
**DETERMINING THE INDEMNITY OF RETIRING SME OWNERS IN
GERMANY: TAKING INTO ACCOUNT SMES' SPECIFIC
CHARACTERISTICS**

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A thesis submitted to
The University of Gloucestershire
in accordance with the requirement of the degree of
Doctor of Business Administration
in the Business School

October 2017

DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

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ABSTRACT

A shareholder's withdrawal from a small and medium sized enterprise (SME) can significantly impact the financial stability of the company. This may be because the legislator has not provided precise legal specification of how to determine indemnity, or that the compensation regulations implemented in the articles of association do not comply with existing legislative frameworks.

The aim of this study is to identify the most suitable valuation method for indemnity determination when taking into account the particular, qualitative characteristics of SMEs and to develop a severance agreement for indemnity regulation that considers the interests of all shareholders, increases clarity and meets the statutory requirements.

Previous studies regarding valuation, the characteristics of SMEs and indemnity determination have addressed indemnity regulation from either a legal or business administration perspective. This research however investigates the topic holistically by employing an inductive and qualitative approach through semi-structured one-to-one interviews with experts from different but apposite professions. It then offers an indemnity regulation framework that is consistent with current business research and legal boundaries. This research is hence interdisciplinary, i.e. it takes into account the most suitable valuation methods for SMEs, the interests of their shareholders in cases of retirement and the statutory provision by examining current court decisions.

The outcomes contribute to theory and give practical recommendations to SME owners and consultants to enhance the fairness and transparency of the retirement process and reduce the probability of legal disputes. The study demonstrates that SME characteristics should be considered in valuation and consequently when determining the indemnity of the outgoing owner. Furthermore, the outcomes suggest that indemnity regulation is advisable and should be implemented in the articles of association. In cases where compensation regulation exists, a revision is recommended due to the potential unethicity in current statutes.

ACKNOWLEDGEMENTS

I would like to express my gratitude and respect to the many people who have made the completion of this thesis possible.

I could not have made it through this research journey without the patience, understanding and love of my family. My warmest thanks go to my wife, Petra and my daughters, Anna and Lisa, who never complained, even when they had to put up with my absence when I was writing this thesis at weekends and in the evening after work. They always believed in me, which encouraged me through the bad times to fulfil my lifelong dream.

I am deeply indebted to my parents, Michele and Antonietta, who always made sacrifices to support me in achieving an academic education. Unfortunately, my father will not be able to share this moment with me due to him suffering an illness in the very advanced stages. Seeing me awarded with a doctorate would have filled him with joy and pride.

I owe my greatest respect to the research participants who gave up their time for the interviews, even though they all had a tight time schedule.

My supervisors Charles Afriyie, Oliver Kruse and Philippa Ward also deserve my deepest gratitude for their guidance, valuable comments, patience, time and commitment. They enabled me to improve and to complete this study. It has been a pleasure and a great honour to be part of this team. In addition, I would also like to say thank you to the lecturing and administrative members of the DBA-team in Cheltenham, who provided me with very helpful insights and advices. I really appreciate the great job you do.

I wish to express my special thanks to Jörg Neis for sharing ideas and discussing issues about valuation theory and to Susan Turner-Lorenz, who graciously contributed her time to provide me with moral support and feedback.

I would have never been able to reach this stage without the help of all of you.
Thank you very much, from the bottom of my heart.

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ABBREVIATIONS

AG	Amtsgericht [District Court]
BGB	Bürgerliches Gesetzbuch [German Civil Code]
BGH	Bundesgerichtshof [Federal Supreme Court]
BVerfG	Bundesverfassungsgericht [Federal Constitutional Court]
c.p.	Ceteris paribus
CAPM	Capital Asset Pricing Model
CEM	Capitalised Earnings Method
DCF	Discounted-cash-flow
DCFM	Discounted-cash-flow method
EAT	Earnings after taxes
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation and amortization
EBT	Earnings before taxes
ER	Exploratory research
FAUB	Fachausschuss für Unternehmensbewertung und Betriebswirtschaft [Technical committee for business valuations and commerce]
FCF	Free cashflow
GmbHG	Gesetz betreffend die Gesellschaften mit beschränkter Haftung [Limited Liability Companies Act]
GR	Growth rate
GVG	Gerichtsverfassungsgesetz [German Judicature Act]
HGB	Handelsgesetzbuch {German Commercial Code}
IDW	Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany]
IDW S 1	Principles for the Performance of Business Valuations [editor: Institute of Public Auditors in Germany]
KG	Kommanditgesellschaft [Limited partnership]
KWG	Kreditwesengesetz [German Banking Act]
LG	Landgericht [Regional Court]
MM	Multiple Method
OHG	Offene Handelsgesellschaft [General partnership]
OLG	Oberlandesgericht [Higher Regional Court]
PA	Perpetual annuity

POI	Probability of insolvency
PD	Probability of default
RO	Research Objective
RQ	Research Question
RS	Research Strategy
SCEM	Simplified Capitalised Earnings Method
TV	Terminal value
Viz	Videlicet
WACC	Weighted Average Cost of Capital

CHAPTER 1 INTRODUCTION

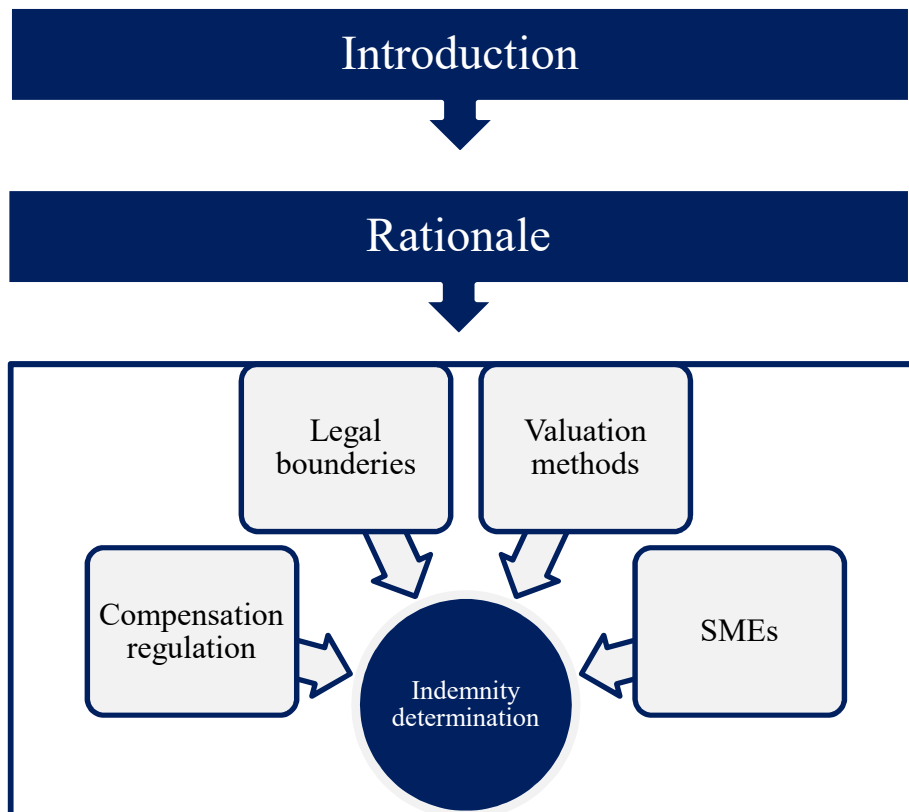


Figure 1. Structure of chapter 1

This thesis consists of five chapters and their contents are described at the beginning of each. The first chapter introduces the research problem and a rationale is offered through description of the main issues that emphasize the importance for theory and practice. It concludes by stating the research questions and objectives.

1.1. INTRODUCTION

This research aims to find the most suitable valuation methods for indemnity determination for retiring owners of German SMEs and if these valuation methods are appropriate when considering the specific characteristics of SMEs. In addition, the study seeks to develop a new framework for indemnity regulations that reduces problems in determining indemnity by addressing the interests of all partners and taking into account the current statutory requirements.

The emphasis is on several inter-related issues, as depicted in figure 2. Firstly, SMEs constitute the majority of companies in Germany and are an important economic factor. Secondly, demographic shifts, and the existing legal rights for the shareholder to leave the company at any time, indicate that retirements will increase over the short-term. Thirdly, due to SME characteristics, retirement can affect the stability of the company and its shareholders. Fourthly, the legislator has not determined compensation and the boundaries of private autonomy in the case of retirement, thus existing regulations are potentially unethical. Finally, appropriate valuation methods need to be identified and assessed that take into consideration SMEs specifics and are suitable for indemnity determination.

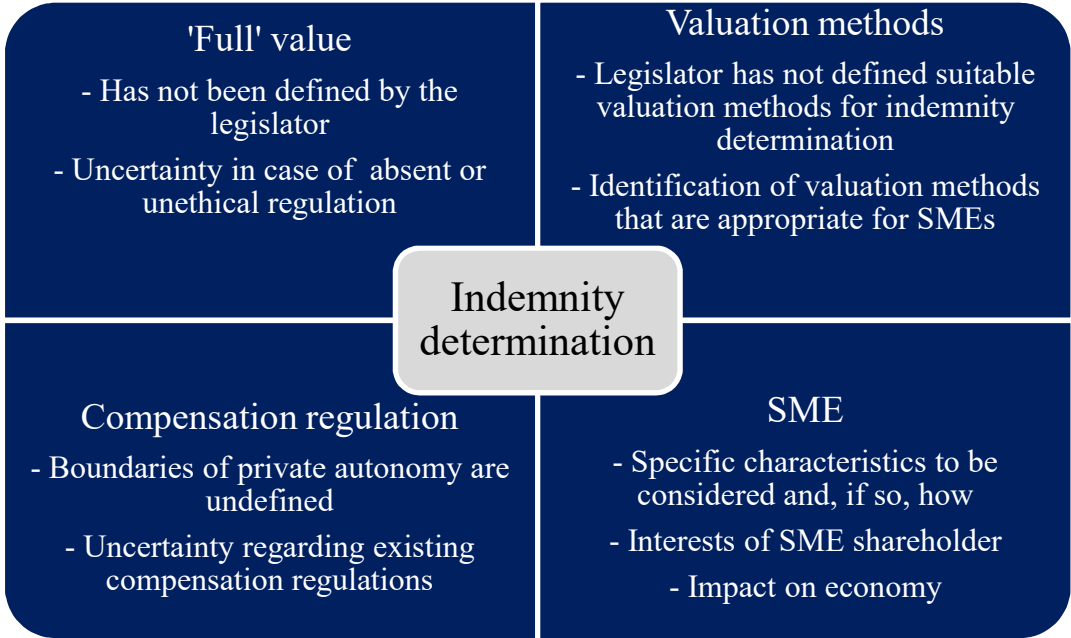


Figure 2. Research problem domains

My personal interest in this specific area derives from different perspectives. I have been a lecturer at the Business School for Economics and Law in Berlin on the entrepreneurship and business succession programme for 10 years. I teach business valuation and financing in particular for SMEs and ‘Mittelstand’ companies. In this context, I have become interested in the developments in academia regarding the business valuation of SMEs and possible differences to listed companies. By reading articles and academic

texts in this field, I realised that these issues were still unresolved, and researchers and practitioners often have diametrically opposed positions. The question of how to determine indemnity when an owner retires is still unanswered and the ‘full’ value that the outgoing owner is entitled to receive is not defined. Reviewing the literature has been a continuous process and my interest in the issue has increased as a result.

I have also worked in banking and financing for more than 30 years. Most of this time – working as head of department in structured finance for more than 10 years – the focus of my work was on ‘Mittelstand’ companies and their debt finance. I have been confronted, in particular, with different debt financing situations, such as succession, retirement, acquisition, management buy-in, management buy-out or major investments. In all these instances, operational development is influenced by the increased debt burden, and ongoing business success is dependent on the specific and individual characteristics of these companies. In cases where retirement, and therefore compensation, is contested, the successful continuity of the company is endangered. Particularly when dealing with the successions of outgoing owners, I am concerned with the practical question of feasibility, predominantly when financing indemnity or necessary investments. However, I have an understanding of the typical characteristics of SMEs and am familiar with the specific structures and possible solutions in such cases.

Having this long-term professional experience in the field of research, I have to accept that this can influence the conduct and results of the research. As stressed by many authors (Denscombe, 2012; Symon & Casell, 2012; Sekaran & Bougie, 2016), the researcher’s skills and problem solving abilities can be beneficial and decisive for the success of the research. Furthermore, for reasons of transparency, I would like to disclose my professional background, which was – apart from my academic background – important in conducting this research and interviewing experts in this area. Conducting this research project showed that my personal experience was useful for acceptance by participants: I was regarded as an ‘equal’ partner and was therefore able to

interview these experts effectively (see section 3.6.1.3.). I could therefore collect data from experts in the field of research which gives an authentic insight into their experience (Silverman, 2011). Also listening and the interaction with the interviewees by building a rapport were significant for the research of this thesis. I possess the necessary skills due to my day-to-day business experience, which consists of having conversations and negotiations with clients as well as colleagues. Without this experience, these outcomes probably would not have been reached, in particular regarding understanding and interpretation these skills were indispensable for providing significant results.

1.1.1. SMES

Most companies affected by the potential withdrawal of an owner are SMEs, as 99% of all companies in Germany are classified as such (Statistisches Bundesamt, 2015). The term ‘SME’ is used synonymously with “Mittelstand”, as SMEs constitute 99.9% of this group. 95.3% of small and medium-sized companies are also family owned (Wallau, 2009). Consequently, SMEs prompt the majority of business valuations (Helbling, 2006) and this has only increased recently (Zwirner & Zimny, 2015) by growth in unresolved succession situations (Behringer, 2012).

Although there is no secure database that lists forthcoming company successions, given current demographic trends in Germany, it can be assumed that succession arrangements will increase in the near future. In 2013, 16.9 million people were aged over 65 years and the Federal Statistical Office (2015) estimates there will be 19.1 million in 2023. This forecast represents an increase of 13%.

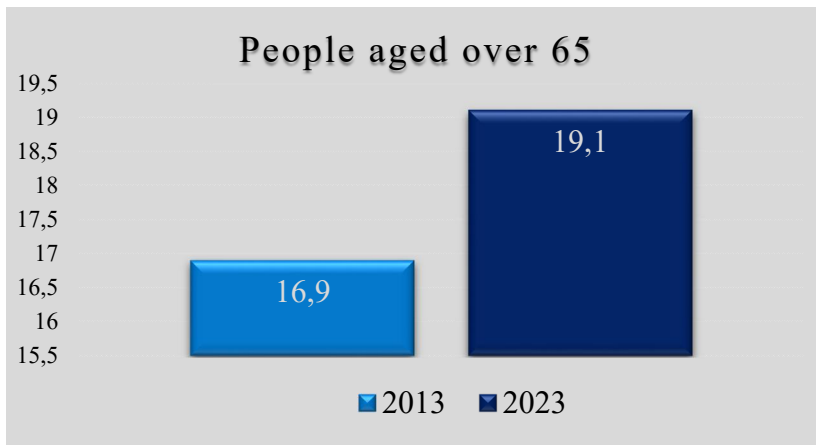


Figure 3. Demographic developments

One third of all owners of SMEs are already 55 years old or over (KfW, 2015), hence a significant number of shareholders are expected to retire in the short to mid-term.

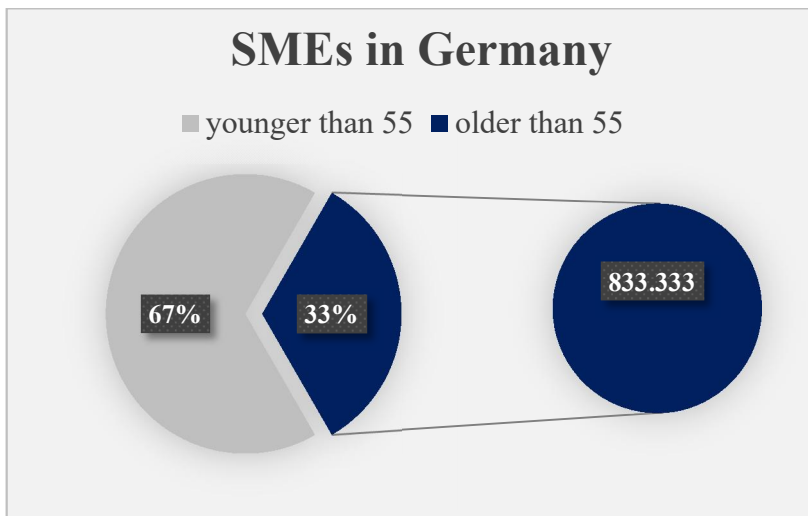


Figure 4. Potential numbers of SMEs affected by retirement (given approximately 2.5 million SMEs) (Statistisches Bundesamt, 2014)

Apart from demographic developments, each shareholder has the right to terminate their contract at any time and thus to resign from the company. According to estimates by the Institut für Mittelstandsforschung (2016), 135,000 companies will face takeover for personal reasons between 2014 and 2018. The Kreditanstalt für Wiederaufbau (2015) suggests 580,000 companies

face succession by 2017. Against this background, economically and legally acceptable regulation for compensation assessment is required; one that adequately takes the interests of the parties into account.

These occurrences are of crucial importance for the future well-being of the company and its stakeholders, such as owners, employees and business partners. A partner’s withdrawal is particularly momentous for an SME (Knackstedt H. , 2009) and result in many opportunities, but also risks for the company. An incorrect valuation, e.g. too high an indemnity, can even have an existential impact on the company. Company valuation is therefore of great importance for all stakeholders (Behringer, 2012).

Furthermore, SMEs play an important economic role in Germany. They are core to the economy, providing out-of-school-education (82%), employment (61%), capital expenditure (42%), turnover (36%) and economic output (55%) (Institut für Mittelstandsforschung, 2016). According to Simon (2012), in 2011 1,307 SMEs could be described as ‘hidden champions’ that play a leading role in mechanical and electrical engineering in global terms. In comparison to other countries, the proportion of German SMEs in the industrial sector is pronounced. Almost two-thirds of all such workers are employed by SMEs (Statistisches Bundesamt, 2016). The construction and hospitality industries are also dominated by SMEs (Statistisches Bundesamt, 2016). Hence, SMEs have important economic significance for their innovative capacity, as well as being ‘job engines’ (Fahrenschon, Kirchhoff, & Simmert, 2015).

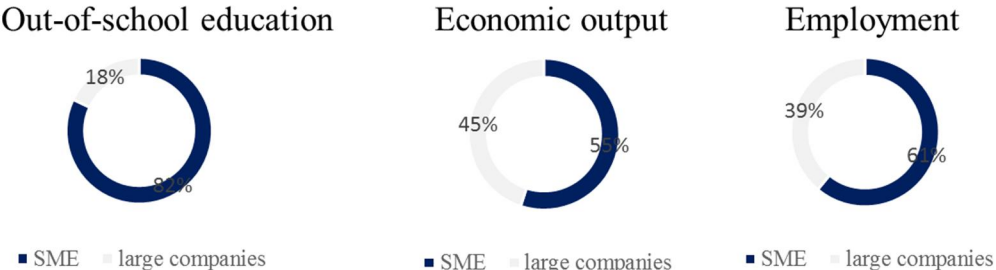


Figure 5. Importance of SMEs for the German economy

It is not only during times of economic boom that SMEs function as a job engine; they also have a consolidating effect in periods of downturn. Various studies, such as Fendel und Frenkel (1998) and Varum and Rocha (2011), have demonstrated the disproportionately low impact on employment dynamics during macroeconomic fluctuations due to SMEs. Wolter and May-Strobl (2013) also conclude that in times of economic crisis, SMEs are significantly less affected than large companies. In 2009, when Germany experienced one of the worst recessions since the Second World War after the financial and economic crisis (Statistisches Bundesamt, 2011), the impact on business and unemployment was minor for SMEs in comparison to the effects on large companies (KfW-Bankengruppe, 2010). The relevance of this impact relates to the qualitative characteristics of SMEs, as investigated by Davidsson, Lindmark, and Olofsson (1999). Other studies carried out during different periods and in different countries arrive at the same result - SMEs are less affected in crisis. However, the positive impact on SMEs during economic upswings is also more moderate than it is for large companies.

Even though there is no general definition of SMEs available, they do have specific characteristics. These companies are particularly dependent on their owners, have relevant contacts with customers and suppliers (Pfohl, 2006) and their success depends on the owner's skills and capabilities (Leker & Sonius, 2015). There is also no separation between ownership and management (Helbling, 2015) and most companies are run as sole proprietorships or partnerships (Institut für Mittelstandsforschung, 2012); this implies owners' full personal liability arising from business risks. In addition, owners have primarily invested their assets in their company and further diversification is seldom available to them (Ihlau, Duschka, & Gödecke, 2013). The main source of finance is therefore the owner or banks (Schlitt, 2014; Söllner, 2011). Accounting is tax oriented (Busse von Colbe, Crasselt, & Pellens, 2011; Peemöller V. , 2014) and financial reporting is underrepresented (Zwirner, 2013; Leker & Sonius, 2015; Schoberth & Ihlau, 2008; Knackstedt H. , 2009).

1.1.2. FULL VALUE

The relevant legislation does not explicitly define how to determine full value (Hütteman, 2007; Fleischer, 2016; Barthel, 2010). The legislator has indicated that a fictitious market value should be determined by court decision and the wording of Article 738 BGB. The full value is the price that *might* be achieved in the case of the company's sale (BGH, 1984). Another older verdict defines the full value as the most favourable disposition of the company assets as a whole (BGH, 1967). According to Article 738 BGB, the shareholder is entitled to the same amount of money as if the company had been dissolved at the time of retirement. The question of what assumptions have to be made in this context remains unanswered. One striking example is that the full value can be calculated based on the continuation of the company assuming the same concept and circumstances. The question arises of whether to consider the possible implications on the earnings caused by the retirement of the outgoing owner.

Additional verdicts state that 'full' value has to be determined by valuation methods that are recognised in business administration (BGH, 2001; OLG München, 2009; OLG Stuttgart, 2003) even if a particular method has not been prescribed by the legislator (Lauber, 2015; BGH, 1993; Hannes, 2015). On a case-by-case basis, preference should be given to the method that best fits the specific characteristics of the respective company (Lorz, 2014; BGH, 1990).

1.1.3. VALUATION METHODS

The capitalised earnings method (CEM) has established itself as one of the most applied methods in case law and valuation practice (BGH, 1991; BGH, 1993; Drukarczyk & Ernst, 2010; Großfeld, 2012). Nevertheless, a variety of other methods also exist (Fleischer, 2016; Mandl & Rabel, 2015).

In this respect, the specific valuation approach of the Stuttgart method (Stuttgarter Verfahren) must be highlighted. This provided unsuitable results and so was replaced in 2010 by the simplified capitalised earnings method (SCEM) for the calculation of inheritance tax (BVerfG, 2006; Felden &

Pfannenschwarz, 2008). The Stuttgart method is a mixed method that takes into account assets, as well as past oriented earnings (Mandl & Rabel, 2015). However, the SCEM is based on earnings (see section 2.4.2.2.). In inheritance tax calculation cases, the legislator was consistent by replacing a net asset based method with an income-based method.

There is also continual development of recognized valuation methods that are appropriated for particular valuation occasions in business administration. However, there are different opinions in literature with regard to the withdrawal of shareholders. While Ballwieser and Hachmeister (2016) and Schütte-Biastoch (2011) consider classical procedures such as the CEM as preferable and universally acceptable, Kelleners (2004) and Schwetzler and Adlers (2012) favour valuation using multiples due to it being market-oriented. In addition, book-value-methods, net-asset-value-methods and mixed methods are still used when determining indemnity (Oppenheim, 2011; Keller & Hohmann, 2004; OLG München, 2012; OLG Rostock, 2016).

The variety of existing valuation methods (Ernst, Schneider, & Thielen, 2012; Barthel, 2010; Fleischer, 2016; Mandl & Rabel, 2015) can therefore cause problems, particularly in cases of dominated valuation (Schütte-Biastoch, 2011). Ultimately, the choice of method is a supervisory decision, incumbent upon a trial judge (BGH, 1993; Schmidt K. , 2011; BverfG, 2007). This unresolved matter leads to uncertainty, and growing potential for conflict and litigation.

Dominated valuation occasions differ substantially from other occasions (see Figure 6).

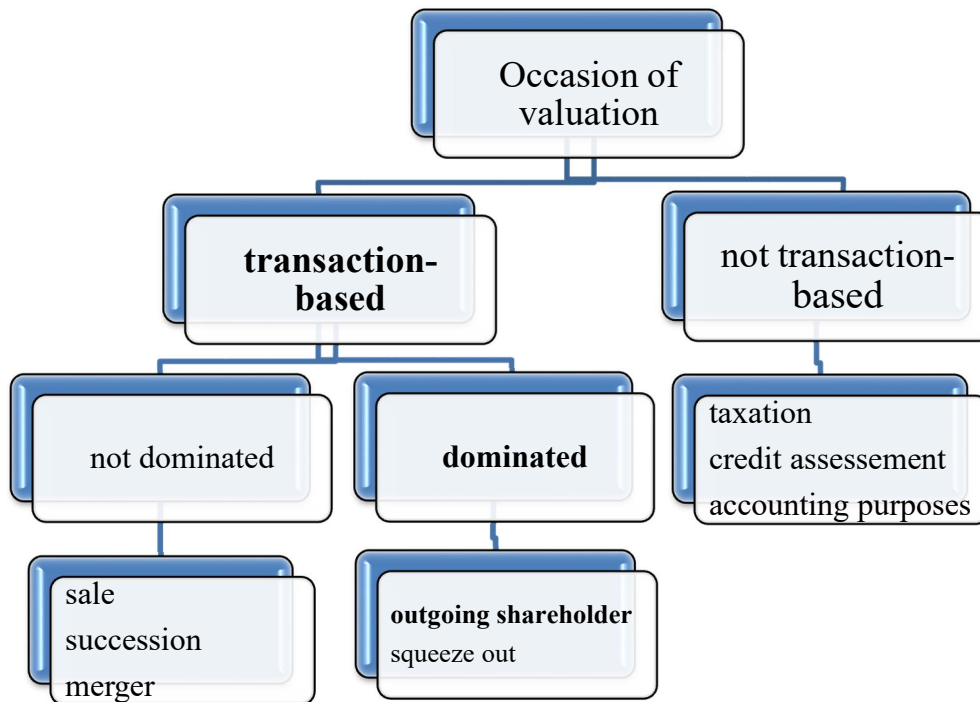


Figure 6. Occasion of valuation (Schütte-Biastoch, 2011, p. 11)

If none of the parties is able to change ownership by themselves, there is a non-dominated conflict situation. Hence, any change of ownership requires a voluntary hearing of the parties (Matschke & Brösel, 2014; Wagner F. , 2008). This means autonomy negotiated by both parties. In contrast, changes can occur through the imposition of one party, for example, ‘squeeze-out’ or withdrawing from the company (Hüttemann, 2015). These events include reviews of compulsory and takeover bids or merging, divisions or profit transfer and domination agreements etc. (Matschke & Brösel, 2013).

In the present work, consideration of dominated valuation focuses on the termination of the shareholders. These situations differ from voluntarily negotiated transactions. Such unilaterally caused changes of ownership are constrained by legal regulations, e.g. Article 138 BGB and court decisions (BGH, 1991; BGH, 1989; BGH, 1993), as stated in the legal framework. In a dominated situation, an assessment is sought that withstands judicial examination as the parties often find themselves in conflict. This means that

the valuation needs to be based on legal provisions or on the basis of statutory or contractual regulations, unless this had been agreed in the partnership agreement. Therefore, the valuation methods used have to take into account the implications caused by the withdrawal of shareholders. The problem under study can best be addressed through an interdisciplinary approach, by taking into account the relevant legal regulations, as well as current business administration research.

1.1.4. COMPENSATION REGULATION

German enterprise shareholders are entitled to withdraw from the company at any time, according to Article 723 BGB (German Civil Code). A retiring owner must be paid, according to Article 738 BGB. In the absence of any agreement in the articles of association, the outgoing partner is entitled to receive the full¹ value of their share.

A claim for severance payment arises when the shareholder withdraws (Hopt, 2010). This aims to safeguard the interests of the withdrawing party in order to prevent the remaining shareholders from delaying the determination of the indemnity and from specifying the maturity date themselves. In this context, business continuity is intended by the legislature, and thus the survival of the company, might be jeopardised if the maturing funds are not, or not immediately, available from company assets (Jäger, 2005). Hüffner and Koch (2015) suggest that the economic situation of the company is not taken into account. Consequently, the partners may have to finance the compensation due in advance from their private assets. However, the majority of their assets are usually bound-up in the company (Ihlau, Duschka, & Gödecke, 2013).

To avoid statutory regulation (Kirchdörfer & Lorz, 2012; Ihlau, Duschka, & Gödecke, 2013; Strohn, 2016), company shareholders frequently include indemnity regulations in partnership agreements (Wangler & Dierkes, 2006; Dietrich & Dierkes, 2015; Jula & Sillmann, 2016). Besides limitations on the level of compensation, compensation clauses also provide the valuation

¹ The terms 'full' and 'real' value are used synonymously in case law.

method, terms of payment, such as due date, and indemnity payment spread out over several years (Fleischer, 2015; Roth, 2014; Hadding & Kießling, 2012).

Where the contractual parties have stipulated a compensation clause, the legislator respects the free will or intention of the contracting parties upon conclusion of the contract that normally subordinates the particular interests to those of the company (Koch A. , 2014). However, in these cases the retiring owner must not be disadvantaged (Raiser & Veil, 2010; Schäfer, 2013) and the agreement must not impinge against *boni mores*, according to Article 138 BGB. The indemnity must not differ substantially from the company's 'full' value, with the result that the retiring owners are constricted in their right to retirement (Bergmann, 2010; Koch J. , 2015; Strohn, 2016). If there is disparity between full value and indemnity payment provided by the contractual procedure, owners may be constricted in claiming their right due to the economic consequences. Usually the main assets of a SME's shareholder are bound in the company (Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013) and are their only retirement provision. However, a clear definition by the legislator regarding such disparity does not exist, excepting the following indications:

- A potential unethicity result from unreasonable disadvantage under consideration of the individual circumstances of the case (Ebenroth & Müller, 1993; Schäfer, 2013).
- Case law has not yet established a clear and precise benchmark value (BGH, 1993).
- The Federal Court of Justice (BGH, 1991) has provided a more general wording with regard to the unethicity of compensation regulations: *"... the restrictions on outflow of corporate capital associated therewith are completely disproportionate to the limitation as is required to ensure the continuance of the corporation and the continued operation of the company for the protection of the partners."*

In other words, it is impossible to set fixed thresholds to determine the existence of an imbalance between compensation and the value of the shares. Therefore, the threshold of ‘unethicality’ restricts the freedom of contract.

In the following cases, the Federal Court of Justice took the view that the regulation was unethical:

- the limitation of compensation to half the book value (BGH, 1989)
- to the nominal value of the share (BGH, 1991) and
- a small percentage amounting to 20-30% of the market value of the share (BGH, 1993).

Hadding and Kießling (2012) argue that compensation must be at least 60% of full value. Mecklenbrauch (1999) and Schäfer (2013) state that the threshold should be set at 2/3rds of the real value. Therefore, according to the statutory regulation, net asset and book value are inclined to be unethical due to possible disparity (Koch A. , 2014; Dietrich & Dierkes, 2015; Naumeier, 2015; Schmidt K. , 2011; OLG Frankfurt, 2009). The main reason for this is that indemnity determination should be conducted on a going concern basis and not by using asset based methods. As early as 1980, the BGH considered the asset substance of a share to lie in the exploitation of the company, i.e. in the financial benefit that can be expected from the company and that is thus capable of generating revenue surpluses (Riedel, 2006). This means the value of a company will be determined by income that includes, in particular, goodwill (BGH, 1991; BGH, 1993).

Moreover, literature points out that it is not only the percentage disproportion that is decisive, but also the absolute deviation from the ‘full’ value (Butz-Seidel, 2004). The absolute amount depends on the proportional share of ownership and the ‘full’ value of the company. The differences in amount become fully apparent in light of this, and it can be assessed whether this renders it unreasonable for the shareholder to exercise their right to termination.

In case of unethically, the legal consequences depend on the discrepancy between 'full' value and the intended indemnity. If the contractual terms imply an impermissible economic disadvantage at the conclusion of the agreement, then these terms are 'immoral' (Armbrüster, 2015) and the outgoing owner is entitled to a share of the 'full' value (Lorz, 2014; Koch A. , 2014). A different legal consequence arises if a divergence can be shown to have occurred only in the course of time. According to the Federal Court of Justice (BGH, 1991; BGH, 2001), a supplementary interpretation of the agreement in accordance with the principles of good faith (BGH, 1993) is necessary. In other words, a new valuation method may be required to re-determine the compensation amount accordingly. Here, the adaptation depends on the real and the hypothetical intention of either party in order to assess the interests of both objectively.

If indemnity calculation regulations do not comply with statutory requirements, the indemnity has to be assessed and determined according to a verdict from 1993 (BGH) (Federal Supreme Court), after taking into account the interests of the company, the retiring owner and all circumstances in the specific case. This court verdict has been criticised (Rasner, 1994; Ulmer & Schäfer, 1995; Wangler & Dierkes, 2006; Oppenheim, 2011), because appropriate clarification has not been made by the legislator and uncertainty remains for the parties involved. The main issue is that it is difficult to ascertain the will of the parties, and therefore the adaptation of the agreement, especially as the agreement was concluded in the past. As the contract was concluded by the parties, it can be assumed that there was alignment of interest at that time.

Furthermore, it can be assumed that the unequivocal will of the contracting partners was to make provision for a diversification of risks that deviates from the stipulations of the law. It is safe to assume that when the agreement was concluded the partners consciously avoided the statutory compensation regulation in order to reduce the impact on the liquidity burden of the company. The consideration of the criteria for a case-by-case assessment could

prove a further problem as whether existing compensation regulation is unreasonable depends on each individual case. This means that this approach is not a general solution.

Either book value, net asset methods or the Stuttgart method are contained in numerous partnership agreements as basis for indemnity calculation (Verspay, 2014; Schacht & Fackler, 2009; Felden & Pfannenschwarz, 2008; Jula & Sillmann, 2016; Hadding & Kießling, 2012; Piehler & Schulte, 2014). These methods do not, or only partially, comply with current legislation and are therefore open to interpretation or require adaptation to avoid any uncertainty amongst the parties affected, as well as arduous disputes. This disparity means there is still potential for disagreement when an owner retires.

In addition, SMEs' current articles of association contain indemnity regulations such as the Stuttgart method or book value, where the indemnity payment is limited, or the payment is deferred over time (Kunath, 2014; Koch A. , 2014; Dietrich & Dierkes, 2015). These regulations could be immoral if there is substantial disparity between the indemnity amount and the full value (Strohn, 2014) and must not lead to an unreasonable disadvantage for the withdrawing shareholder (OLG Hamm, 2012). However, the law does not specify how to provide such an indemnity determination. Establishing a regulation that considers the opposing interests of the parties, i.e. adequate financial compensation for the outgoing owner and the preservation of liquidity of the company, often leads to problems in practice (Koch A. , 2014; Matschke & Brösel, 2013; Große-Frericks, 2015).

The outcome of a legal dispute is very unpredictable due to the abundance of criteria that has to be considered and so the litigiousness is not attenuated. However, indemnity regulations based on current legal guidelines and accepted valuations methods and procedures should, normatively, increase reliability and therefore legal disputes ought to be avoided.

Apart from indemnity calculation, there are differing views on the valuation of SMEs in the corporate valuation literature. This is particularly due to the characteristics of SMEs. While some writers suggest that traditional methods (such as discounted future earnings method and discounted cash-flow method) can generally be applied to all companies (Ballwieser, 2011; Jonas, 2011), Busch (2008) disagrees. He suggests a combination of net assets and earnings. Other authors also stress that asset-based methods still have significance in SME valuation practice (Keller & Hohmann, 2004; Matschke & Brösel, 2013; Ihlau, Duschka, & Gödecke, 2013; Helbling, 2015).

Despite the importance and the quantity of valuation, SMEs continue to be treated as the ‘Cinderella’ of company valuation theory (Popp, 2008). The theory is largely concerned with the valuation of large publicly traded companies, whereas the specific characteristics of SMEs and their impact on the company value have been insufficiently studied (Hackspiel & Fries, 2010).

The most suitable valuation method for SMEs has not as yet been clarified. Many authors document that there are specific features and characteristics of SMEs and their differences to public companies influence performance (Kramer S. , 2009; Schütte-Biastoch, 2011; Hachmeister & Ruthardt, 2014; Franken & Koelen, 2015). Dodel (2009) examined the value difference between public companies and the German Mittelstand, which is influenced by the unique factors that surround it. These characteristics have to be taken into account in SME valuation (Keller M. , 2015).

Some authors resort to focusing on specific features and make suggestions of how to proceed in such cases, e.g. intangible assets, goodwill and the multiple method or the combination of future earnings method and asset value method (Busch, 2008; Behringer, 2012; Helbling, 2015; Koss, Lemmen, Niemann, & Wohlgemuth, 2010; Schütte-Biastoch, 2011). Ihlau and Duschka (2012) go further and suggest allowing size or illiquidity discounts in exceptional cases and only if the consideration is justifiable, appropriate and comprehensible. Given the absence of empirical evidence in Germany, Ballwieser and

Hachmeister (2016) and Jonas (2011) reject premium discounts or illiquidity discounts and argue that SMEs have to be valued in the same way as all other companies.

If and how the characteristics of SMEs have to be taken into consideration in company valuation is still unresolved. A company valuation according to the specifications of German Institute of Public Auditors is usually performed in cases where the assessment of compensation has to be clarified in court (Karami, 2014; Lauber, 2013). These specifications provide, *inter alia*, for typification, i.e. the company is deemed to continue to operate according to the same concept (Institut der Wirtschaftsprüfer, 2008; Institut der Wirtschaftsprüfer, 2014).

This means that the company is realistically valued and subject to similar opportunities, risks and funding. However, this approach has been criticised in the literature as SMEs are distinguished from stock-listed companies not only due by their size, but also by their structural characteristics (Busch, 2008; Muschol, 2016; Hachmeister & Ruthardt, 2014). In particular, the shareholders of SMEs can influence the company performance, given their connections to clients and suppliers (Ihlau, Duschka, & Gödecke, 2013; Franken & Koelen, 2015; Helbling, 2015) and their impact on sales has to be analysed when they retire.

The key figures presented are indicative of the economic significance of SMEs in Germany, irrespective of the SME definition applied (see section 2.2.). This alone warrants their further investigation and the need for additional research in valuation methods that considers both the specifics of SMEs and the interests of all parties.

The research and findings of this thesis refer to SMEs from archetypal sectors such as engineering, manufacturing, construction, chemicals, pharmaceuticals, textile, IT and services. In other words, liberal professions like auditing, tax

advising, consultant companies, financial companies, healing professions and start-ups are not taken into account. This is mainly because

- i) specific and simplified valuation methods and procedures are applied in those professions (Drukarczyk & Ernst, 2010; Bundessteuerberaterkammer, 2010; Hartung, 2000; Bundesärztekammer, 2008; Achleitner & Nathusius, 2004; Kasperzak & Nestler, 2010) and
- ii) some of the interviewees are members of these professions and thus bias could arise.

Furthermore, the different interests of the parties involved can lead to litigation that can threaten a company's existence in extreme cases. On the other hand, it is legitimate that the outgoing shareholder receives adequate compensation. The main aim is for balanced consideration of the interests of the parties and the interdisciplinary necessities aroused by my curiosity. The adopted research process and in particular the involvement of different professional groups, from academics to practitioners who are proven experts in this field, allows me to understand the different arguments in depth and provide outcomes that will hopefully be accepted by both practitioners and academia. These different perspectives and experiences enable me to analyse, discuss and generate robust outcomes. Therefore, the contribution to knowledge of this thesis is beneficial for theory and practice.

1.2. RESEARCH QUESTIONS AND OBJECTIVES

The definition of the research problem focuses the researcher and defines the direction of the investigation (Zikmund, Babin, Carr, & Griffin, 2013). The best method of doing this is to precisely formulate the research question (Dixon-Woods, et al., 2006). According to Dane (1990, p. 5), "*The ultimate goals of research are to formulate questions and to find answers to those questions*". The procedure for developing these answers is not as static as it seems. The problem formulation stage is one of the most important in the research process. Any inaccuracy at this point could lead to issues at a later

stage that cannot be corrected (Zikmund, Babin, Carr, & Griffin, 2013). The specific needs of the researcher, or the research, should be taken into account and the first step to formulating the research questions is to break down the aims of the study as follows:

- What valuation method should be used to determine the compensation for withdrawing shareholders of German SMEs?
- What characteristics of German SMEs have to be considered in determining indemnity?
- What specific compensation regulations should be included in the articles of partnership - taking into consideration the existing legal framework and the interests of all shareholders?

The number of research objectives should be limited in order “*to ensure that each will be addressed fully.*”, as recommended by Zikmund et al. (2013, p. 122). The following research objectives were identified:

- To identify the most suitable valuation methods for indemnity determination and to assess the appropriateness when considering the characteristics of SMEs.
- To examine the characteristics of German SMEs and to identify those that influence performance and thus the determination of indemnity.
- To develop a framework for indemnity determination that meets the statutory requirements and considers the interests of the parties in order to reduce the probability of dispute.

CHAPTER 2 LITERATURE REVIEW

This chapter presents the literature review on indemnity determination by addressing the related components, in particular SME characteristics, valuation methods and the legal framework. It provides a definition of SMEs and assesses the existing valuation methods for their suitability for SMEs. In the final section, the key findings of the LR are presented by evidencing existing uncertainties and issues in the literature, which serve as the basis for the objectives of this research.

2.1. INTRODUCTION

The objective of this chapter is to critically review the existent literature, taking into consideration the legal framework and the current state of research in business administration. The focus is therefore on the following factors:

- Identification of current knowledge on valuation, focussing on most suitable methods when valuing SMEs
- Identification of value relevant SMEs characteristics
- Identification of balanced compensation regulations

The difficulties faced by the parties in case of indemnity determination, due to the non-existent clarifications of legislator are highlighted. This is significant for designing a framework of sensible components to be implemented in the articles of association.

The key outcomes are summarised and presented in relation to the RQ after a thorough assessment of valuation methods, the specifics of SMEs and the legal framework and components of indemnity regulations. The overarching and interrelated nature of the research topic necessitates a narrative LR approach (see Appendix II). As stated by Willcocks, Sauer and Lacity (2015), traditional literature reviews or narrative reviews are frequently conducted to provide a better understanding of the subject under study. They are particularly suitable for complex subjects (McKibbin & Wilczynski, 2009) and effective for difficult topics (Carey, 2013). This accords to the issues in this research due to

its interrelated concerns, such as legal frameworks, the characteristics of SMEs that influence company performance and the interests of different parties in retirement.

2.2. SMALL AND MEDIUM SIZED ENTERPRISES

There is no widely recognised definition of an SME (Zwirner, 2013; Leker & Sonius, 2015; Rohlfing & Funck, 2002). However, there are many classifications based on quantitative factors like turnover, balance sheet and staff (Helbling, 2015; Matschke & Brösel, 2013; Ihlau, Duschka, & Gödecke, 2013). The most common in Germany are the following:

Company category	Factors	§ 267 HGB ²	European Commission ³	Statistisches Bundesamt ⁴	IFM Bonn ⁵
Micro	Turnover		≤ € 2 m	≤ € 2 m	
	Staff headcount		< 10	< 10	
	Balance sheet total		≤ € 2 m		
Small	Turnover	≤ € 12 m	≤ € 10 m	≤ € 10 m	< € 1 m
	Staff headcount	≤ 50	< 50	< 50	< 10
	Balance sheet total	≤ € 6 m	≤ € 10 m		
Medium-sized	Turnover	≤ € 40 m	≤ € 50 m	≤ € 50 m	< € 50 m
	Staff headcount	≤ 250	< 250	< 250	< 500
	Balance sheet total	≤ € 20 m	≤ € 43 m		
Large	Turnover	> € 40 m		> € 50 m	
	Staff headcount	> 250		≥ 250	
	Balance sheet total	> € 20 m			

Table 1. Definition of SMEs

² (The definition of small enterprises in accordance with German Commercial Code (HGB): companies must not exceed two out of these three criteria. The definition of medium-sized enterprises: companies have to exceed at least two of the three criteria specified under “small” and must not exceed at least two out of the three criteria specified under “medium-sized enterprises” (Federal Ministry of Justice and Consumer Protection, 2015). (Bundesministerium für Justiz und Verbraucherschutz, Handelsgesetzbuch, 2015)

³ The main factors determining whether an enterprise is an SME are: i) staff headcount and ii) either turnover or balance sheet total (European Commission, 2015)

⁴ (Statistisches Bundesamt, 2015) [Federal Statistical Office]

⁵ (IfM Bonn, 2015)

A definition based on quantitative criteria constitutes a simplification in the sense that it takes insufficient account of sector- and company-specific features (Knackstedt H. , 2009). In Germany, as well as in the EU, quantitative definitions are sensible as they serve primarily to determine entitlement to government subsidy or assistance programmes. Conversely, quantitative criteria do not fulfil SME characteristics in the context of valuation and are therefore not relevant for company valuation. In valuation, there can be no difference between a company with a turnover of EUR 50 million and a company with 50.1 million with otherwise identical circumstances. A purely quantitative consideration of SME is thus not sensible, because, as Welsh and White once put it so appositely, “*A small business is not a little big business*” (1981, p. 1). A further distinction is needed in addition to classic qualitative business administration criteria.

SMEs have striking qualitative characteristics, however, there is a lack of a coherent definition. As to the extent of difference in the literature, multiple SME characteristics are cited. Ihlau, Duschka and Gödecke (2013) suggest a classification of qualitative characteristics according to business model, information, financing and owner. Schütte-Biastoch (2011) systematizes these according to corporate functions. However, qualitative characteristics systematization by corporate function or according to other criteria is problematic given their interconnectedness and interdependency, a clear distinction is not always possible.

One example is the influence the owner exerts in various fields that affect financing, organizational structure, expertise and the existing number base. The following section describes the characteristics that are frequently mentioned by many authors (Zwirner, 2013; Matschke & Brösel, 2013; Purtscher, 2017; Keller M. , 2015; Helbling, 2015) (Schütte-Biastoch, 2011; Hachmeister & Ruthardt, 2014; Hackspiel & Fries, 2010; Hüttche, 2014; Ihlau, Duschka, & Gödecke, 2013; Eickmann, 2008).

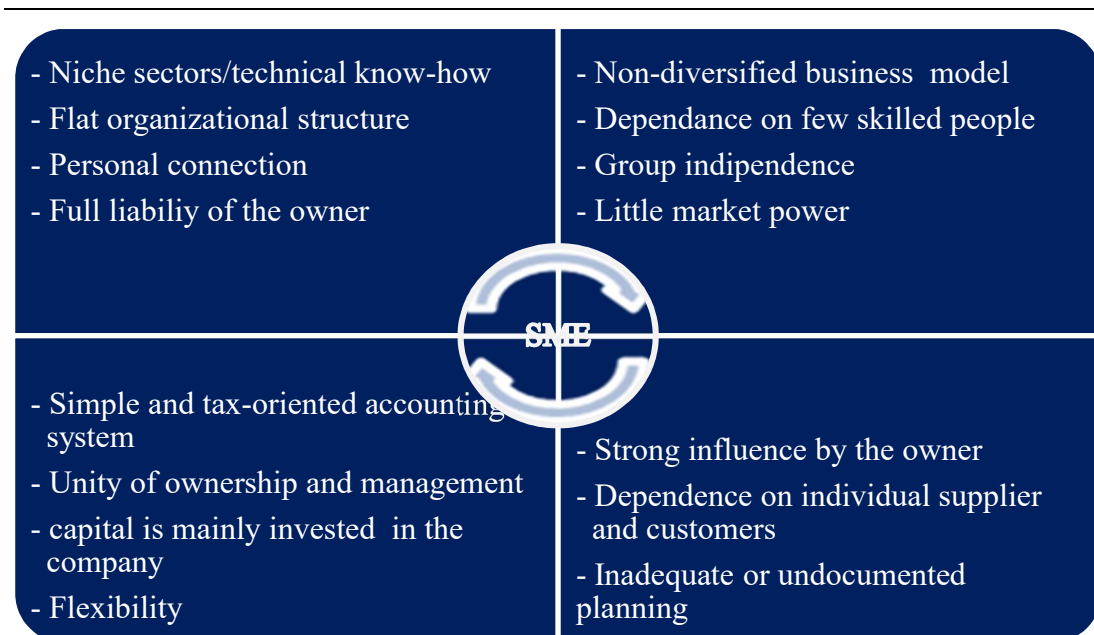


Figure 7. SME Characteristics

SMEs are usually shaped by a few owners who function as managers and often also as investors (Helbling, 2015), i.e. there is no separation of ownership and management. In this respect, entrepreneurial success depends on the owners' skills and capabilities (Leker & Sonius, 2015). In many cases, the firm was founded by the partners themselves or was taken over from family members. Therefore, dependency on the owner is considerable (Zwirner, 2013; Ihlau & Duschka, 2012; Matschke & Brösel, 2013; Purtscher, 2017; Keller M. , 2015; Helbling, 2015). Also mentioned as specific characteristics is dependency on a few clients, suppliers, investors and the economic situation (Schütte-Biastoch, 2011; Hachmeister & Ruthardt, 2014; Hackspiel & Fries, 2010; Hüttche, 2014; Ihlau, Duschka, & Gödecke, 2013).

SMEs are legally and economically independent companies (Behringer, 2012), i.e. they do not belong to a group of companies. That is why the partners have relevant contacts with customers and suppliers (Pfohl, 2006). The entrepreneurs lead and manage the company according to their own objectives and values (Busch, 2008; Knackstedt H. , 2009) and therefore influence success and performance.

The entrepreneurs have often invested their assets primarily in their company; further diversification is thus not available (Ihlau, Duschka, & Gödecke, 2013). A large proportion of SMEs are also family businesses, in which the enterprise represents the main source of income (Bussiek, 1996; Matschke & Brösel, 2013). Not only are there ties between members of the family working in the enterprise, limited staff and long periods of employment also foster a social relationship between long-serving employees, as well as a high level of company identification (Meyer J.-A. , 2013).

Empirical research on company culture shows that the conduct of SME employees has a strong impact on the company strategy implementation and its achievement (Hutzschenreuter, 2015; Zaunmüller, 2005). In part because daily contact and flat hierarchies enable short decision-making processes (Pfohl, 2006).

In many SMEs private property is linked with company property, in other words, there is no demarcation of, for instance, patents, licences, properties or buildings used for operational purposes (Institut der Wirtschaftsprüfer, 2014). The latter characteristic feature is also documented in the company's legal form. SMEs are predominantly run as sole proprietorships or partnerships, (more than $\frac{3}{4}$ of all SMEs - see figure 8), this implies personal liability for risks stemming from business activities.

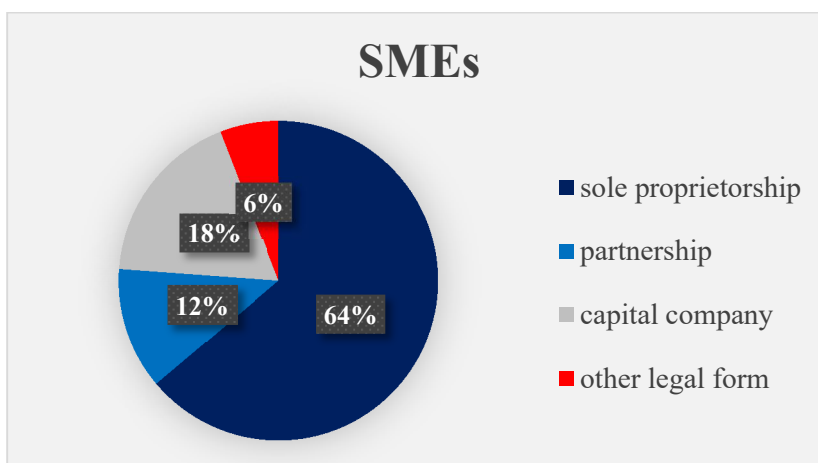


Figure 8. Legal form of SMEs (Institut für Mittelstandsforschung, 2012)

SMEs that have a legal form that limits liability in that they are required to provide collateral (mortgages, guarantees) to secure a loan. Therefore, the prevailing overlapping liability is a structural element of SMEs. Given that, apart from a few exceptions (SME bonds), SMEs have no access to the capital market implies limited financing options (Pichler, Pleitner, & Schmidt, 1997) and one of the main SME financing sources are banks (Schlitt, 2014; Söllner, 2011). Approximately 100 SME bonds are available (Bond Guide Media, 2017; finanztreff.de, 2017). Given the amount of SMEs, the number of bonds is comparatively small and has little impact on SME refinancing capacity.

Furthermore, from the SME perspective the hurdles for bond issues are vast, the securities prospectus has to be drawn up in accordance with the law, external credit assessment (rating) is necessary and the overall costs are relatively high (Hippchen, 2016). A number of SME bond insolvencies have caused credit losses, which has raised criticism in literature (Teske, 2014; Kernder, 2015). It can be stated that due to their requirements, SME bonds are suitable only for bigger Mittelstands-companies, however it is to be expected that these companies are cautious because such bonds' reputation. As a result, SME bonds cannot be seen as an alternative finance source for the majority of SMEs. This leads to dependence on banks and higher financing costs in comparison with listed companies (Schütte-Biastoch, 2011; Seehausen, 2014; Volkart, Vettinger, & Forrer, 2013; Aschauer & Purtscher, 2011; Schlitt, 2014; Söllner, 2011).

The qualitative SME factors above are frequently mentioned when describing SME characteristics. In the following, SMEs are characterized according to the qualitative attributes that usually influence performance and therefore are to be considered when determining indemnity.

Criterion	Impact on performance
Unity of leadership and capital	No access to capital market, dependence on bank finance, higher costs in contrast to public companies
Owner dependence	Conservatism can barrier innovation and progress, success depends on the owner
Lack of specialisation, business model is not diversified	High competitive pressure, margin pressure, stability of business model
Dependence on a few skilled people	Success depends on the skills and capabilities of a few people, endangering the existence of the company
Restricted market, local market	Expansion may be difficult, growth is limited
Dependence on supplier	Increase price pressure
Dependence on customer	Increase price pressure
Close relationship to customer and supplier	The company may lose the favourable conditions when leaving
Flat organisational structure, low level of management	Generalists without special training are in charge and may take decision without expertise
Simple and clear tax-oriented accounting system	Limited reporting system, contains private (owner and family) costs and earnings, limited indication of operating results
Inadequate or undocumented planning	Insufficient monitoring process regarding costs, liquidity and investments
Private and company property are connected, legal form usually implies the full liability	Patents, licences, properties or buildings used for operational purposes and may not be priced at arm's length Private collaterals provided for company loans, influence the interest rate, may not be priced as a guarantee
Flexibility	Increases adaptability to market or customer requirements

Table 2. SME characteristics which impact on performance

This table demonstrates the possible impact on performance that has to be taken into account when determining indemnity. The SME related valuation section defines how to address these characteristics in valuation.

2.3. LEGAL FRAMEWORK

This section considers the legal basis for assessing the withdrawal of shareholders' compensation. This legal procedure applies if there are non-existing or invalid regulations in the articles of association, or if there are disagreements between the outgoing and remaining company shareholders. It is important to understand the legal procedures to address RQ 3, but also to assess the situation in cases where compensation regulations exist.

The statutory regulation primarily affects individual companies. However, case laws also apply to limited liability companies, in analogy with the general principles of company law, (Hueck & Fastrich, 2013; Hülsmann, 2002). According to the Federal Statistical Office (2015), 99.4% of smaller and medium-sized businesses trade either as individual companies or as corporations in the legal form of a German limited liability company (GmbH). (For a classification of the cited judgements according to the instances of the German court system see Appendix I.)

A shareholder may make use of his right to terminate the contract at any time if he wishes to withdraw from the company. He is entitled to this right under Article 723 BGB (German Civil Code), and under Articles 132, 134 HGB (German Commercial Code). A restriction of this fundamental right of termination cannot be effectively agreed (Gregoritza, 2011; Hopt, 2010).

If the company was established for an indefinite period, the notice period is six months to the end of the financial year, according to Article 132 HGB and Article 732 BGB. Following the departure, the withdrawing partner loses his shareholder position (Saenger, 2014), i.e. the existing rights and obligations expire (Schmidt K. , 2011). The terminated shares accrue to the assets of the company *ipso jure*, if the company is continued by the remaining shareholders (von Ditfurth, 2012).

This legal consequence is apodictic and cannot be excluded or modified by agreement (Schäfer, 2013). The departing shareholder is entitled to a severance payment for the loss of his share, i.e. he is authorised to demand payment of the amount he would receive in the event of liquidation and the subsequent dissolution, in accordance with Article 738 (1) sentence 2 BGB.

The compensation claim of the withdrawing shareholder is primarily entitled against the company (Hadding & Kießling, 2012). However, case law and the literature confirm that the shareholders are liable for the company's debt on an ancillary basis, jointly and severally, and consequently with their private assets (Altmeyden, 2013; BGH, 2012). In other words, the remaining shareholders are only liable in the event of the company's insolvency.

2.3.1. OCCURRENCE OF THE COMPENSATION CLAIM

The procedure to determine indemnity takes time. This raises the question of whether the outgoing shareholder is entitled to an interest payment for the period between indemnity maturity and payment. There is no consensus as to the date of which interest becomes payable on the compensation entitlement. There is a body of opinion in the relevant literature that presumes that the interest claim arises on maturity, i.e. at the time of withdrawal (Hopt, 2010). According to prevailing views in relevant publications, the withdrawing partner has to first send a reminder and the interest claim arises only when the reminder is sent (Schäfer, 2013).

The Higher Regional Courts decided the rate of interest on the due compensation, according to the legal default interest rate⁶ (OLG München, 2009; OLG Karlsruhe, 2006; OLG München, 2011; KG Berlin, 2015)⁷. It should be noted however, that in these cases there was no regulation of the interest in the partnership agreements. To avoid the immediate payment of the indemnity at maturity date, a shareholder can agree on different regulations regarding payment and interest rate.

⁶ See Appendix I

⁷ The Higher Regional Court of Berlin is called the Supreme Court.

2.3.2. PROCEDURAL ENFORCEMENT

In the case of owner retirement, the company is obliged to draw up the financial account in order to determine indemnity (Schäfer, 2013). If the remaining owner fails to provide the financial basis, the outgoing owner is entitled to take legal action (Lorz, 2014). The following table shows the process in cases of disagreement between outgoing and remaining shareholders:

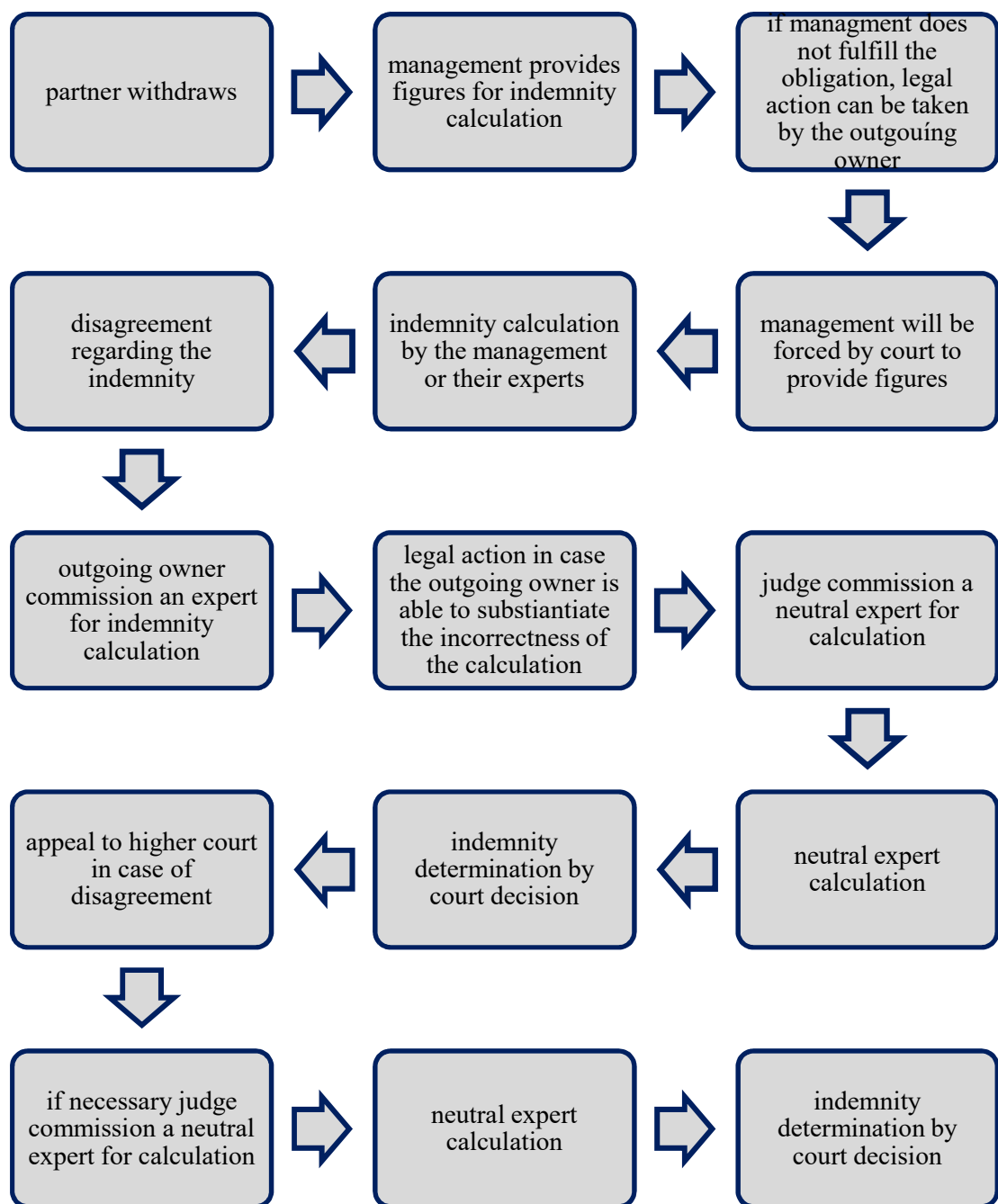


Figure 9. Process in case of disagreement

In practice, it is difficult for the withdrawing shareholder to embark upon this path because he needs the information to take legal action. Sometimes such proceedings take years, and the determination of the compensation amount is made from the data that might be partially incomplete or incorrect. This is more difficult when the company has already fulfilled the material reporting requirements, as provided in Article 259 BGB (Krüger, 2016).

Due to the limitations of investigation, a verification of substantive accuracy cannot take place. Finally, given that he is no longer a shareholder, he no longer has access to additional sources of information and his say and control rights have expired at the date of withdrawal (Schöne, 2012). This situation is further aggravated if the withdrawing shareholder had, prior to his withdrawal, no or only partial knowledge of the financial basis of the company due to his particular field of activity/area of responsibility (e.g. research and development, technology and distribution). In this case, the only option left is for him to arrange for the compensation calculation through the Court, provided there is evidence that is adequately substantiated to resist a lawsuit. Consequently, an expert will be commissioned with the valuation and thus with the determination of compensation (Heidel & Hanke, 2012).

In addition to uncertainties regarding proceeding outcomes, this approach is very time- and cost-intensive for both parties (see figure 9). Therefore, it is sensible to implement indemnity regulation in the articles of association and in particular regulation regarding the financial figures that have to be provided for indemnity calculation. Here, regulations can be specified subject to dispositive law.

2.3.3. GROUNDS FOR COMPENSATION CLAUSES

The following addresses the main reasons for implementing compensation clauses and discusses the main components of these. This is essential to address RQ 3 and to assess the necessity for modifications of existing indemnity regulation due to their possible violation of statutory provisions.

The main reasons are (see also Appendix I):

<p>Long-term existence of the company</p>	<p><u>Permanent income generation</u> for the shareholders (Arens & Tepper, 2013; Matschke & Brösel, 2013). <u>Spare the assets and hidden reserves</u> (Piehler & Schulte, 2014; Großfeld, 2012; Strohn, 2014)</p>
<p>Planning security</p>	<p>Withdrawal can take place at any time; to ensure the <u>return of investment</u> of the invested capital and to <u>plan and manage the liquidity</u> (Wangler & Dierkes, 2006).</p>
<p>Private autonomy to prevent the legal regulations</p>	<p><u>Safeguard the company</u>; immediate payment and full value represent a burden of liquidity that has impact on the strategic development of the company (Ihlau, Duschka, & Gödecke, 2013; Schäfer, 2013) Compensation at full value provides a great incentive for the outgoing owner (Koch A. , 2014; Neuhaus, 1990) therefore the restriction on compensation provides an <u>incentive to remain</u> in the company (Reuter, 1973; Sieben & Sanfleber, 1989; Kindl, 2011). and has a <u>disciplinary function</u> (Wangler, 2001; Kort, 1995) <u>Conflict-reducing, mediation and simplification function</u> (Bacher & Spieth, 2003; Strohn, 2014); the private autonomy offers a wide range of opportunities to implement regulations, that can prevent later disputes by agreeing on the procedure and the components of an indemnity regulation</p>

Table 3. Reasons for compensation clauses

Compensation clauses are included in many, but not all, articles of association (Schmolke, 2014; Arens & Tepper, 2013). According to a survey conducted by Wangler (2009), 25% of companies do not have indemnity regulation in their articles of association. Some only give an indication of determining market value (Jula & Sillmann, 2016). Moreover, the book value or Stuttgart method and regulations that mitigate the liquidity burden are usually the valuation method implemented. Apart from the question of legitimacy of these components, further concrete regulations seem necessary within the articles of association.

Company valuation is complex and requires expertise (Drukarczyk & Schüler, 2009; Ihlau, Duschka, & Gödecke, 2013), which is usually not available in SMEs. Therefore, an external expert experienced in company valuation needs to be commissioned when determining indemnity. Such a valuation causes additional costs and provides no guarantee that the level of compensation is accepted by all parties. This may lead to disputes among the partners due to their different interests and may have a negative impact on corporate management and development. The stipulation of the method to be used, the valuation criteria and the expert to be charged and his role, ensure that the consequences are predictable and may help avoid long, costly legal disputes.

Due to private autonomy, more detailed regulations such as capitalization rate, the relevant basis for valuation - such as assets or earnings (Behringer, 2012) or the specific situation of the company and the impact on the performance (Schütte-Biastoch, 2011) - can be included in the articles of association.

2.3.4. LIMITS OF PRIVATE AUTONOMY

The legal rights of domestic partnerships in particular, are largely dispositive and the law regulates prevailing contractual freedoms (Koppensteiner, 2009; Zöllner, 1992; Kuntz, 2016). This normally subordinates the particular interests to those of the company (Koch A. , 2014; Hey, 2004). In addition, Article 45 GmbHG consolidates the principle of private autonomy and grants limited liability company shareholders an appropriate and extensive sphere of influence (Schindler, 2016). The legislature allows all private companies - in

contrast to public companies such as stock corporations – to regulate the internal relationship and other contracts in principle by the parties. The reasons for this are two specific corporate law characteristics:

- i) shareholder agreements are typically created for the long-term and therefore it is impossible to have perfect content related rules, because not all future events at the time of conclusion of the contract can be foreseen (Kalss, 2012; Fleischer, 2001),
- ii) after the establishment of the company, the principle of majority rules, which means all changes in relationships with each other are regulated at the expense of the minority (Fleischer, 2004; Wiedemann, 1980).

Specific reasons are therefore needed to justify why this agreement should not come into effect (Koppensteiner, 2009; Schmolke, 2014). Consequently, shareholders are free to agree on specific indemnity regulations i.e. that safeguard the existence of the company as long as these regulations are ethical.

2.3.5. UNETHICALITY

Some of these restrictions depend on the assessment as to whether regulations are unethical, as defined in Article 138 BGB. Contractual regulation accords different weightings to the interests of the parties involved so it is not necessarily an indication of unethicity (Ulmer, 1991). However, unreasonable disadvantage of the outgoing owner can result in unethicity (Schäfer, 2013; Koch J. , 2015; Sack & Fischinger, 2011).

In the case of an asset value clause, the Federal Court of Justice (BGH, 1991) decided that there is considerable disparity between the contractual compensation entitlement and the actual entitlement calculated based on full economic value. In the following cases, the Federal Court of Justice took the view that the regulation was unethical: The limitation of compensation to half the book value (BGH, 1989) and to the nominal value of the share (BGH,

1991) and a small percentage amounting to 20-30% of the market value of the share (BGH, 1993). Hadding and Kießling (2012) argue that compensation must be at least 60% of the full value (see introduction). Mecklenbrauch, (1999) and Schäfer, (2013) argue that the threshold should be set at 2/3rds of the real value.

Moreover, literature points out that it is not only the percentage disproportion that is decisive, but also the absolute deviation from the real value (Butz-Seidel, 2004). The absolute amount depends on the proportional share of ownership and the full value of the company. In light of this, the difference in amount becomes fully apparent and an assessment can be made as to whether this magnitude renders it unreasonable for the shareholder to exercise his right of termination. However, there are no clearly defined lower limits determined by case law, as to when this is the case.

The Federal Court of Justice provides indications of the criteria, based on the divergence between the compensation amount and the real value of the shares. In addition, in consideration of the remaining partners' concern to protect their assets, there should not be unreasonable discrepancy between the compensation amount and the full value of the shares, as required by law (BGH, 1993; Mansel, 2015).

An assessment should be made in each individual case of whether the requirements relating to the inapplicability of the contractual compensation clause are fulfilled. In these individual assessments, account has to be taken of the following criteria (BGH, 1993; Schäfer, 2013):

- i) the extent of the discrepancy between the contractual and the legal compensation
- ii) the grounds for withdrawal
- iii) the withdrawing shareholder's stake in the development and the success of the company,
- iv) the duration of the membership of the withdrawing partner.

2.3.6. LEGAL CONSEQUENCE

Time of occurrence is crucial to the legal consequences. If the unreasonable disadvantage already occurred at the conclusion of the agreement, then the outgoing partner is entitled to full value (Armbrüster, 2015). If the economic disadvantage occurs in the course of time, a supplementary interpretation is needed (BGH, 1993).

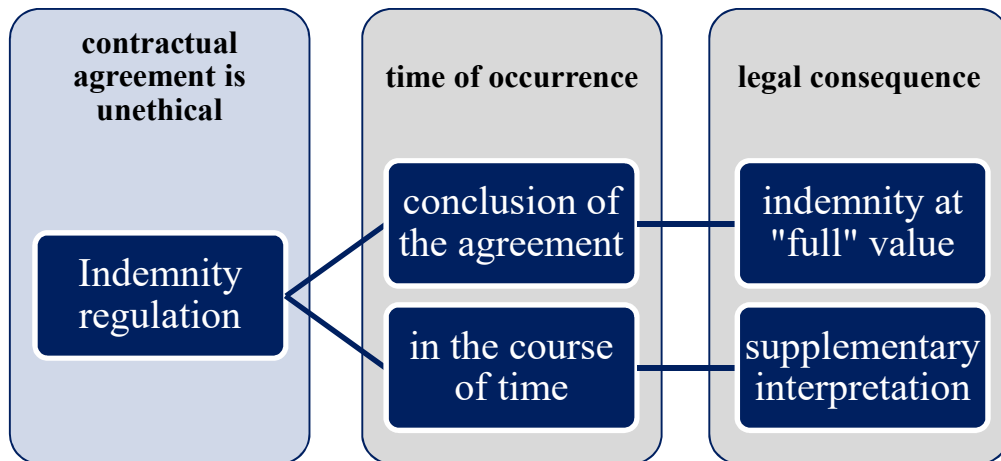


Figure 10. Different legal consequences

This means that any compensation regulation, as required by law in accordance with Article 738 BGB, that was valid at the time of the conclusion of the partnership agreement, has caused a large discrepancy to arise over time due to divergence between the compensation amount and the full value of the shares. Thus, the partner who wishes to withdraw is restricted in his freedom of choice (Schäfer, 2013).

Neither the full value nor the supplementary interpretation is exactly what the partners intended at the time of the conclusion of the agreement. A modified compensation regulation should take into consideration the interests of the contracting parties, thus preventing the withdrawing partner from being excessively disadvantaged and the remaining partners from being obliged to pay the full value. Hence, there remains uncertainty concerning the formalization of agreements, especially in view of *a posteriori* assessment of the parties' intention.

In the case of a deferral, the compensation claim is subject to interest. The withdrawing partner has to be placed in the same position as if he had invested the compensation claim with customary conditions at the time of his withdrawal (OLG Dresden, 2000). It can be assumed that long-standing interest-free or low-interest agreements on the repayment of compensation claims place the withdrawing partner at a disadvantage in an inadmissible manner.

Therefore, a compensation clause may result in inadmissibility due to various provisions that deviate from applicable law, such as a combination of limitations on the level of compensation, payment deferral or the interest rate and maturity of the claim. If the contractual compensation clause is determined as unethical, the pertinent legal regulation takes its place.

The supplementary interpretation of the contract or a contractual adjustment in the sense of its reduction to a legally permitted core no longer comes into question. This means that compensation regulation under the stipulations of the articles of association entail the withdrawing shareholder to be compensated at full value (BGH, 1991).

2.4. VALUATION METHODS

This section details both historic and current valuation methods used in determining severance payments. Over the past seven decades, the concept of business valuation in Germany has changed. The following summary shows its development.

	Phase 1	Phase 2	Phase 3	Phase 4
Time period	Until approx. 1959	Approximately 1960-1970	Approximately 1971-1985	From 1985
Concept of the enterprise value (V)	V is objective determinable and therefore independent of the decision point of the investor and purpose of the provision: assets create value	V is recognized as being independent of the strategies and of the decision point of the investors because yield creates value	V is a subjective marginal price of the investor, which marks the limit of the concessions of the ownership rights	DCF-methods: enterprise value corresponds to the valuation of a potential market price under the premise that the market disposes the expectations of the investors
Value category	Asset value	Earning or income value, asset value is used as a correction parameter	Earning or income value	Total company value according to entity approaches; value of equity under equity approach
Calculation mode	Payments for reconstruction need individual assets at replacement cost	Earning or income value as present value of future surpluses attributed to the owners	Earning or income extracted from the enterprise	Discount of different defined achievable surpluses with discount rates, which include risk premiums driven by the market
Valuation and purpose of valuation	No recognizable differentiation of purposes	Marginal price from investors can diverge; problem of the arbitrary value is detected	Earning/Income values are subjective marginal prices for owners; clear purpose orientation	Corporate values or rather than values of equity are strategy dependent; clear purpose orientation

Table 4. Concept of business valuation (Drukarczyk & Schüler, 2016, p. 9)

There is no legislative codification in Germany as to how a company valuation should be carried out (Lauber, 2015; BGH, 1993; BVerfG , 2012). An exception is the Valuation Law, which is applicable to inheritance tax or gift tax calculations. In addition, there are standards from professional groups i.e. auditors and tax consultants that have authored guidelines for the execution of company valuations (Institut der Wirtschaftsprüfer, 2008). Given this situation, a plurality of valuation methods are used in Germany (Ernst, Schneider, & Thielen, 2012; Barthel, 2010; Fleischer, 2016; Mandl & Rabel, 2015; Henselmann & Barth, 2009).

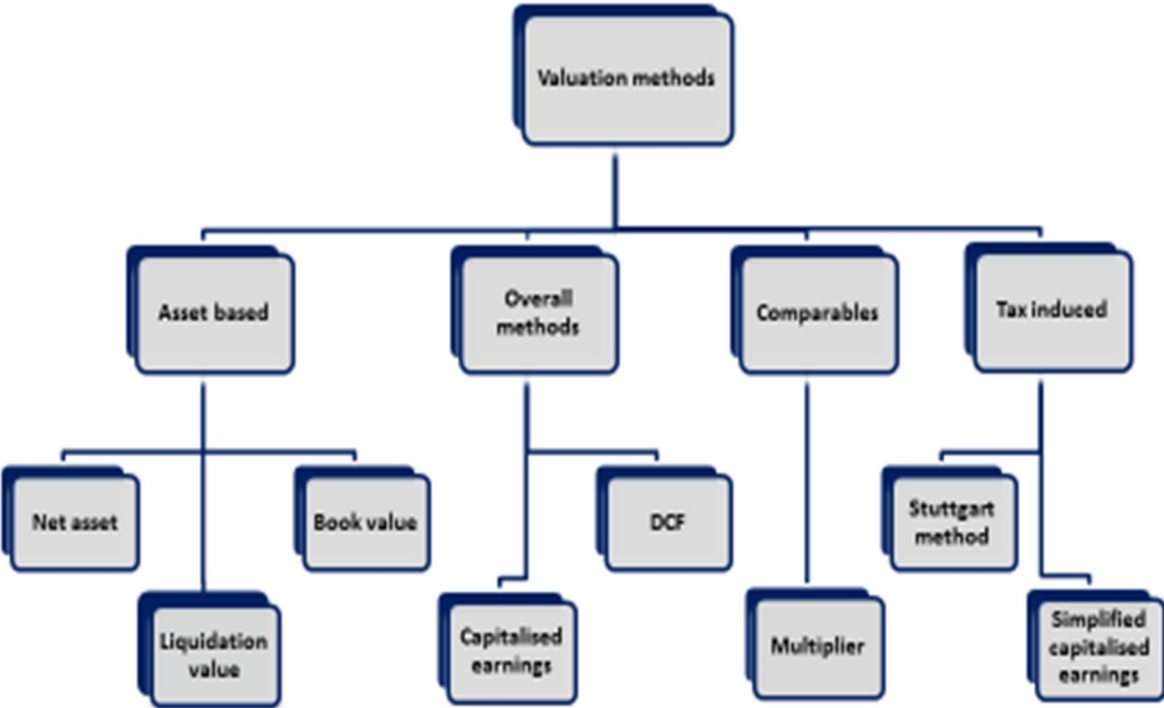


Figure 11. Valuation methods synthesized from Mandl and Rabel (2015) and Ihlau, Duschka and Gödecke (2013)

2.4.1. ASSET BASED METHODS

Net asset based approaches are predominately implemented in articles of association when determining the indemnity of an outgoing owner. In Wangler's (2009) study, 60 randomly chosen compensation regulations were assessed. In 60% of all cases asset based valuation methods were included in the articles of association. Numerous academics and practitioners confirm that many indemnity regulations contain net asset methods (Butz-Seidel, 2004; Arens & Tepper, 2013; Kirchdörfer & Lorz, 2012; Ihlau, Duschka, & Gödecke, 2013; Ballwieser & Hachmeister, 2016; Wangler & Dierkes, 2006). There are some advantages of net asset methods and so they are incorporated in indemnity regulations, especially for SMEs.

2.4.1.1. Book Value/Net Asset Value

The book value method has the following advantages:

- It is a balance-sheet-based method that includes the assessment of individual assets and liabilities items in which the continuation of the company is assumed (Hasler, 2013). Assets and liabilities of the company can therefore be easily determined, based on the existing balance sheet (Ihlau, Duschka, & Gödecke, 2013).
- The book value results by netting out the added assets with the added liabilities which corresponds, when accounted correctly, with the accounting equity. This means that the assumption or input factors are justified by existing documents on the individual situation of the company. Valuation based on actual transparent figures suggests high reliability (Kuhner & Maltry, 2017).
- Future development of the company, and therefore forecasts that are subject to uncertainty, are not taken into account in this method (Mandl & Rabel, 2015).
- The complex formulas of other valuation methods are not needed.

This method also has the following disadvantages:

- Even if the continuation of the company is assumed by accounting rules, the book values of current assets, such as inventory or receivables, are not assessed on market values. Existing accounting options and different depreciation rates lead to minimal book values of many fixed assets, although they have substantial market value and are crucial for generating company earnings (Drukarczyk & Ernst, 2010; Schütte-Biastoch, 2011).
- Book values, even if correctly accounted, are historical costs minus depreciation and issues such as hidden reserves or losses have not come to fruition (Großfeld, 2012) and may not necessarily have a connection to the current value of the company or the replacement value (Kranebitter, 2012; Koch A. , 2014).
- SMEs usually have tax induced accounting (Zieger & Schütte-Biastoch, 2008; Peemöller V. , 2014; Aschauer & Purtscher, 2011; Busse von Colbe, Crasselt, & Pellens, 2011) and adjustments may be inevitable to identify the ‘real’ value of the assets.
- This method considers tangible assets and fails to account for internally generated intangible assets, such as goodwill, trademarks, services, quality, management skills and human capital (Behringer, 2012; Langguth, 2008; Kunath, 2014). Intellectual and industrial property rights are also disregarded (Ihlau, Duschka, & Gödecke, 2013). This is particularly important for SMEs because they are significant drivers of technology and innovation (Rammer, Gottschalk, Peters, Bersch, & Erdsiek, 2016). 42% of all SMEs implemented a product or process innovation in the three-year-period from 2012-2015. This is the highest figure in Europe (Expertenkommission Forschung und Innovation, 2016). SME research and development expenditure increased by 4.8% between 2003 and 2013, in comparison with large companies (Astor, Rammer, Klaus, & Klose, 2016). Overall, SMEs are often more innovative than previously assumed. 84% of all SMEs are engaged in innovation activities (Maaß & Führmann, 2012).

The net asset value has the following advantages:

- The simplicity of application; essentially, company value is determined by the sum of the company's existing assets (substance) minus existing debts (Behringer, 2012).
- It is a retrograde procedure, i.e. the consideration of the values is determined on past figures (Mandl & Rabel, 2015) and these figures are available.
- Estimating future company development is not needed.

This method also has the following disadvantages:

- Traditional net asset value arises from reconstruction and replacement value, i.e. the sum of all expenses that are necessary for an exact replica of the company to be valued (Ernst, Heyd, & Popp, 2014). Even if reconstruction value appears to be conceptually simple, it is often misunderstood and it is easy to generate incorrect values. One of the main challenges for proper application of the method is that all assets have to be valued individually on a replacement cost basis (Matschke & Brösel, 2013; Kappenberg, 2012) and the allegedly simple procedure becomes time consuming and difficult.
- Estimating replacement costs consists of many factors, such as market volatility and transparency of the market for specific fixed assets (Kuhner & Maltry, 2017). SMEs in particular often operate in market niches and their machinery and other assets are individually built according to their requirements (Ihlau, Duschka, & Gödecke, 2013) and hence the identical cost reproduction of a company is difficult (Kuhner & Maltry, 2017; Schütte-Biastoch, 2011).
- The same disadvantage as the book value method can be applied for internally generated intangible assets (Becker D. , 2005; Kunath, 2014).

All asset-based methods disregard self-generated intangible assets. This can lead to a lower company value and the potential for unethical determination of indemnity. Companies are complex and unique conglomerate of tangible and intangible assets (Matschke & Brösel, 2013; Bieg, Kußmaul, & Waschbusch,

2009). All these assets have to interact and are significant in generating income or cash flows and therefore value, in particular for SMEs (Schütte-Biastoch, 2011; Behringer, 2012). The value adding effects may be wasted if the whole is divided into individual parts (Matschke & Brösel, 2014; Schröder S. , 2014; Kranebitter, 2012; Keller M. , 2015). The principle that “*the whole of a business is greater than the sum of its parts*” (Monks & Reed Lajoux, 2011, p. 58) also has to be applied to SMEs and the individual parts should not be considered in valuation (Kuhner & Maltry, 2017).

Companies can use the discretion granted under German Gap for all accounting base values (Drukarczyk & Ernst, 2010; Bieg, Kußmaul, & Waschbusch, 2009) and the principle of commercial caution has to be respected, according to Article 252 HGB. Therefore, the level of risk assessment of values and their reliability is seen as critical (Schacht & Fackler, 2009; Lütkeschümer, 2012; Schröder S. , 2014).

Moreover, the balance sheet of an SME does not necessarily include all assets and liabilities; it may even be the case that the most crucial assets for generating earnings are excluded. This is because a clear distinction between a company and private property does not exist (Keller M. , 2015; Institut der Wirtschaftsprüfer, 2014; Keller & Hohmann, 2004; Ihlau & Duschka, 2012). This is evident with patents, licences, properties or buildings that are owned privately and used for operational purposes.

Supposedly, the greatest advantage of all asset based approaches is to avoid the uncertainty of forecasting future development. However, this is also one of its main drawbacks. Future prospects and in particular, changes are disregarded and this is crucial in case of retirement for determining the compensation. It does not consider the degree of exploitation of the firm’s assets and the ability to generate earnings for the remaining partners as a whole. By determining the net asset value through addition of the individual values, this method violates the basic principles of the valuation unit (Langguth, 2008; Mandl & Rabel, 2015; Behringer, 2012).

Despite the disadvantages, asset based methods are included in many indemnity regulations. This method is one of the most vulnerable to disparity between compensation and full value in court cases and often leads to unethically (BGH, 1989; BGH, 1993; OLG Frankfurt, 2011; OLG München, 2009; OLG Frankfurt, 2009; LG Mönchengladbach, 2012). The main reason is that intangible assets and earnings are not considered (Butz-Seidel, 2004; Schöne, 2012).

Estimation of certain assets and adjustments remains unavoidable when using asset-based methods. So combined with the risk of unethically, this method is only applicable in certain situations, circumstances and with certain kinds of business. Asset-based methods are often more suitable for companies whose value is fundamentally dependent on its tangible assets, such as real estate or land (Kranebitter, 2012; Lorenz, 2015; BGH, 1998).

2.4.1.2. Liquidation value

As with the asset value method, in liquidation value the assets and liabilities are valued individually, then added and balanced (Sieben & Maltry, 2015). However, assessments for liquidation value follow a particular procedure. Unlike the approach for net asset value and other methods, it is not evaluated according to the going-concern-principle, but is made on the assumption that the company will be dissolved and the individual goods have to be sold (Behringer, 2012). These are the disposal values for the assets and the individual realisable values for liabilities.

Higher compensation may result with liabilities due to a prepayment penalty. Activated and passivated values cannot be removed from the balance sheet because, according to German commercial law, all values must be accounted with the going concern principle (Ihlau & Duschka, 2015). The determined values have to be deducted by any social plan liabilities, the cost of the realization of assets or potential tax burden (Seppelfricke, 2012).

Break-up values are usually lower than with going concern values (Beckemper & Hellmann, 2013; Mandl & Rabel, 2015) and taking into account the additional costs mentioned for liquidation, liquidation value is the minimum value of a company. This is common sense in business administration but also in case law (Wollny, 2012; Drukarczyk & Ernst, 2010; Schröder S. , 2014; OLG Düsseldorf, 2009; OLG Frankfurt, 2015; OLG Rostock, 2016; Großfeld, 2012). There is a logic to this view. It is assumed that the rationally acting entrepreneur does not continue the company when the going concern value is lower than the liquidation value (Ihlau & Duschka, 2015).

Consequently, under these assumptions, the use of the liquidation of the company is only sensible when the liquidation value might be higher, even though SME entrepreneurs do not exclusively seek to maximize profit (Becker & Ulrich, 2015; Schütte-Biastoch, 2011). To sum up, liquidation value has relevant meaning in corporate valuation.

Despite the development of valuation methods in business administration, asset based methods are still important in the following cases:

- for valuation in certain industries such as land (BGH, 1998) power grids (Ständer, 2008; Ballwieser & Lecheler, 2007) local surgeries (Sander, 2014; Grün & Grote, 2015) or tax consultant offices (Winter, 2009; BGH, 2011)
- if they are still used for SME valuation (Fischer-Winkelmann & Busch, 2009; Helbling, 2015)
- to determine operating and non-operating assets (Sieben & Maltry, 2015; Ihlau, Duschka, & Gödecke, 2013)
- for tax and accounting regulation (Ernst, Heyd, & Popp, 2014; Schmeisser, Görlitz, Spree, Clausen, & Schindler, 2008; Schröder S. , 2014; Mandl & Rabel, 2015)
- if they are included in existing articles of association for indemnity calculation (Ballwieser & Hachmeister, 2016; Oppenheim, 2011).

Regardless of these reasons, asset based methods are not suitable in general for the indemnity determination of SME owners as there are many disadvantages associated with this method. If the liquidation value is applied in the calculation of non-essential assets, it is considered to be a minimum value and only has to be determined when a company's life is limited (Schütte-Biastoch, 2011). Therefore, it is assumed that the 'real' or 'fair' value, that takes into account the interests of the parties, is higher. Another valuation method must be used to determine indemnity that is in line with the dominant opinion in business administration and corporate law.

2.4.2. TAX INDUCED METHODS

2.4.2.1. The Stuttgart Method

The 'Stuttgart Method' was used by fiscal authorities in the assessment of non-listed company shares in the framework of donations and for calculating inheritance tax. It was abolished as of 1st January 2009 in response to a judgment by the Federal Constitutional Court dated 7th November 2006 (BVerfG, 2006). Thus, the Stuttgart Method is no longer applied for tax assessment purposes. However, it is still extant in terms of its implementation in the articles of association for the determination of compensation (Kirchdörfer & Lorz, 2012; Wangler & Dierkes, 2006). The cornerstones of the Stuttgart Method are:

- the assets - the basis for determination are the values presented in the tax balance sheet
- the average yields of the past three years preceding the valuation date.

Mixed valuation methods can be as good as their components (Schröder S. , 2014). This is evident when examining the Stuttgart Method, which is based on assets and earnings. The main criticism of book values can also be applied to the Stuttgart Method. Moreover, the assets are overweighed in this method. The weaknesses of book values methods cannot be removed by the partially determined value and lesser weighting from earnings. This is particularly the

case as past earnings are not questioned but transferred in a linear fashion to the future. The earnings of the last three years cannot determine the company's sustainable future income, but this is common sense according to current valuation theory (Karami, 2014; Metz, 2007; Ballwieser & Hachmeister, 2016; Kuhner & Maltry, 2017; Voigt, Voigt, Voigt, & Voigt, 2005; Schütte-Biastoch, 2011).

This is because possible economic changes or market shifts such as industry cycle, market growth or contraction, life of assets, product cycle and lengths in advantage of products or services are not considered. The implications of these are not taken into consideration. This is heightened in cases where the outgoing owner has a relationship with the customers and these effects have to be evaluated to ensure appropriate revenue projection. Therefore, the consideration of these influences for future development is indispensable.

Evaluation on the basis of financial substance and the consideration of historical business figures (without assessment of the present and the future) are the two key criticisms of the Stuttgart Method. The business literature rejects the overall approach of the Stuttgart Method for company valuation (Großfeld, 2012; Ballwieser & Hachmeister, 2016; Mandl & Rabel, 2015). Given its abolishment initiated by the legislator and the substantiated and comprehensible criticism of it in literature, this method is not suitable for indemnity determination, even though it is still implemented in many articles of association.

2.4.2.2. Simplified Capitalised Earnings Method

The Federal Constitutional Court decided that the Stuttgart Method fails to determine correct values for the inheritance tax calculation (BVerfG, 2006) and so the legislator followed business administration developments valuation methods (see section 2.4.). One main component is that the degree of exploitation of their assets is the basis of value, i.e. earnings. Another impetus was to introduce a method that simplifies the calculation (Kappenberg, 2012). However, many authors, such as Drukarczyk and Ernst (2010), Schröder

(2014) and Mannek (2012), suggest the legislator failed. The adjustments that have to be made, i.e. addbacks and deductions, do not simplify the valuation process (see Appendix II) and the contradictions are unmissable.

Particularly when valuing subsidiaries, the value can, but need not be valued according to the SCEM, and in cases where earnings are negative, the net asset value is to be applied (Bundesministerium der Justiz und Verbraucherschutz, 2016). Determining an asset's market value two years prior to the valuation date also increases complexity (see Appendix II).

However, the main criticism of the SCEM is that this method, using earnings as a basis for calculation, is past oriented (Wollny, 2012; Wegmann & Wiesenhahn, 2015; Drukarczyk & Ernst, 2010; Schröder S. , 2014). The adjusted historical earnings of the last three years are multiplied by the capitalization factor (see Appendix II). This means that the past earnings are transferred into the future and the reservations in this respect are identical to the SM.

The second criticism is that the capitalization rate is the same for every company and is an inadmissible typification from a business administration perspective (Schulte, 2010; Lorenz, 2015; Kraft & Kraft, 2014; Schröder S. , 2014; Kappenberg, 2012). The individual risk factor of base interest rate plus risk factor of 4.5% is not considered (see Appendix II). The past earnings and the uniform interest rate are an inherent simplification of this method. A comparison of the SCEM and CEM is provided below.

Comparison Criteria	Simplified Earnings Method	Capitalised Earnings Method
Earnings Base	The anticipated earnings are determined on the basis of the last three years and then projected into the future.	Determination of future earnings on the basis of a planning.
Base Rate	Specified once a year by the Federal Ministry of Finance on the basis of long-term German government bonds	Determined on the basis of a future yield curve using the Svensson method
Market Risk Premium	Statutory market risk premium of 4.5% p.a.	Determined according to the CAPM or individual approach
Beta Factor	The SCEM takes into account neither the Beta nor a debt burden, therefore it proceeds from an unindebted Beta of 1.0.	Determined from the existing risk structure of the company compared with a peer group
Tax Burden	Calculated at a flat rate 30%	The actual tax burden of the company is taken into account
Growth Reduction	Growth is not taken into account	Normally a growth rate (GR) is applied
Reductions for upcoming change in earnings performance	No deductions are made, for instance, with regard to remediation needs	Can be taken into account in terms of the detailed planning phase
Change of finance structure	No consideration	Taken into account in terms of the detailed planning phase
Earnings from equity investments	The value is determined separately, also in the case of negative of low earnings	Calculation based on total earnings, thus not taken into account separately
Young Assets (under two years)	Separate valuation and assessment	No separate valuation, since these assets contribute to the generation of earnings.

Table 5. Comparison of the two income approaches

The relatively low calculation rate has raised concern in literature and practice. The enterprise values are considered to be overstated (Kappenberg, 2012; Müller M. , 2016; Schulte, 2010; Ihlau, Duschka, & Gödecke, 2013; Kraft & Kraft, 2014). In the meantime, the legislator has come to the similar view (Ländererlass zum Bewertungsgesetz, 2011) that other business valuation

methods are allowed when apparently incorrect values are generated through the use of the SCEM (Schröder S. , 2014; Preißer, Hegemann, & Seltenreich, 2009; Lorenz, 2015).

Most criticism comes from the business administration and tax related literatures (Wollny, 2012; Kappenberg, 2012; Schulte, 2010; Lorenz, 2015; Kraft & Kraft, 2014; Ihlau, Duschka, & Gödecke, 2013). However, opinions about indemnity determination are not available due to the short timeframe since the indemnity regulation's introduction.

The only progress since introducing the SCEM is the benefit of the whole company being taken into account for valuation. However, the existing shortcomings of this method are obvious and make it difficult to come to an adequate SME valuation. Moreover, possible implications deriving from an owner who is no longer able to contribute to the benefits of the company are not taken into account. These preconditions are similar in both cases. Therefore, the SCEM is not suitable for inheritance tax or for indemnity calculation. Given that, it is understandable that this method is criticized in literature. Nevertheless, as this method has replaced the Stuttgart Method, it could play a role in indemnity regulations and further investigation and dissemination of insights is necessary.

2.4.3. TOTAL VALUATION METHODS

Total valuation methods (TVM) are conceptually similar. They focus on estimated future benefits that can be generated from the whole company as a continuing unit (Ernst, Heyd, & Popp, 2014), either as earnings or cash flow. The use of the company as a whole for valuation is supported by a broad consensus, both in theory and in practice (Ballwieser & Hachmeister, 2016; Matschke & Brösel, 2014). The company forms an evaluation unit that consists of operational or essential tangible and intangible assets and is considered as an 'investment object' (Kunath, 2014; Hering, 2015).

In the case of future-oriented valuation methods, the financial surpluses are discounted by the capitalization rate on the valuation date. To ensure a consistent comparison of investment alternatives and thus sensible results, it is necessary to create congruency between variables and the properties to be compared (Zwirner, 2012). Comparability refers to the values of the valuation formula numerators and denominators. Consequently, the capitalization rate has to be consistent with the surpluses to be discounted, particularly with regard to significant structural features such as risk, liquidity and maturity (Moxter, 1983).

The imperative of equivalence of numerator and denominator in business valuation is generally acknowledged (Drukarczyk & Schüler, 2016; Institut der Wirtschaftsprüfer, 2014; Kuhner & Maltry, 2017; Ballwieser & Hachmeister, 2016). A general view of the components of the principle of equivalence and its relevant characterizations are set out in Appendix II.



Figure 12. Principles of equivalence following Ballwieser and Hachmeister (2016, P. 89)

The value of a business is determined on the valuation date, i.e. the present values of future streams are discounted using an appropriate capitalization rate. In this context, the two best-known and accepted methods are the Capitalisation Earnings Method and the DCF-Method (Ballwieser & Hachmeister, 2016; Matschke & Brösel, 2013; Drukarczyk & Schüler, 2016; Baetge, Niemeier, Kümmel, & Schulz, 2015). The respective differences are shown in Appendix II.

The following requirements are necessary to implement these valuation methods (see Appendix II):

- projection of earnings or cash flows divided in detailed and residual phase
- determination of:
 - capital structure
 - operating and non-operating assets
 - base rate
 - risk premium
 - growth rate
- discount of the benefits from the detailed phase
- discounting the income streams of the residual phase
- borrowed capital to be valued to market conditions, depending on the equity or entity method

From these, the main advantages and disadvantages of these methods can be derived.

Future income or cash flows have to be estimated to perform valuation by using TVM (Ballwieser & Hachmeister, 2016). Therefore, the question of the company value corresponds to the question of company future benefits. The future is uncertain, however, both the company itself, as well as exogenous factors, can lead to unpredicted development (Hering, 2006). This can lead to the following problems; how to assess the basis to be projected and how to predict the future benefit. This requires a definition of earnings or cash flows.

Even though there are different definitions, a clear demarcation is available for cash flows. In Germany earnings are defined according to identical accounting standards (see table 24), however accounting and valuation options available under German Commercial law can lead to differences. Distinction is made by the beneficiary of the attributed cash flows.

Two sorts of capital provider exist; shareholders and debt capital lenders (see Appendix II). These cash flows can be influenced by investments and low cash levels could signal weak performance (Kranebitter, 2012) even if, in the long term, the return on investments increases the business value. The intended investments are crucial for valuing a business. In this context, knowledge of the investment cycle and recognition of postponed investments are central for the appraiser.

Historical results do not matter for these valuation methods, but future benefits do. One of the main disadvantages of the total valuation methods is that future developments have to be estimated. This leads to the following issues when using TVM:

- Projections of long horizons are required and therefore the forecast problem cannot be avoided (Hering, 2006; Aschauer & Purtscher, 2011).
- Predictions cannot be guaranteed and unforeseen events and circumstances can cause large deviation from the projected figures.
- The intended business policy regarding products, markets, production, services, research and development, procurement and pricing has to be considered (Drukarczyk & Ernst, 2010; Ballwieser & Hachmeister, 2016; Schacht & Fackler, 2009).
- Macro-economic development, consumer behaviour and competition have to be taken into account (Schütte-Biastoch, 2011; Kuhner & Maltry, 2017; Kranebitter, 2012).

In summary, the earnings or cash flows cannot be determined precisely and therefore have to be estimated based on assumptions and premises, which leads to uncertainty. A competent and experienced evaluator is able to manipulate this input and can provide the desired value (Karami, 2014; Kunath, 2014). Consequently, different appraisers could generate questionable results and in so doing show the inherent subjectivity of future oriented valuation methods.

This susceptibility to possible evaluator bias is higher with SMEs. This is because of the following characteristics of SMEs:

- Historical results can show what has happened rather than what is happening. However, an analysis of the companies' historical and current development is necessary to make realistic projections for business valuation. This is recommended by many authors (Drukarczyk & Schüler, 2016; Schacht & Fackler, 2009; Keller M. , 2015). The financial analysis has to provide information such as market position, earning power, operating and non-operating assets, indebtedness and competition (Zwirner, 2012; Naumeier, 2015; Kranebitter, 2012; Drukarczyk & Schüler, 2016) and the recent annual statements are usually the basis and starting point for this analysis. In the context of SMEs, these statements are influenced by simplifications that are granted due to their size, according to Article 267 und 326 HGB (Bundesministerium für Justiz und Verbraucherschutz, 2015).
- A mixture of private and business expenditure, assets, expenditure and earnings such as costs for private use of cars or phones.
- Annual statements that are usually tax-oriented (Busse von Colbe, Crasselt, & Pellens, 2011; Fischer-Winkelmann & Busch, 2009; Nickert & Kühne, 2014). With SMEs in particular the non-market oriented wages of the shareholder or their family members and inadequate rents for private owned operational property can be found in annual accounts (Zwirner & Zimny, 2015; Behringer, 2012; Keller M. , 2015; Ihlau, Duschka, & Gödecke, 2013). Aggressive tax-induced strategies and expenses can lead to understated company values.

The private and business spheres need to be separated to have an appropriate business valuation unit (Zieger & Schütte-Biastoch, 2008; Aschauer & Purtscher, 2011; Bucher & Schwendener, 2007; Hackspiel & Fries, 2010; Peemöller V. , 2014) and adjustments are necessary to have a reliable basis that generates the earnings or cash flows (Kappenberg, 2012; Schütte-Biastoch, 2011; Aschauer & Purtscher, 2011).

To offer realistic estimations, it is crucial that the evaluator has some knowledge of accounting, valuation practice and the industry of the company to be valued. Nevertheless, objectivity cannot be assumed due to the necessary adjustments and therefore, for SMEs, the main disadvantage of TVM is its subjectivity.

Another disadvantage of these methods can be seen in the inherent simplification of capital structure (Tinz, 2010), i.e. changes in the capital structure over the course of time are not taken into account. For SMEs, however, this limitation does not come into effect, since large changes are relatively seldom (Zitzelsberger, 2015; Keller & Hohmann, 2004; Helbling, 2015).

This is understandable as SMEs have a longer-term strategic focus than listed companies (May, 2009; Bucher & Schwendener, 2007; Hackspiel & Fries, 2010; Schoberth & Ihlau, 2008) and the main source of equity is usually the shareholder and their families (Matschke & Brösel, 2013; Ihlau, Duschka, & Gödecke, 2013; Fahrenschon, Kirchhoff, & Simmert, 2015), with debt finance usually provided by banks (Schlitt, 2014; Söllner, 2011).

Some authors (Heesen, 2014; Pfeiffer, 2014; Brück & Sinewe, 2010; Bieg, Kußmaul, & Waschbusch, 2009) argue that defining the capital structure with the DCF-method and particularly the WACC-method is ineffectual because it requires more information and assumptions than other valuation methods, such as balance sheet, profit and loss statement, cash flow statements and investments (see Appendix II). The capital structure is needed to determine

value by using the corresponding formula (see Appendix II). Some of the already mentioned authors (Heesen, 2014; Bieg, Kußmaul, & Waschbusch, 2009) and others (Sieben G. , 1995; Schacht & Fackler, 2009; Dreher, 2010) emphasise that the CEM is most suitable for companies because it is easier and more practicable to apply.

This view and reasoning is surprising. It is acknowledged that if the same assumptions are used, all total valuation methods (equivalence of methods such as CEM, DCF-methods either equity or entity) lead to the same results (Kranebitter, 2012; Drukarczyk & Schüler, 2016; Aschauer & Purtscher, 2011; Ballwieser & Hachmeister, 2016). This implies that projected future development is founded on the same information, such as investments, capital structure and thus debt costs. Therefore, for a sound and qualitative valuation, all inputs needed for the different total valuation methods are identical, otherwise the same results can only be obtained by chance (equivalence of the TVM).

Nevertheless, in Germany, the CEM is preferred, particularly by the courts (BGH, 2003; OLG München, 2009; OLG Stuttgart, 2012; OLG Frankfurt, 2012; OLG Düsseldorf, 2012), although both methods are seen as equivalent and both are accepted (Naumeier, 2015; Ballwieser & Hachmeister, 2016; Kranebitter, 2012; Drukarczyk & Schüler, 2016; OLG München, 2014).

TVM is mainly accepted in business administration and law because the company is regarded as a valuation unit and is the basis for value. The value is based on the company as a going concern and the ability to generate income flows from their tangible and intangible assets (Ernst, Heyd, & Popp, 2014; Ballwieser & Hachmeister, 2016; Matschke & Brösel, 2013). Therefore, the future expectations of the company should be considered. Market changes or economic influences on earnings or cash flows can be taken into account in the projections of the company.

These assumptions are based on observations of relevant markets, including regional specifics, size, growth trends, market share, company and market risk characteristics. This is seen as the main advantages in comparison with other valuation methods (Schacht & Fackler, 2009; Kunath, 2014; Ballwieser & Hachmeister, 2016; Drukarczyk & Schüler, 2016).

The results of valuation for SMEs are as good as the data and information available and the assumptions and premises used (Drukarczyk & Schüler, 2016; Naumeier, 2015). Difficulties and problems can arise when unreliable measures are used for forecasting, such as interdependencies, contacts of the owner, transferable earning power into the future or the mixture of private and operating assets (Keller M. , 2015; Ihlau & Duschka, 2012). These implications have to be considered, in particular with SMEs, when people important to the generation of income leave the company.

The stated subjectivity of TVM offers the flexibility to respond to changes that are necessary in situations such as retirement from the company, i.e. individual characteristics and adjustments can be implemented (see SME related valuation). Different growth periods can be planned and dynamic or stable developments can be projected. Furthermore, models such as coal mining⁸, that assume a decrease in earnings or cash flows from a certain point in time can be accommodated, as can business models that are subject to termination in the future. Company investment policies are considered and financial development and stability can also be projected (Kunath, 2014; Drukarczyk & Ernst, 2010).

In addition to the CEM, the main advantage of the DCF method is that value is based on cash flows and not earnings. Consequently, the valuation cannot be influenced by accounting rules. The TVM is predominantly seen in literature as a theoretically sound approach for company valuation, both in business administration (Koelen, 2009; Kranebitter, 2012; Hasler, 2013; Schütte-Biastoch, 2011; Dietrich & Dierkes, 2015) and in law (Wüstemann, 2013;

⁸ In Germany the remaining coal mines are to be closed by 2018 due to the Government's decision from 2007.

Fleischer, 2015; Hüttemann, 2015; Großfeld, 2012). This is because it is rooted in investment theory (Langguth, 2008; Matschke & Brösel, 2013). These methods are generally used in legal disputes over the determination of indemnity (Hachmeister, Kühnle, & Lampenius, 2009; Schröder S. , 2014; Koch A. , 2014; Lauber, 2013).

2.4.3.1. Discount rate

The determination of the discount rate has crucial importance and is one of the most controversial issues in literature, especially when valuing SMEs. The business value can be determined by discounting the surpluses listed in the numerator (Ernst, Heyd, & Popp, 2014). The determination of the discount rate is a major business valuation challenge, because small modifications to a discount rate lead to significant differences in company value (Munkert, 2005; Bark, 2011) and thus in severance payments for the withdrawing shareholder. If the discount rate increases, then the value of the company declines and conversely, a decreased discount rate increases the corporate value. Behringer (2012) notes that, *ceteris paribus*, a halving of the discount rate results in a doubling of the company's value.

2.4.3.1.1. Base rate

In capital market models, such as CAPM (see Appendix IX) the discount rate is usually made up of two components; the risk-free base rate and the risk supplement. The risk-free base rate corresponds to risk-free alternative investment maturities (Scheld, 2013), i.e. the amount of income the investor can generate from an investment with virtually no risk of default. However, this comparison is only theoretical because, in practice, even securities and government bonds are not completely risk free. Nevertheless, usually in both theory and in practice, the best credit rating (AAA) is used compared to domestic government bond returns as a basis for a risk-free rate (Reese, 2007). This is because they are safe and failure is unlikely (Langguth, 2008).

A critical note at this point is that there have already been some failures in government issued bonds (Argentina) and that even Germany has experienced a deterioration in creditworthiness due to the European financial crisis (e.g. in Greece).

The so-called ‘Svensson method’ is another method for determining the risk-free base rate (Metz, 2007). The Svensson method uses an estimate of the discount-structure-curve at the base of zero coupon bonds revenues (spot rates) of government bonds (Reese, 2007). In theory, there is now general agreement that the base rate should be derived by discount-structure-curves (Hachmeister, Ruthardt, & Lampenius, 2011; Obermaier, 2008). Zero coupon bonds do not have a continual interest, i.e. the generated interest arises from the price at maturity and therefore from the final payment.

The advantage of the Svensson method is that no reinvestment risk needs to be taken into account and the duration equivalent is consistent with the income to be capitalized (Metz, 2007; Ihlau, Duschka, & Gödecke, 2013). This method can estimate maturities between 1 and 30 years, which is theoretically the most popular (Hachmeister & Wiese, 2009; Bark, 2011).

In order to exclude, or smooth, possible market fluctuations, the IDW recommends averaging the last three months before the valuation date (Wagner, Jonas, Ballwieser, & Tschöpel, 2006). This approach is viewed critically in the literature, since the correction is at the discretion of the auditor and is not verifiable. The result could therefore be falsified (Bassemir, Gebhardt, & Ruffing, 2012; Dörschell, Franken, & Schulte, 2012). Despite this criticism, courts accept the determination of the base rate according the recommendation of the IDW (OLG Frankfurt, 2014; OLG Stuttgart, 2014; OLG München, 2014).

The data necessary for determining spot rates are provided on the Deutsche Bundesbank (2016) and the European Central Bank (2016) websites. The Deutsche Bundesbank depicts German government bonds and the European

Central Bank depicts government bonds of European countries with an AAA-rating. Clearly, the difference in perceived credit risks in the application of both values leads to different results.

However, there is no difference when determining the risk-free rate of SMEs. The Svensson method provides a future-oriented risk-free rate with equivalent terms that can also be applied for SME valuation. In addition, this procedure is accepted by case law (OLG Düsseldorf, 2012; OLG Frankfurt, 2013; OLG Stuttgart, 2011), as it can reduce the probability of disputes in the case of retirements. This is also predominately accepted in the business administration literature (Wollny, 2010; Metz, 2007; Drukarczyk & Schüler, 2016; Steinbach, 2015; Kappenberg, 2012).

2.4.3.1.2. Beta

The equity costs of a company consist of a risk-free and risk-premium rate (Bark, 2011). The risk premium is obtained by multiplying the market risk premium by the determined company-specific Beta factor (Munkert, 2005). Therefore, the risk of alternative investment or the market portfolio is transferred to the searched individual risk premium.

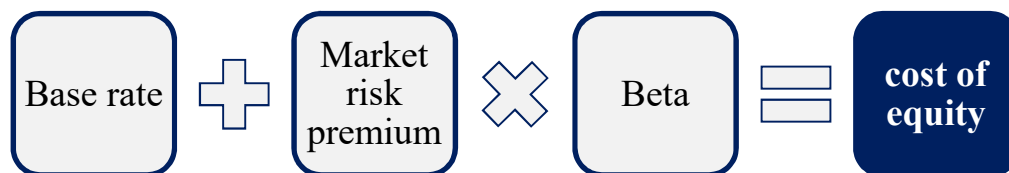


Figure 13. Cost of equity determination

The Betas are usually published for public listed companies, (Scheld, 2013). When companies being valued are not listed, such as SMEs, this could be problematic. In practice, the appraiser reaches his limits when valuing SMEs or risk premiums or when Betas are not available for SMEs. These challenges are both theoretical and practical. Comparison with listed companies is used to determine company-individual Betas, (Stahl, 2015).

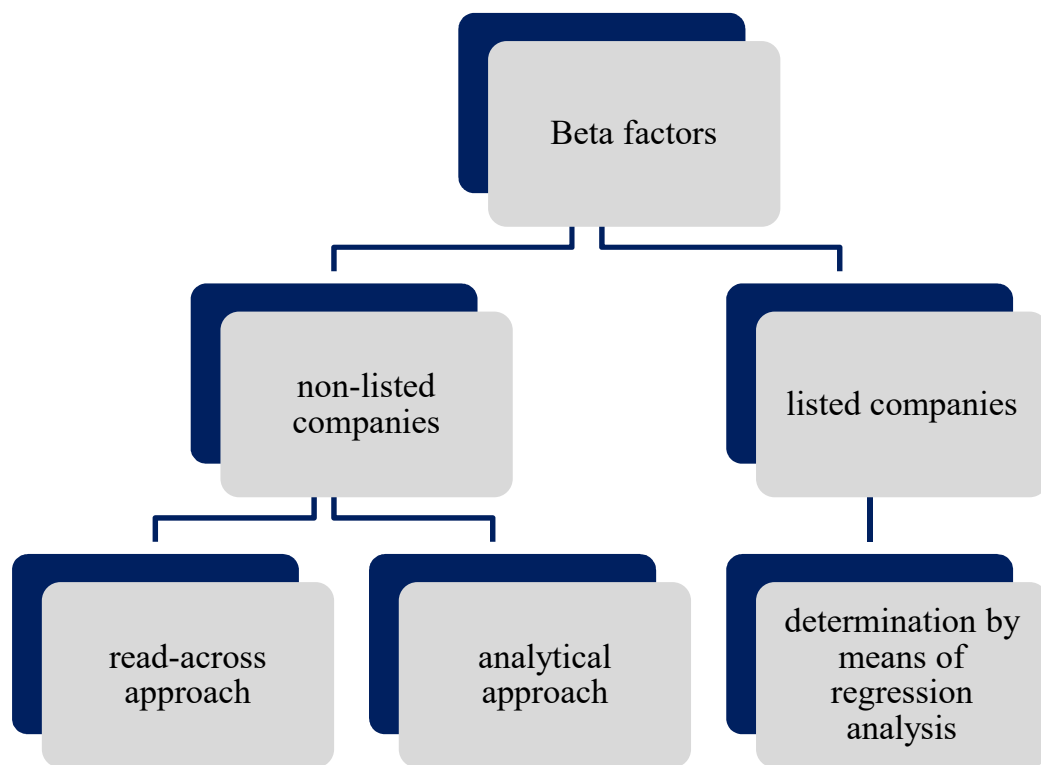


Figure 14. Alternatives for determining Beta factors following Schütte-Biastoch (2011, p. 185)

In the case of stock-listed companies, the Beta is determined by regression analysis of the company's historical data (Kuhner & Maltry, 2017; Langguth, 2008). The calculation of Beta factors for SMEs that are not listed cannot be carried out directly on the basis of the underlying stock index, because they are not included in the reference portfolio (Scheld, 2013). Thus, alternative procedures are used in valuation practice. The specific risk of an SME is determined by drawing on the risk of comparable companies (a group of comparable companies; the so-called 'peer group') in the capital market and a company-specific Beta factor is derived by means of the read-across approach (see figure 14).

Read-cross approach	
Pure Play Beta	Selected reference companies are the basis for the calculation of the Beta factor.
Industry Beta	Calculation of the Beta factor is on the basis of the arithmetic mean of the industry beta represented in the respective sector.
Peer group Beta	Basis for calculation is the arithmetic mean of the Betas represented in the reference group of listed companies.
Analytical approach	
Statistical analysis	Accounting data (accounting Beta) backed up by further significant explanatory variables (fundamental Beta) are taken into consideration for calculation.
Qualitative analysis	Basis for calculation is a qualitative risk rating model (scoring model) that has to be filled by the management or experts.

Figure 15. Overview of Beta factors synthesized from Meitner and Streitferdt (2015) and Scheld (2013)

The suitability of the different Beta determination methods for SMEs, and in particular the indemnity calculation, is critically evaluated in the following section. Even for listed companies, the application of Betas is not without criticism. In a survey of seventeen valuation experts conducted by Ernst and Gleißner (2012), the majority state that historical stock returns is not suitable to derive the risk of the company to be valued because past values cannot be transferred into the future without consideration of current changes. In addition, the principle of equivalence is not respected in business valuation when using future oriented methods (Bassemir, Gebhardt, & Ruffing, 2012; Metz, 2007; Janos & Tracia, 2012; Stahl, 2015).

Furthermore, market data might be influenced by reasons that are not rooted in fundamental developments, such as investors' herd instinct, massive liquidity on the market or trading orders from computer programs. Due to the speculativeness of market data, Gleißner (2015) states that using historical Betas is not suitable for SMEs in particular. Deviation can emerge in comparison to

valuation based on fundamentals, i.e. expected sustainable earnings or cash flows. These values are objective in terms of market view, however they can be fundamentally incorrect (Dirringl, 2009; Raupach, 2007) and do not represent the present value of expected earnings or cash flows (Franken, Schulte, & Luksch, 2012). The highlighted objectivity of the Beta cannot be achieved due to market subjectivity (Große-Frericks, 2015; Lütkeschümer, 2012; Gleißner, 2015).

Pure play beta

Similar companies with closely aligned risk characteristics are examined to determine an SME's Beta, (Koelen, 2009; Steinbach, 2015). The application of the pure play Beta approach requires certain conditions. The selection of the company and its comparability has to be provided on the basis of qualitative and quantitative factors (see table 6). The same parameters relevant for valuation purposes are taken into account.

Calculation on a pure play basis is particularly challenging as this approach requires achieving congruence with the benchmark company. The determination of a significant Beta factor depends on thorough selection (Ernst, Schneider, & Thielen, 2012).

Qualitative criteria	Quantitative criteria
Business model	Market capitalisation
Sector	Number of employees
Type of product or service sales	Turnover
Life cycle of the company including products	EBIT-margin
Market penetration	Profit margin
Enterprise locations	Return on sales
	Sales growth
	Debt burden

Table 6. Criteria for comparison following Dörschell, Franken, & Schulte (2012, p. 221) and Ihlau, Duschka, & Gödecke (2013)

These companies are usually listed and operate in lines of business that can be explicitly identified as identical (Knabe, 2012). The pure play company has to exist in the same segment, have similar structures of distribution, operate in similar markets and generate comparable sales (Scheld, 2013; Steinbach, 2015). In particular, when valuing SMEs, turnover is problematic as they usually have lower sales than listed companies. Therefore, some authors (Ihlau, Duschka, & Gödecke, 2013) recommend resizing to make this approach applicable.

Apart from the different sales dimension, it is difficult to compare listed companies and SMEs that have specific characteristics. Moreover, SMEs usually have selected products or services and distribute in a different part of the market to public companies (Schütte-Biastoch, 2011; Aschauer & Purtscher, 2011). Stock listed enterprises, and therefore comparable companies are sufficiently diversified as opposed to SMEs and so the risk attributed by the Beta is based on the entire company and not specific segments analogous to the SME (Matschke & Brösel, 2013; Koelen, 2009).

In practice, the Beta is based on the risk of the entire company. In Germany, segment Betas are seldom available from listed companies (Scheld, 2013; Matschke & Brösel, 2013). The Beta is therefore the average value of all segments of the entire company. Even though a systematic process of generating a Beta from pure play companies is available in literature, a comparison with SMEs is difficult without adjustments by the appraiser (Loßagk, 2014; Keller M. , 2015; Kappenberg, 2012), i.e. the process requires decisions and judgements about companies to be included or excluded and leads to subjectivity and therefore possible bias.

Peer group

Comparison companies, or ‘peer groups’, have similar systematic risks (Steinbach, 2015), i.e. their business models have high convergence. This relates particularly to products, services, markets, cost structure and industry (Meitner & Streitferdt, 2015), German peer companies are primarily sought as

they are German companies themselves. An average Beta is determined from different but comparable listed companies. In the event that no national benchmark companies can be found, Betas used by international companies can be employed (Schütte-Biastoch, 2011; Steinbach, 2015). The peer group approach is seen as more reliable as it can provide more robust data (Knabe, 2012; Tinz, 2010). This is rooted in the selection of several companies that have a similar risk structure to the business model of the company to be valued. With this approach, selective enterprises can be identified that have similar risk characteristics (Schacht & Fackler, 2009; Keller M. , 2015). However, this is one of the main criticisms of this approach. In choosing certain companies, the risk factor, and therefore the Beta, can be adjusted to the value desired (Wolter, 2011; Metz, 2007; Große-Frericks, 2015; Hering, Klingelhöfer, & Koch, 2008). Here the same degree of discretion for the appraiser can be attributed when valuing SMEs.

Industry beta

One of the main advantages of the industry Beta approach is its simplicity (Bark, 2011). Industry Betas of listed companies are available and therefore market data can be attributed as objective due to the high sample of companies (Langguth, 2008; Metz, 2007; Koelen, 2009).

One of the main disadvantages of this approach is that individual risk of the company to be valued is not considered (Kuhner & Maltry, 2017; Knabe, 2012). Furthermore the risk profile is derived mainly from the industry (Meier, 2001; Beckmann, Meister, & Meitner, 2003). The financial and operational business risks show similar behaviour to the industry, neither regional specifics nor individual risk components are taken into account. Error is reduced through smoothing the statistical estimation, (Scheld, 2013), but furthermore, the individual risk is socialised and the Beta is an average to the industry (Knabe, 2012). Companies within an industry can differ, therefore the industry Beta may not be representative for valuation purposes. If differences in the risk between the company to be valued and the industry are identifiable, as can be the case with SMEs, adjustments are necessary (Seppelfricke, 2012).

In Germany, fewer public companies exist in comparison with USA or UK. In the main segments DAX, MDAX, TecDax and SDAX, only 160 companies are listed and taking into account all stock exchanges in Germany, about 800 companies are listed (Deutsche Börse, 2017). To find comparable companies with similar risk structures is therefore difficult and the industry Betas are based on a comparably small sample.

The appraiser is obliged to use data from abroad unless reliable data from German listed companies can be generated (Naumeier, 2015). Even if SMEs are increasingly international, there is still a lack of comparability. The Betas abroad do not capture the risk profile of German SMEs that predominately operate in a German environment. The economic differences based on GBP, unemployment rate and inflation are considerable when looking at the different EU-members, (Statista, 2017). This leads to a distortion of the risk parameter of the company to be valued. When expanding to other countries, the subjectivity of the beta and therefore of the value grows. This fundamental idea to substitute the subjectivity of the appraiser by using market data is lead ad absurdum. All adjustments are subjective and there seems to be no difference to the individual determination of the discount rate. The appraiser is able to manipulate the capitalization rate.

Analytical approaches can be applied in terms of management or expert interviews or by means statistical procedures. Thereby, earning Beta and fundamental Beta are put in relation to risk indicators on the basis of historical accounting data (accounting Beta) in order to calculate the Beta. The operating ratios determined in this way are compared to the average values of the relevant industry or market. Apart from the variance with regard to the methodology used for determination and the problems with data procurement, these analytical approaches have not established themselves in business valuation practice (Schütte-Biastoch, 2011; Steinbach, 2015).

One of the main advantages is that, based on balance sheets, it is assumed that the information is objective (Peemöller, 2005). However, accounting beta is difficult to apply in Germany because of the limited quantity of listed companies (Hasler, 2013; Metz, 2007; Drukarczyk & Ernst, 2010). Therefore, data are not reliable and an application cannot be recommended. The main drawback of this approach is that, according to German GAAP, the existing accounting and valuation options make it almost impossible to compare (Bundesministerium für Justiz und Verbraucherschutz, 2015).

Moreover, SME accounting data are usually tax related (Bucher & Schwendener, 2007; Busse von Colbe, Crasselt, & Pellens, 2011), and do not contain a demarcation between private and business sphere (Keller M. , 2015; Ihlau & Duschka, 2012). Therefore it is not suitable to represent the overall risk of SMEs. In particular, commercial, technological, management and entrepreneurial risks are disregarded. Future developments that might be the case when a shareholder retires are also not taken into consideration.

2.4.3.1.3. Risk premium

The risk must be considered in order to make the income from the companies comparable. This is also the main distinguishing feature between a secure, risk-free investment in securities and future corporate earnings (Metz, 2007). Market participants can therefore compensate the entrepreneurial uncertainty through risk premiums. If the risk was not remunerated, any rationally acting investor would invest in a risk-free investment. The two main methods relevant to SMEs are determined on capital market orientated reference models such as CAPM or individually determined risk premiums (Reese, 2007; Tschöpel, 2004; Drukarczyk & Schüler, 2016; Behringer, 2012).

The CAPM derived from the Anglo-Saxon DCF-method and has been the established German company valuation doctrine since the nineties (Ballwieser & Hachmeister, 2013; Matschke & Brösel, 2013; Beckmann, Meister, & Meitner, 2003). The cost of capital, and thus the discount rates for the evaluation of uncertain earnings, should be gained from market data, i.e.

obtained market returns (Scheld, 2013). The company's future return is compared with the future return on the market portfolio, which corresponds to the overall stock market.

CAPM is disputed in the literature, as it assumes rational behaviour from all market participants, a complete capital market, equal distribution of information and the same basis for investment decisions (see Appendix IX). The results of several studies were influenced by the choice of observation periods (Fama & French, 2002; Hachmeister, Puchstein, & Seidler, 2016). Fama and French (2004) state that CAPM could not be confirmed empirically, even though CAPM is very common in German valuation practice (Lütkeschümer, 2012; Loßagk, 2014). This is due to the following criteria:

- Capital costs can be gained from historic capital market data, which is favoured over other models (Dörschell, Franken, & Schulte, 2012; Ballwieser & Hachmeister, 2016).
- Subjective influences can be reduced when the risk surcharge is determined, as the model is inter-subjectively verifiable (Metz, 2007; Hachmeister & Wiese, 2009; Kranebitter, 2012).
- Unlike alternative methods for the determination of the capitalization interest rate, CAPM is unambiguous (Ballwieser, 1998) and gives the impression of objectivity (Steinbach, 2015; Karami, 2014).
- According to the basic idea of CAPM, risk is the crucial influence factor on the return and refers to the company as risk entity, which is easy to transmit and intuitively understandable (Ihlau, Duschka, & Gödecke, 2013; Ballwieser, 1998).
- Alternative theoretical models do not offer sufficient quantification, they are very complex and demand special know-how, which even skilful valuation experts rarely have (Lauber, 2013; Henselmann, 2015).
- It is accepted internationally and is used predominantly to determine the capitalization interest rate in Germany (Lütkeschümer, 2012; Zischg, 2013; Aschauer & Purtscher, 2011).

Against this background, CAPM filled a gap and established itself partly in practice - even though theoretical concerns remain. According to the premises of CAPM, a portfolio should be formed containing all investments that are not risk-free, such as land, human capital, works of art and gold (Voigt, Voigt, Voigt, & Voigt, 2005; Kappenberg, 2012). This return cannot be observed nor measured, therefore it is based on market portfolio indices (Baetge, Niemeyer, Kümmel, & Schulz, 2015).

In practice, the return on the market portfolio is derived with the help of a broad stock market index (Meitner & Streitferdt, 2015). Evaluation of national companies in Germany mainly relies on the DAX and CDAX (Dörschell, Franken, & Schulte, 2012; Schütte-Biastoch, 2011). These values also serve as a basis for the evaluation of SMEs because they are considered to be useful (Stehle, 2004; Ihlau, Duschka, & Gödecke, 2013).

Here, an average of the observed capital market returns is made over a period of 20-50 years (Kruschwitz, Löffler, & Essler, 2009). The determination of the average can be done arithmetically or geometrically. The arithmetic mean assumes that the underlying stock is sold each year and the proceeds are reinvested (Mandl & Rabel, 1997). The geometric mean assumes that the shares are held over the period of the investigation and are sold only at the end (Aschauer & Purtscher, 2011). The value of the arithmetic mean is generally higher than the geometric mean (Bark, 2011). A clear preference is not evident in business administration. Therefore, in the practice of valuing and in court cases, the average of the two methods of calculation is chosen (Bark, 2011; OLG Saarbrücken, 2014; OLG Stuttgart, 2011; Schröder S. , 2014).

There is empirical evidence that the risk of corporate involvement can be significantly reduced at a level of diversification that is already low (Drukarczyk & Ernst, 2010). In this respect, a realistic assumption must be made about the degree of diversification of the investor. With severance appraisal an exact uniform interest rate cannot be calculated, due to different risk preferences and shareholder diversification.

The following list shows the main criticisms of CAPM:

- CAPM is derived from listed companies and used for non-listed companies, which differ structurally from listed companies, i.e. different key drivers in SMEs are the basis for the stability of the company and income generation. For listed companies the empirical results are also not convincing (Hagemeister & Kempf, 2010; Fama & French, 2012). Recent studies conducted by Walkhäusel (2012; 2013; 2014) show that companies with less risks generate higher profits. The principle that investors take higher risks only if provided with higher expected returns could be questioned.
- The usefulness of past values for the determination of a future return is questionable in valuation (Karami, 2014; Bassemir, Gebhardt, & Ruffing, 2012; Metz, 2007; Janos & Tracia, 2012; Stahl, 2015).
- Identification of comparable companies: (Busch, 2008). Ihlau, Duschka and Gödecke (2013) point out that due to SME specialization and the low degree of diversification of their business models, the search for comparable listed companies is difficult. Even if Dörschell, Franken and Schulte (2012) suggest companies with the same product category, from the same industry, from an upstream or downstream value chain to bring about comparability of the main risk factors, extending the search of companies to other industries or countries increases the degree of discretion and therefore results in invalidity.
- Derivation of the individual risk factor and the necessary adjustments to be made in Beta (see Appendix IX) are therefore problematic (Kruschwitz & Löffler, 2014; Loßagk, 2014).
- The assumptions of CAPM do not comply with the reality of SMEs, independent of the general model criticisms. Forster (1997) sees determination by CAPM as an estimate for the capitalization rate - the mathematics is camouflage. Capital market data cannot be transferred to SMEs (Nickert & Kühne, 2014; Kruschwitz & Löffler, 2014). Shareholders of German SMEs have invested their main assets in the company, therefore they are not diversified (Nestler, 2012; Ihlau,

Duschka, & Gödecke, 2013) and unsystematic risks have to be considered (Balz & Bordemann, 2007; Hackspiel & Fries, 2010; Knabe, 2012). SME shares cannot be sold at any time and therefore cannot be converted into cash immediately (Zwirner, 2013; Schröder S. , 2014) and possible transaction costs have to be considered (Keller M. , 2015). The SME refinancing situation differs significantly from listed companies as they do not have capital market access and are generally dependent on bank financing (Schlitt, 2014; Söllner, 2011).

Therefore, the cost of capital for SMEs differs from listed companies (Schütte-Biastoch, 2011; Seehausen, 2014; Volkart, Vettinger, & Forrer, 2013; Aschauer & Purtscher, 2011). CAPM allows for the determination of the model parameters such as Beta and market risk premium, but also large discretionary leeway for the reviewer. As such it may also be assumed to be subjective (Metz, 2007).

Irrespective of the criticism, CAPM is accepted by many courts (OLG Stuttgart, 2009; OLG Karlsruhe, 2008; OLG Düsseldorf, 2009; OLG Frankfurt, 2012) as data can be generated from capital markets and a certain objectivity can be assumed. Some courts, however, have a contrary view; they do not see any methodological advantages in using CAPM (OLG München, 2008; OLG Stuttgart, 2007; OLG München, 2009) and some emphasize the weaknesses of CAPM (OLG Düsseldorf, 2014; OLG Stuttgart, 2011).

2.4.3.2. Individual risk surcharge

As transparent equity costs indications from comparable SMEs are not available to the same extent as for stock companies (Schütte-Biastoch, 2011), the risk surcharge is determined individually. The determination by the appraiser is usually subjective (Bark, 2011; Knabe, 2012; Volkart, Vettinger, & Forrer, 2013) and therefore criticized (Zwirner, 2012; Aschauer & Purtscher, 2011) and not as technically sound as capital market oriented methods (Pinzinger, 2016; Koelen, 2009; Dreher, 2010).

Other authors (Schröder S. , 2014; Schacht & Fackler, 2009) emphasize that these risk surcharges are based on risk factors such as distribution, production, procurement, capital- and business-risk. Helbling (1996) and Felden and Klaus (2003) state in a similar vein that the industry, competition, profit volatility, management quality and workforce structures are the basis for a risk surcharge. Other authors determine the risk surcharge according to comparable companies' market values, in other words, based on required return on equity (Heesen, 2014; Kranebitter, 2012). Nestler (2012) emphasizes that the individual risk of SMEs had to be considered and, if necessary, the risk rate has to be adjusted.

All these suggestions show that a deeper assessment of the company is needed to determine the individual rates risk. Drukarczyk and Schüle (2016) stress that calculation without detailed information about the company to be valued is not sensible. This procedure is - as already described - necessary to analyse the income or payment flows and to adequately consider possible modification. Therefore, in particular, due to the heterogeneity of SMEs and their individual situation in the particular case of retirement, a detailed analysis and determination of risk surcharge, which is oriented on market conditions (Schacht & Fackler, 2009), is sensible. This method takes account of the risk appetite and the expected rate of return of the investor (Voigt, Voigt, Voigt, & Voigt, 2005; Metz, 2007; Knabe, 2012). In addition, this method aligns with the principles of equivalence in numerator and denominator.

Despite criticisms regarding the subjectivity, individual premiums are accepted by case law for indemnity purposes (LG Frankfurt, 2006; OLG München, 2009; OLG Stuttgart, 2010; OLG Düsseldorf, 2008; BayObLG, 2005). Also, Hachmeister, Ruthardt and Lampenius (2011) state that in 58% of the cases decided by courts between 2000 and 2010, the discount rate was determined individually. This takes into account the individual risk of the company to be valued.

Contrasting opinions in literature remain. Proponents stress the advantages and especially the consideration of unsystematic risks, which cannot be considered adequately with capital-market oriented methods such as CAPM (Steinbach, 2015; Kranebitter, 2012; Gleißner, 2015). Opponents stress that individual surcharges are schematic and arbitrary (Matschke & Brösel, 2013; Schacht & Fackler, 2009). Risk surcharges that are based on experience are particularly hard to trace (Bark, 2011; Große-Frericks, 2015) and the values are therefore influenced by the evaluator. This risk can be mitigated by using risk surcharges generated from similar companies' valuations (Metz, 2007). However, the auditor's degree of discretion remains.

There is no consensus view in business administration or in case law for the determination of the risk surcharge; opinions contrast starkly when valuing SMEs. However, in business and SME-related literature, there is a tendency against CAPM that can be seen when valuing SMEs because of their specifics. Against this background, the determination of an appropriate discounting interest rate for the compensation calculation of withdrawing SME shareholders is still problematic and is therefore examined among other questions in this thesis.

2.4.4. MULTIPLE METHOD (MM)

Besides the traditional valuation methods in finance, so-called 'comparable methods' have also become established in practice (Löhnert & Böckmann, 2015; Peemöller & Braune, 2015). One of the most common is the MM (Olbrich & Frey, 2013; Langguth, 2008; Schüler A. , 2014). In this case, the company values are derived on the basis of comparison values from other companies; that is, either on the basis of prices of stock-listed companies or realised market prices (Bausch, 2000). Thus, comparison proceedings are also referred to as 'market oriented valuation methods' or 'pricing fixing procedures' (Krolle & Schmitt, 2005).

The MM aims to increase objectivity in the valuation process by using market data (Langguth, 2008). The enterprise value is based on similar stock listed companies' prices or similar companies' transactions (see Appendix II).

Valuing means to compare (Moxter, 1983). This is particularly the case when using the MM. A conflict could arise for SME valuation when its overall risk level is different to a similar company. Therefore, one of the main challenges for valuation of non-traded companies - like SMEs - is to choose comparable companies (Schröder S. , 2014; Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013).

One of the main advantages of this method, and the chief reason why it is accepted and used in practice, is that it can be used by non-experts (Schacht & Fackler, 2009; Große-Frericks, 2015). The logic behind this method is that similar risk characteristics have similar prices (Drukarczyk & Ernst, 2010). This enables an application of relatively simple ratios to the company to be valued (Kuhner & Maltry, 2017) and only the four basic arithmetic operations are necessary when looking at the ratios used (see Appendix II). Investment bankers and also company owners, use this method at least for a first price indication (Kranebitter, 2012). The second advantage is that actual data from companies or transactions are used. Complicated projections of the future development of the company are not needed to come to a value and ratios are based on historical data (Zwirner, 2012; Aschauer & Purtscher, 2011). Therefore, it does not rely on uncertain forecasts.

As with any valuation method the MM has some drawbacks. The main disadvantage is that this method uses too many simplifications (Matschke & Brösel, 2013; Lorenz, 2015) because individual key success factors are not explicitly taken into account. These simplifications can only constitute an indication (Drukarczyk & Ernst, 2010; Schacht & Fackler, 2009). Moreover, this method determines transaction prices for listed companies rather than values (Löhnert & Böckmann, 2015; Dreher, 2010; Matschke & Brösel, 2014).

In addition, the assumption that the comparable companies' market values are correct is not necessarily true and undervaluations or overvaluations are possible (Hasler, 2013; Kranebitter, 2012; Langguth, 2008). Strategic or synergetic reasons may have led to the actual or current price (Löhnert & Böckmann, 2015). In this case both transactions and the price of listed companies may be based on market irregularities and fluctuations (Dreher, 2010; Kuhner & Maltry, 2017). Moreover, financial ratios from peer group companies can lead to diluted results due to their spread width (Loßagk, 2014). Against this background, the highlighted objectivity of the market is led ad absurdum.

In essence, the following reasons for using the MM are similar to those stated in the sequence Beta (a detailed overview is provided in Appendix IX).

- Difficulty of finding similar companies due to the characteristics and heterogeneity of SMEs
- Availability of data for comparison
- Variation in accounting standards for listed companies and SMEs
- Necessity of adjustments for SMEs.

Detailed research of the similar companies is essential to locate comparable entities. In addition, the principle of future orientation is neglected (Kelleners, 2004; Langguth, 2008; Behringer, 2012). This method is based on past data; the value derived from this method is determined statically at a certain point in time (Drukarczyk & Schüller, 2016). This means the present and moreover, the future, situation of the company is overlooked. Possible market changes or economic development are disregarded. In addition, in the case of SME owner retirement, the situation of the company can change.

Neither juristic literature nor case law see the MM as a reliable method in dominated occasions (OLG Schleswig, 2004; OLG Frankfurt, 2011; OLG Frankfurt, 2010; Fleischer, 2016; Großfeld, 2012; Hüttemann, 2015); in particular because the future benefits of the company have to be considered and the MM is not acknowledged in business administration.

2.4.5. INSTITUTE OF PUBLIC AUDITORS IN GERMANY (IDW)

The IDW is a private interest group which, among other things, has set standards for company valuation. These standards are set out in Appendix II.

Auditors are commissioned by the courts as neutral experts to determine reasonable compensation (Langguth, 2008). It is therefore appropriate to explain this function and the ‘objective’ valuation of enterprises, as this deviates from the development of valuation theory in Germany (Matschke & Brösel, 2013). Moreover, some articles of association contain indemnity regulations that are based on the IDW (Verspay, 2014; Kirchdörfer & Lorz, 2012; Butz-Seidel, 2004; Koeberle-Schmidt, Fahrion, & Witt, 2012). It is also necessary to examine the suitability of these standards for outgoing SME shareholder indemnity determination.

One of the basic assumptions in the IDW S1 is that the management remains in the company or that an equivalent substitute is found in order to ensure consistent quality in the future. This does not require adjustments to account for effects on future earnings. This premise is criticized in literature (Franken & Koelen, 2015; Schütte-Biastoch, 2011; Busch, 2008). Dependency on the owner of an SME may be considerable (Zwirner, 2013) to the extent that future earnings can be significantly influenced by the competence of the remaining, or future, management. These individually related factors can now be taken into account.

In 2014 the IDW issued a set of practical guidelines for SMEs, emphasizing the individual responsibility of the evaluator (Institut der Wirtschaftsprüfer, 2014). It explicitly states that in the case of SMEs, the owner’s impact on earnings should be analysed and the evaluator receives practical support and clarifications (Franken & Koelen, 2015). If there is a company transfer or a partner withdraws from the company, the impact on the full or partial future earning capacity has to be determined.

Moreover, besides the determination of quantitative effects, the duration of influencing variables has to be specified (Institut der Wirtschaftsprüfer, 2014). These influences can be taken into account in by applying a shrinking model⁹ (Ihlau, Duschka, & Gödecke, 2013). In order to achieve this, the evaluator has to find criteria that are directly linked with the activity of the withdrawing shareholder (Peemöller V. , 2014). This represents a major challenge for the evaluator and is only possible with a certain margin of discretion. The practical guidelines list five exemplary groups of activities for the owner, in which intangible factors have a significant effect on earnings performance, serving as orientation for the evaluator. The owner should function as (Institut der Wirtschaftsprüfer, 2014):

- (major) service provider (e.g. lawyer, architect, medical doctor, accountant, auditor), whose performance is crucial for customer satisfaction, even when using his personnel as vicarious agents
- sales manager consistently who gains new customers
- managing director who attains major marketing effects
- a person of trust for the staff who generates a high level of loyalty among the personnel
- a holder of specific knowledge on the basis of which new products and processes are developed.

The evaluator can forecast clues with regard to the duration of a (partially) transferable earning power drawing on the indicators listed below (Institut der Wirtschaftsprüfer, 2014):

- contract terms and projected contract extensions,
- typical product life cycles,
- prospective actions of competitors and potential new rivals,
- period of customers' dependency (economical, legal, technical) and
- demographic/biometric aspects with regard to the existing customer structure.

⁹ These models assume that from a certain point in the future the revenues, earnings or cashflow drop off. In German, these models are referred to as "Abschmelzmodell". Literally, "abschmelzen" means the stream of revenues, earnings or cashflows are 'melting away'.

The result of the analysis and, where appropriate, the consequential effects have to be taken into account in the planning. This means if corporate planning is already in place, the evaluator has to make an adjustment.

Nevertheless, the practical guidelines for SME valuation are only recommendations and their application is the responsibility of the auditor (Institut der Wirtschaftsprüfer, 2014). Any divergence from the Principles for the Performance of Business Valuations (Institut der Wirtschaftsprüfer, 2008) has to be justified. Consequently, in practice auditors are not expected to apply their margin of discretion (Tinz, 2010; Knabe, 2012; Schütte-Biastoch, 2011) to ensure their ‘objectified’ valuation (see Appendix II) and their admission as auditor (Kruschwitz, Löffler, & Sloane, 2010). Many authors (Zwirner, 2013; Busch, 2008; Behringer, 2012; Nestler, 2012; Hachmeister & Ruthardt, 2014; Hackspiel & Fries, 2010) suggest that SME specifics need to be considered and therefore the ‘objectified’ valuation, according IDW principles, without modifications or adjustments, is not suitable for SMEs.

However, auditors are very often appointed by courts as neutral experts in business valuations. The valuation principles of the accounting profession may also be recognised as customary law or case law (Schülke, 2014). This quasi-monopoly position has triggered concerns in the literature that the IDW could fail to provide the neutrality necessary (Ballwieser, 1995; Lauber, 2013; Karami, 2014).

Fleischer (2016) also investigated whether auditors' professional principles are legally binding. He concludes that professional valuation standards are not laws, even if they are set down in writing in professional rulebooks. The Higher Regional Courts of Stuttgart (OLG Stuttgart, 2013) and Düsseldorf (OLG Düsseldorf, 2014) also found that the IDW is an association under private law that has no regulatory powers. Nevertheless, many courts rely on the valuation according to the Principles for the Performance of Business Valuations (OLG Düsseldorf, 2011; OLG Frankfurt, 2014; OLG München, 2014; OLG Karlsruhe, 2015; OLG Karlsruhe, 2015).

Other courts (LG Frankfurt, 2014; LG Köln, 2009; LG Frankfurt, 2014) (LG Frankfurt, 2014) criticise the Principles for the Performance of Business Valuations, particularly ‘objectified’ value, as it is the responsibility of the court to decide how to value a business and the IDW is just a private organization. Moreover, some courts have stressed that every value is only an estimation and is therefore subjective (OLG Karlsruhe, 2012; OLG München, 2008; OLG Düsseldorf, 2014) and values within a bandwidth must be accepted (OLG München, 2006; OLG Stuttgart, 2014; OLG Karlsruhe, 2013; LG Frankfurt, 2014; OLG Düsseldorf, 2015). This has been confirmed by the Federal Constitutional Court (BVerfG , 2012).

There is no unanimous opinion in case law as to whether the Principles for the Performance of Business Valuations should be applied in dominated occasions or how this should be done. Moreover, as the practical guidelines for SME valuation were introduced in 2014 and given a relatively short time scale, no court decisions are available in this respect.

2.5. SME RELATED VALUATION

There is wide agreement in literature that when valuing SMEs, their characteristics should be considered accordingly (Ihlau, Duschka, & Gödecke, 2013; Keller M. , 2015; Behringer, 2012; Schröder S. , 2017; Kranebitter, 2012; Matschke & Brösel, 2013) (Gleißner & Ihlau, 2012; Nestler, 2012; Jonas, 2011; Purtscher, 2017). However, there are no consistent guidelines of how to address these characteristics. This is because SMEs are not homogenous and the characteristics have different impacts on performance. In particular, the measurement of these effects and their application in valuation methods leads to different proposals of how to consider these specifics. They can be considered individually or by using general adjustments. This work examines some of these diverse characteristics. It also analyses whether these characteristics have to be considered in the context of a dominating occasion of valuation, i.e. during the calculation of the compensation of withdrawing shareholders. The section below looks at how these adjustments can be made.

2.5.1. INDIVIDUAL CONSIDERATION

Addressing the impact of performance is challenging when valuing SMEs because the risk and opportunities of the company have to be adequately identified. One option is to address the specifics and their impact on performance individually. This requires an analysis of the company such as due diligence (Keller M. , 2015; Schacht & Fackler, 2009; Becker & Ulrich, 2015). The analysis provides a basis to generate sustainable income, taking the individual specifics of the company into consideration (Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013; Purtscher, 2017; Kappenberg, 2012; Hackspiel & Fries, 2010). This method incurs a high degree of resources and is time and cost effective (Zieger & Schütte-Biastoch, 2008; Peemöller V. , 2014; Becker & Ulrich, 2015). Therefore, general consideration (see section 2.5.2.) proposals are also available in literature.

There is no available framework in literature as to how to take these characteristics into account individually and under which circumstances. This is understandable because SMEs are heterogeneous and they have different manifestation of these specifics. Therefore, an analogous consideration is hardly possible. This is exactly why this procedure is vulnerable in terms of validity. However, the literature provides characteristics of SMEs that have to be analysed and to be considered when an owner retires where appropriate.

The most common and frequently mentioned are outlined in the following table generated from many authors (Zieger & Schütte-Biastoch, 2008; Peemöller V. , 2014; Schoberth & Ihlau, 2008; Nickert & Kühne, 2014; Kniest, 2010; Hackspiel & Fries, 2010; Hachmeister & Ruthardt, 2014; Bucher & Schwendener, 2007; Ihlau, Duschka, & Gödecke, 2013) (Zwirner & Zimny, 2015; Muschol, 2016; Keller M. , 2015; Schacht & Fackler, 2009).

Characteristics	Characteristic to Analyse	Possible Actions
People dependent factors	Owner, family members, related parties/skilled people	
	Relationship to or dependence on clients	Reducing sales if the sales are bound to “key person”
	Relationship to or dependence on suppliers	Adjustments to market conditions might be necessary if favourable terms are granted due to the relationship
	Know-how of these people	Adjustments for patents or licences at market costs
	Creativity of these people	Adjustments for consulting fees
	Management quality	Adjustments for qualification costs
	Staff quality	Adjustments for qualification costs
	Expenditure associated with the outgoing owner or family members such as pension provisions	Elimination of these provisions; possible payments from pension obligations are to be considered
Salary	Owners usually pay themselves low or no salary	Adjustments for an appropriate management salary to market conditions
	Family members are usually paid a low or no salary	Adjustments for salary to market conditions
Separation private and operational sphere such as private assets, i.e. real estate or patents and licences	Owner	Adjustments for leasing cost or licence fee at normal market conditions Elimination of earnings and expenses from non-operating assets Elimination of private liquidity
	Family members	Adjustments for leasing cost or licence fee at normal market conditions Elimination of earnings and expenses from non-operating assets
Capital	Financing from outgoing owner, either as equity investor and providing debt capital. Owner is mainly invested in the company.	Impact on financial ratios and bank rating could lead to increased interest costs; if interest rate is not at arm’s length adjustment to market interest rate. Equity or shareholder loans have to be eliminated or consideration of interest rates at market conditions.

	Financing from family members, either as equity investor and providing debt capital	Impact on financial ratios and bank rating could lead to increased interest costs; if interest rate is not at arm's length adjustment to market interest rate. Equity or shareholder loans have to be eliminated or consideration of interest rates at market conditions.
Collaterals such as real estate or guarantees	Collaterals provided by the owner enable the SME to obtain capital by banks	Adjustments for guarantee fees or increase in interest costs
	Collaterals provided by family members enable the SME to obtain capital by banks	Adjustments for guarantee fees or increase in interest costs
Unlimited liability of the owner	Personal liability for risks stemming from business activities due to the legal form of the company	If there is impact on debt finance due to the fact that loans are granted only because of the personal liability, increase in interest costs for debt finance to market conditions is necessary. Adjustments for a factious change in legal form.
Tax oriented annual accounts	Identification of corporate related expenses and earnings, separation from private sphere of owner and family members	Adjustments of private expenditure and earnings
Undocumented planning	Risk associated with non-existent or insufficient planning	Adjustments regarding investments, depreciation, expenditure and earnings, liquidity by using scenarios.
Stability of the business model and prospects	Risk assessment of the business model such as: Quality of product and services, Digitalisation, Diversity of the business model, (non)-Specialisation, Restricted market and access into new markets, Skilled staff	Overall risk of the company has to be considered in the projections by using scenarios.

Table 7. Addressing SME specifics in indemnity calculation

Meanwhile many authors (Zwirner, 2013; Kniest, 2010; Gleißner & Ihlau, 2012; Peemöller V. , 2014; Nickert & Kühne, 2014; König & Möller, 2014; Schütte-Biastoch, 2011; Hüttche, 2014), prefer to address these impacts in the counter¹⁰, i.e. considering the implications of all characteristics in the sales and consequently in earnings or cash flows. All value relevant specifics have to be analysed and addressed, preferably in scenarios (Zieger & Schütte-Biastoch, 2008; Ihlau & Duschka, 2013; Hackspiel & Fries, 2010; Hachmeister & Ruthardt, 2014; Peemöller V. , 2014). All these factors have to be quantified and taken into account in integrating planning (Zwirner & Zimny, 2015; Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013; Hüttche, 2014) but a schematic and exact determination of the individual impact is not possible (Zeidler G. , 2006; Schoberth & Ihlau, 2008; Hackspiel & Fries, 2010; Schröder S. , 2017).

This view seems to be a preferable alternative if the analysed impact is documented and the implication is comprehensible. However, the subjectivity of the appraiser and a possible bias cannot be avoided because there is no approved method available to estimate such factors (Drukarczyk & Ernst, 2010; Hackspiel & Fries, 2010). Despite this subjectivity, the individual consideration of the business model and the specific characteristics, in particular, the impact from withdrawing, is also seen as more favourable than flat rate discounts in juristic and economic literatures (Hachmeister & Ruthardt, 2014; Peemöller V. , 2014; Buck, 2016; Ballhorn & König, 2015; Gleißner, 2015; Schütte-Biastoch, 2011; Fleischer, 2015).

2.5.2. GENERAL CONSIDERATION

Adjustments are suggested in literature due to characteristics such as the size of SMEs, non-daily sellable shares and the alleged higher probability of insolvency (Schütte-Biastoch, 2011; Hackspiel & Fries, 2010; Behringer, 2012; Gleißner, 2015). Valuation surcharges or valuation discounts serve as compensation for evaluation-relevant differences between the SMEs as a valuation object and comparable listed companies and can be caused by a

¹⁰ Refers to the mathematical formula where the earnings or cashflows are included in the numerator

variety of factors. As far as these characteristics are endorsed in the evaluation process, they can be considered differently. All these lump-sum discounts or premiums are seen as simplification (Keller M. , 2006; Schröder S. , 2014; Kappenberg, 2012; Jonas, 2011; Hüttche, 2014; Becker & Ulrich, 2015; Hackspiel & Fries, 2010) for addressing the specifics of SMEs.



Figure 16. Deduction of company value by using discounts

Deductions of the determined company value or surcharges to the capital costs, by adapting the interest rate or the Beta factor, can be considered (Lorson, Geltinger, Horn, & Schünemann, 2012; Hackspiel & Fries, 2010). A surcharge on the interest rate is recommended for methodical reasons but a discount on the determined value is generally accepted for practical reasons (Barthel, 2003).



Figure 17. Determination specific discount rate

The discounts or premiums for SMEs frequently mentioned in the literature, such as size discount, fungibility, diversification and probability of insolvency are detailed below.

2.5.2.1. Size-dependent Adjustments (Size discount)

The size of a company is irrelevant for valuation because it is not necessarily an indication of the stability of the business model and therefore the ability to generate income or cash flow. This is appreciated in the literature (Schulz, 2009; Jonas, 2008; Baetge, Schulz, & Klönne, 2010).

However, there is a smaller risk assumed for larger companies, as they can usually adapt better to potential market changes due to their diversification (Schütte-Biastoch, 2011; Hachmeister & Ruthardt, 2014). This diversification can be geographical and due to products, services and real net output ratio (Gehrmann, 2014). There are potentially higher operational risks with small and medium-sized enterprises (Ihlau & Duschka, 2012).

A key argument for these variations is that there is a correlation between the size of the company and the demanded return on equity, i.e. there is a higher return on equity for SMEs due to their characteristics (Baetge & Schulz, 2009; Creutzmann, 2008). In addition, there is a difference in the discount interest rate between market valuations with SMEs and by CAPM and therefore of listed companies (Kranebitter, 2012; Schütte-Biastoch, 2011), i.e. the discount rate includes a general risk premium (Matschke & Brösel, 2013).

The application of a size-premium for small and medium-sized enterprises is seen to be justified by a higher level of risk for these companies compared to large, and usually listed companies. This higher risk level is caused by the characteristics of SMEs. In valuation practice adjustments are proposed and used for SMEs due to their size (Baetge, Schulz, & Klönne, 2010; Cheridito & Schneller, 2008; Nestler, 2012; Matschke & Brösel, 2013).

In the USA, adjustments are often made due to size and also on legally motivated occasions of valuation (Hachmeister & Ruthardt, 2013). Empirical studies in the USA seem to prove an inverse correlation between realized return and company size (Ballwieser & Hachmeister, 2016). This was based on a study conducted by Banz (1981) and Fama and French (1993). Based on

Grabowski and King's (1995) method, Duff and Phelps (2016) published annual US data on the size-effect (Ballwieser & Hachmeister, 2016).

In Germany, the scientific literature commonly rejects general size discounts for SMEs. The potential risk implications of SMEs should be addressed individually (see section individual consideration) and not by applying a flat-rate-discount (Nestler, 2012; Ihlau, Duschka, & Gödecke, 2013). They are highly subjective (Ballwieser & Hachmeister, 2016; Behringer, 2012; Kappenberg, 2012) and there is no rational justification (Matschke & Brösel, 2013; Loßagk, 2014), data is not available (Schütte-Biastoch, 2011) and discount is not quantifiable (Becker & Ulrich, 2015) or transparent (Keller M., 2015) and size discounts in case law could not be found. Consequently, it can be assumed that size discounts are not applied in dominated situations.

2.5.2.2. Fungibility

Fungibility¹¹ is the ability to quickly substitute the property rights of a company or company shares with money, safely and without high costs (Barthel, 2003). Usually, SMEs are individual companies, private companies and limited companies. Therefore, the selling process is likely to take longer than selling listed company shares. This selling process which takes longer and entails more financial effort than government bonds or stocks, should be considered in the determination of company value through 'fungibility discounts' (Zeidler, 2006; Keller & Hohmann, 2004; Hackspiel & Fries, 2010). In addition, weaker market transparency compared to listed companies decreases the number of potential buyers.

In this respect, some authors consider a fungibility discount necessary for non-listed valuation objects given their insufficient marketability and their limited (re)saleability (Lorson, Geltinger, Horn, & Schünemann, 2012; Römhild, 2009; Barthel, 2003; Pratt & Niculita, 2008). Such discounts can also be necessary because of legal selling restrictions, such as those on transferability (Binz & Meyer, 2012).

¹¹ The terms fungibility, mobility and liquidity are used synonymously in this context.

This issue is not the subject of the thesis and so it is not discussed in detail. It should not influence the calculation of compensation as the shares will be transferred de facto to the remaining shareholders and restrictions on transferability usually prevent shares from being sold to outsiders.

German literature deals only sparsely with fungibility surcharge calculation (Hackspiel & Fries, 2010). In the USA, more studies are available on so called ‘restricted-stock’ and IPO-studies (see Appendix III). Although it not disputed that the calculated price discount depends on different factors (Pratt S. , 2009), such as the size of the company, sector and the legal form of the company (Dodel, 2009; Lorson, Geltinger, Horn, & Schünemann, 2012), there are some references to possible discounts in Germany.

Supporters of the fungibility discount consider figures between 15-20% (Cheridito & Schneller, 2008), 35-40% (Lorson, 2004) 25% and 35% (Keller M. , 2006) of the company value as common. Römhild (2009) considers an established discount rate of 35%. Further proposals suggest surcharges on the interest rate. Barthel (2003) considers an increase of the base interest rate to 50 %. Helbling (1996) and Völker (2015) assume a rise of the capitalization interest rate of between 1-3%. Furthermore, an adjustment is proposed to the Beta factor of 0.1-0.5, according to the size of the company, i.e. the smaller the company, the higher the Beta factor (Keller & Hohmann, 2004).

Fungibility discounts are disputed in Germany. Some authors reject its application because they doubt the theoretical foundation (Fleischer, 2012; Ballwieser & Hachmeister, 2016; Jonas, 2011) and quantification seems to be problematic (Keller M. , 2015). The auditors’ professional body (Institut der Wirtschaftsprüfer, 2008) also rejects its application for objectified valuation and therefore in dominated occasions.

Even if the literature does not present a uniform picture regarding possible fungibility discounts and a different application in dominated situations, the extent of its significance still needs be considered from a legal perspective.

Fleischer (2013) emphasizes that the economic implication does not come into effect because the shares do not have to be sold to outsiders. In the case of an outgoing owner, a long-term holding period is assumed (Dörschell, Franken, & Schulte, 2012; Schulz, 2009) that corresponds to the real investment situation of SME shareholders (May, 2009; Hackspiel & Fries, 2010; Schoberth & Ihlau, 2008; Keller M. , 2015; Matschke & Brösel, 2013). Because of this, a fungibility discount is not seen as relevant by many authors (Großfeld, 2012; Ihlau, Duschka, & Gödecke, 2013; Schütte-Biastoch, 2011; Metz, 2007; Große-Frericks, 2015). This view is comprehensible and the company is obliged to pay the indemnity, according to Article 738 BGB, irrespective of whether the shares are liquid or not.

2.5.2.3. Diversification discount

As mentioned previously, the SME shareholder's role is one of a company's distinguishing characteristics. SMEs have a fewer number of owners than larger companies and therefore larger packages of shares (Jonas, 2008; Balz & Bordemann, 2007; Helbling, 2015). An SME owner has usually invested a large proportion of his assets in the company (Kruschwitz & Löffler, 2014; Ihlau, Duschka, & Gödecke, 2013). The company is therefore often their main source of income and their only asset allocation. The economic risk is thus not diversified and poor decisions such as misguided investments could threaten the survival of the company.

As highlighted in section 2.4.3.1., one assumption of CAPM is that the investor is able to eliminate unsystematic risks (Schacht & Fackler, 2009). As the risks of many SME shareholders are not diversified, adjustments are seen as necessary (Balz & Bordemann, 2007; Hackspiel & Fries, 2010; Knabe, 2012) by increasing the market risk premium or Beta (Schütte-Biastoch, 2011; Keller & Hohmann, 2004; Nestler, 2012; Gleißner & Ihlau, 2012) or an individual determination of discount rates (Neufang, 2009; Ernst, Schneider, & Thielen, 2012).

Other authors assume the same typification for SMEs as for larger companies, even in dominated occasions. This is either because the assets of the shareholder are not relevant for the value of the company, or the shareholder is able to diversify at any time. Jonas (2008) points out that SME owners usually possess properties and are therefore diversified to a certain degree. Moreover, the problem of defining the limit of under-diversification exists. According to Statman (1987) and Schulz (2009), only a few further investments are necessary to reach a significant degree of diversification.

The IDW (2014) rejects the consideration of SME shareholder non-diversification because, in dominated situations, valuation has to be inter-subjectively verifiable. This opinion is also shared by other authors (Ihlau, Duschka, & Gödecke, 2013; Zieger & Schütte-Biastoch, 2008; Jonas, 2011; Wollny, 2010).

There is a uniform opinion in case law and diversification discount is not taken into account (OLG Düsseldorf, 2009; OLG München, 2015; OLG Düsseldorf, 2012). The chief reason is that its use is not seen as legitimate quantification is seen as difficult. This issue still causes contradictory views in the business literature.

However, there is a tendency to ignore the level of diversity of the shareholder in case of retirement. The degree of diversification of the shareholder can change at any time. Consequently, a valuation would vary at different times, even if all other assumptions and circumstances remained the same. It is not possible to give the remaining shareholder a reliable basis of what to pay in compensation as the amount depends on the degree of diversity of the outgoing shareholder. This seems to violate the balanced interests of all shareholders in such a situation. Nevertheless, one of the questions in this thesis is whether, or how, the shareholder's asset position should be considered when determining indemnity.

2.5.2.4. Probability of Insolvency (PoI)

Future-oriented valuation methods use the going-concern-premise. Therefore, it is usually assumed mathematically that during the continuation phase the returns or cash flows are generated constantly and infinitely (see Appendix II); i.e. the company valuation considers an infinite continuation of the company. It is assumed that all payments to outside creditors (interest and repayment) and to equity providers (dividends) are free from default risks and therefore safe (Koziol & Triter, 2014). This is the case with both entity and equity methods.

The assumption of a company's infinite lifetime is questioned by some authors, in particular when valuing SMEs (Gleißner, 2015; Keller M. , 2015; Gleißner & Ihlau, 2012). However, Matschke and Brösel (2013) indicate that assuming an infinite company life span is just a mathematical construction. They consider a certain value after the detailed planning phase and even within the perpetual annuity the liquidation of the company generates some value (Aschauer & Purtscher, 2011) that further in the future, is lower than the residual value (Schütte-Biastoch, 2011). Therefore, the difference between real lifespan of the company and the assumed perpetual annuity may not be significant in reality (Stellbrink, Baetge, & Kirsch, 2005).

In recent years there has been controversy regarding the precise projection of future development (Kehrel, 2011; Ernst, Schneider, & Thielen, 2012), and in particular the probability of insolvency and its application in business valuation (Gleißner, 2014; Nestler, 2012; Knoll & Tartler, 2011; Lobe, 2010; Frühling, 2009; Lobe & Hölzl, 2011). Papers in particular from Gleißner (2013; 2010; 2015) (2014; 2011) but also dissertations from Knabe (2012) and Friedrich (2015) discuss the justifiability of PoI and methods of application.

The main argument is that SMEs have higher risk for their owner and creditors than listed companies, i.e. the probability of default is more likely and therefore should be considered to avoid overvaluation (Sonius & Kehrel, 2013; Gleißner, 2014). Listed companies are less vulnerable due to diversification

(Matschke & Brösel, 2013; Schütte-Biastoch, 2011). SMEs usually have their risks rooted in their qualitative specifics, as described in section 2.2. Another argument is that when the PoI is quite low due to the cumulative effect over years, the impact on the value increases (see Appendix IX).

Another argument for PoI is that SMEs constitute the majority of firms that ultimately fail. This is not surprising because SMEs represent the vast majority of companies in Germany (Statistisches Bundesamt, 2015). Even though the insolvency rate of listed companies may be lower, the questions remains of whether insolvency rates of 0.7 % (Statistisches Bundesamt, 2016) justify a general consideration for all SMEs. Individual differentiation to their risk profile remains disregarded and SMEs, in particular, show heterogeneity.

Moreover, the PoI can change at any time and lead to distorted enterprise values. Quantification based on empirical evidence remains difficult in Germany, as reliable historical data is not available. However, different insolvency rates can be observed over different time periods (Statistisches Bundesamt, 2016; Creditreform, 2016).

The probability of insolvency during the valuation of the company is implied when considering the termination of the company i.e. the cash flows or the returns decrease gradually. If total liquidation is the result of insolvency, the cash flows fail in the following period. Considering insolvency risks is therefore a value-related issue. This is a significant reduction of the company value for the withdrawing shareholder. This value relevance is also pointed out by Bierman and Thomas (1972, p. 1361): *Introducing the possibility of ruin means that the initial owners may not realize the profits they know exist if they continue the 'game'*. A consideration of PoI without reliable empirical evidence corresponds to part dispossession of the retiring owner.

In Germany the consideration of PoI has not been established either in non-dominated, or in dominated, valuation occasions. The dominant opinion rejects any general consideration (Ihlau, Duschka, & Gödecke, 2013; Hachmeister &

Ruthardt, 2014; Ballwieser & Friedrich, 2015; Institut der Wirtschaftsprüfer, 2008; Lobe, 2010). One argument is that sustainable and reliable empirical evidence is not available. In addition, historical values cannot be extrapolated into future developments.

Taking into consideration past values for future oriented methods disregards the principle of equivalence in business valuation (Karami, 2014; Bassemir, Gebhardt, & Ruffing, 2012; Metz, 2007; Janos & Tracia, 2012; Stahl, 2015). Bank ratings are not suitable to determine insolvency rates (see Appendix IX). Furthermore, an insolvency rate of 0.7% justifies a general consideration for the majority of all SMEs, as they mainly exist over a longer period of time and numerous SMEs have long company histories.

The risks of an SME have to be considered individually. If the company is financially distressed then possible insolvency has to be taken into account in the earnings or cash flows. This is the view mainly taken in literature (Große-Frericks, 2015; Kuhner & Maltry, 2017; Karami, 2014; Kruschwitz, Lodowicks, & Löffler, 2005; Ballwieser & Friedrich, 2015; Hasler, 2013). This is consistent, as it would be contradictory to assume indefinite cash flows or adding a risk surcharge for insolvency to the discount rate. Court decision regarding PoI could not be found which suggests that PoI has never been the subject of a court case regarding the determination of indemnity.

Although it is widely covered in literature, a unified opinion does not exist and so one of the RQ is how to address the characteristics of SMEs. Moreover, these results have to be consistent with the valuation method, the determination of the discount rate and meet the legal requirements when determining indemnity.

2.6. CONCLUSION

The considerations above provide the following key outcomes.

2.6.1. VALUATION METHODS

Although business economics has a clear preference for overall valuation methods, there is still diversity for SMEs in indemnity determination valuation methods. The consideration of SME specifics leads to a discussion about the adequacy of the valuation methods and their application. The following figure shows the valuation methods identified above.

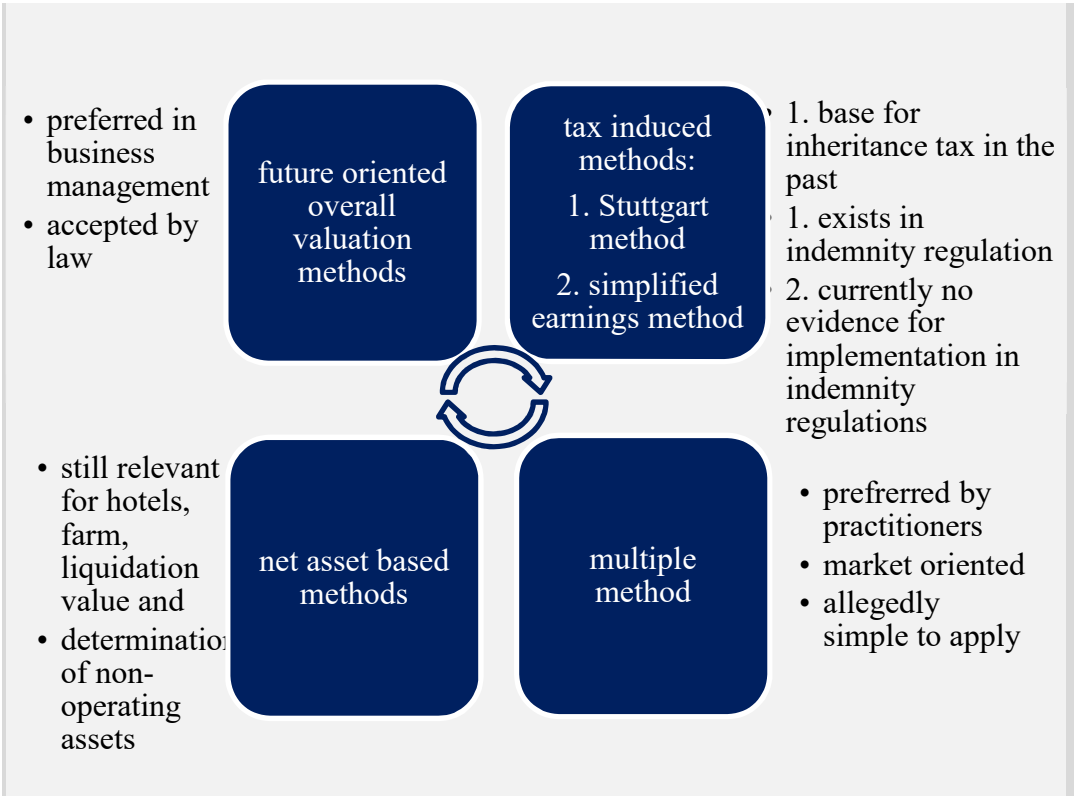


Figure 18. Valuation methods identified

The underlying reasons for the plurality of methods are as follows. The legislator does not provide valuation methods for valuation occasions. This means there is no one valid legal method to determine indemnity. The Stuttgart method was abolished and substituted by the SCEM. The legislator preferred earnings as a basis for valuation instead of assets. However, other methods are also allowed. Possible sales, earnings and alternative methods are taken into consideration, which indicates that the legislator intends there to be

a market-consistent valuation. This market-relatedness refers to the calculation of inheritance tax. Simplification of the earnings-basis, and therefore extrapolation of past figures, is the justification for the retrograde approach. Critics suspect a pro-fiscal intention since this valuation leads to excessive values. There was no indication in the literature that the Stuttgart method has been substituted with regard to compensation regulation for SMEs. The period since SCEM introduction is short, therefore, no empirical studies are available, but it is likely that the Stuttgart method will be substituted since the legislator has introduced SCEM to replace it.

There are occasions where other valuation methods are sensible. The net asset method is used for valuation of land, doctors' surgeries or tax consultancy companies. In addition, net assets are relevant for tax purposes and accounting. The net asset method is implemented in many articles of association in terms of specifying compensation. The liquidation value can be seen as the minimum value and for value determination of operative and non-operative assets with future oriented methods.

Although SMEs are not often listed, methods such as comparable methods are used in practice. Company values are derived on the basis of comparison with other companies, either on the basis of prices of stock-listed companies or of realised market prices. Due to their simple application and market relatedness, multiple methods could be implemented for indemnity determination. However, nothing in the literature could be found to show that articles of association contain the MM for compensation purposes. Nevertheless, proponents argue that the method is inter-subjectively verifiable and market related and can be used, particularly for SMEs. SME specifics can be considered when valuing in this way. Criticism about the reliability of comparative values, and thus of prices that could be used, presupposes a well-functioning market and availability of relevant data. SMEs are not often listed, as stated above, and SME-related data is difficult to generate. Finding peer group companies can prove to be challenging.

Overall, in relation to valuation methods, the focus lies in the future orientation of the earnings and cashflows. Return on investment for the investor is generated through the income of the investment object. This view has been established in German business administration and reinforced by international influence. The CEM and DCF-method are also accepted in case law.

The two acceptable alternatives in Germany to determine risk premium, especially for SMEs, are capital market orientated reference models such as CAPM/WACC and individual bases. This is unambiguous in case law and in business economics, nevertheless there is increasing criticism in business management literature for the use of CAPM to determine risk premiums in the valuation of SMEs. How to determine the capitalisation rate for these methods remains controversial.

It can be stated that the legislator has not provided a valuation method for indemnity determination - either for SMEs or for other companies. The literature review presents a spectrum of valuation methods that are still used such as net asset methods, mixed methods, tax induced methods, multiplier method and future oriented methods, as well as revealing various potential methods that could lead to a suitable valuation methods in the situation of an owner withdrawing from an SME. The advantages and disadvantages of each valuation method are analysed and highlighted. However, the identification of the most suitable method in this context has yet to be provided within the field of business administration, particularly in combination with the legal perspective.

A comprehensive view of how to manage the specific situation can be particularly relevant to possible future modifications of the risk and profit opportunities, or changes occurring in the company due to the retirement of a shareholder. Therefore, if, and how, possible implications caused by the withdrawal of an SME owner has yet to be identified and considered when determining the indemnity. Nor has it thus far been provided as an existing

principle of the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer, 2008; Institut der Wirtschaftsprüfer, 2014) to use in business valuation, such as assuming that the company will continue to operate with similar opportunities, risks and funding. Even if there are practical guidelines for auditors to consider the implications of withdrawal in relation to some SMEs (see section 2.4.5.), their application is the responsibility of the auditor (Institut der Wirtschaftsprüfer, 2014) and it is not probable that auditors apply their margin of discretion (Kruschwitz, Löffler, & Sloane, 2010).

The literature review showed that current research partly identified the future-oriented valuation methods as being sufficiently flexible to consider possible implications (see table 8). However, no study could be found that was specifically concerned with the quantification of this impact or how to measure these implications. Studies directly related to this research in this specific context could not be uncovered in the existing literature. Though some aspects are only partially discussed, for example the limitation of the Stuttgart Method or the Simplified Earnings Methods from a business administration perspective. This does however neglect the direct relationship between business and case law, which is crucial for this research topic.

Nevertheless, these insights generated – such as the future-oriented methods or the identified limitations – can be used to understand the impact in the context of this research and can be developed further to create additional knowledge by answering the RQ and RO.

Valuation method	Future consideration of risk and opportunities of the business model	Consideration of individual specifics of the SMEs to be valued	Consideration of changes caused by the retirement of the owner	Interests of the parties can be considered
Asset based methods	•	•	•	•
Mixed methods such as Stuttgart method	•	•	•	•
SCEM	•	•	•	•
CEM	✓	✓	✓	✓
DCF	✓	✓	✓	✓
MM	•	•	•	✓

Table 8. Suitability of valuation methods for indemnity determination

Furthermore, a valuation method or a combination of methods that is most able to reflect the specifics of SMEs has to be revealed and analysed. In particular, the advantages and disadvantages of the existing valuation methods in the context of this research have to be further examined. When using CEM or DCF for ‘Mittelstand’ companies the determination of the discount rate is still a point of controversy in the literature. One question to be answered is therefore whether the cost of capital should be calculated by using capital-market-oriented methods such as CAPM or WACC, or rather an individual approach.

The legislator does not provide a definition of full value. Given that an outgoing owner is entitled to receive the full value as compensation, a consistent definition is needed. No work was found that defined the full value either legally, or from a business administration perspective. Therefore, further research in this context is necessary.

2.6.2. SME SPECIFICS

SMEs constitute 99% of all companies in Germany. The specifics of SMEs are recognised and quantitative criteria are used to define them. However, the literature also states that qualitative features characterise the unique specifics of SMEs. I could not find a universally accepted definition of SMEs in the literature. Nevertheless, the most frequent characteristics are taken into account and a definition is provided in section 2.2. (Table 2). The characteristics that usually influence SME performance are also taken into account for valuation.

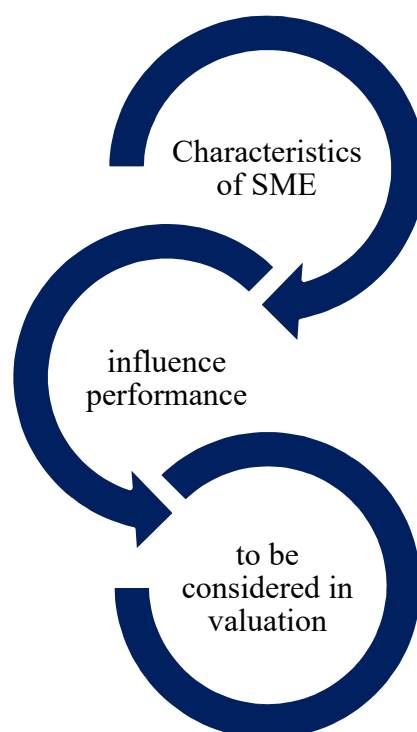


Figure 19. Consideration of SMEs specifics in valuation

These specifics have to be considered when valuing SMEs, even though some authors reject this, due to the difficulties of quantification and the discretionary power of the appraiser. A variety of alternatives, including different valuation methods and risk surcharges or discounts on the value are used when considering these characteristics in SME valuation. In particular, size-dependent adjustments, the fungibility discount, diversification discount or implementing the probability of insolvency are suggested. The

determination of these adjustments varies from a flat-rate discount to a derivation from academic studies or market data (see section 2.5.). A convincing method that considers these specifics could not be identified. One main insight that could be generated from the literature review is that only characteristics that influence earnings or cash flow should be taken into account for SME valuation and this should also be applied for indemnity determination (see figure 20).

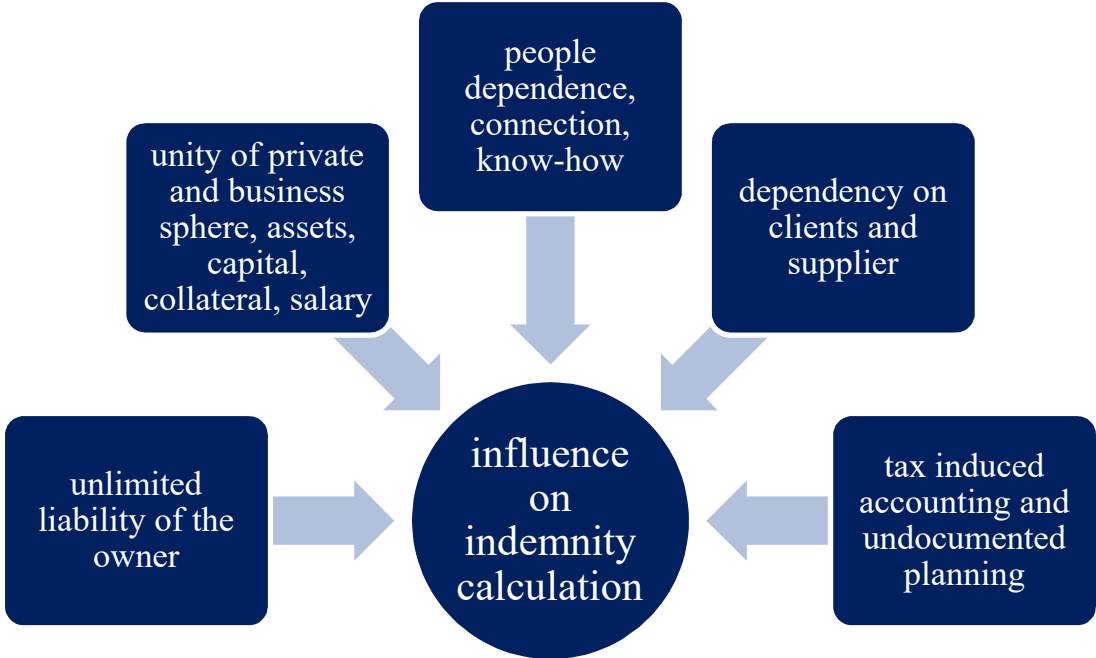


Figure 20. Characteristics that can influence indemnity determination

The extant literature characterised the specifics of SMEs and their significance for the German economy. In particular, the dependence on people and their influence in income generation are stressed. Therefore, many authors agree that SME characteristics should be considered. In this context, it is highlighted that a number of challenges need to be overcome to address these specifics in valuation. The problem is seen in the quantification and the discretionary power of the appraiser and therefore some simplifications are recommended.

It remains difficult to offer an empirically substantiated mechanism to address the specifics of SMEs in valuation. General risk surcharges or discounts, such as size-dependent adjustments, fungibility discount or probability of insolvency are suggested. Other authors reject general discounts due to the heterogeneity of SMEs and an individual consideration is recommended.

In contrast to the numerous articles about the existing characteristics of SMEs, a consistent framework or approach based on research that reflects the specifics of indemnity determination could not be found. However, these identified characteristics of SMEs that influence the performance of the company are a starting point for how to determine the indemnity of retiring owners of German SMEs and can be used to address the aim of the study and also help to develop a definition of the full value.

Various articles and books neglect that a deeper insight into the value drivers of an SME and their specifics is necessary to understand their individual implications on the earnings or cashflows when a shareholder retires. The question remains: can the different suggestions, such as simplifications or typifications in case of SMEs, be combined and applied in case of indemnity determination, or are these distinct and different characteristics that must be approached individually?

The present study aims to identify the most suitable valuation methods and their appropriateness when considering the specific SME characteristics. Given that, their patterns need to be thoroughly analysed so that solutions may be developed that are consistent with the case of retirement and statutory provisions. If specifics of SMEs are to be considered, it remains to be identified which are significant in terms of this research: as they characterize the individual company and are responsible for its success, or those that can influence performance.

In addition, a severance agreement that considers the interests of all shareholders, increases the clarity for all partners, respects statutory requirements and has the potential to reduce the probability of a legal dispute must be developed. However, assessment of the valuation result can only be made through documentation of the assumptions, transparency and traceability of the valuation process.

2.6.3. COMPENSATION REGULATION

A shareholder can withdraw from a company at any time and is entitled to a severance payment. If there are no regulations regarding the indemnity, the withdrawing partner should be compensated in full. Usually shareholders are interested in limiting compensation, so they agree on compensation regulations. In Germany, the freedom of contract also persists in the field of company law (and case law recognises) the admissibility of restrictions on compensation rights. Compensation clauses with limitations on compensation are respected by the legislator, as long as the withdrawing partner is not unreasonably disadvantaged. Case law has not yet established a clear and precise benchmark value for how to assess unethically. If the compensation regulation was already immoral at the time of conclusion, then the withdrawing shareholder is entitled to receive the full value. If the discrepancy occurs in the course of time, the contractual provision has to be replaced by a supplementary interpretation of the agreement (see figure 10). The result will be adequate compensation corresponding to the interests of the parties involved. It is obvious that this may not be the exact intention of the parties. This means that for all parties involved, the wording is somewhat ambiguous.

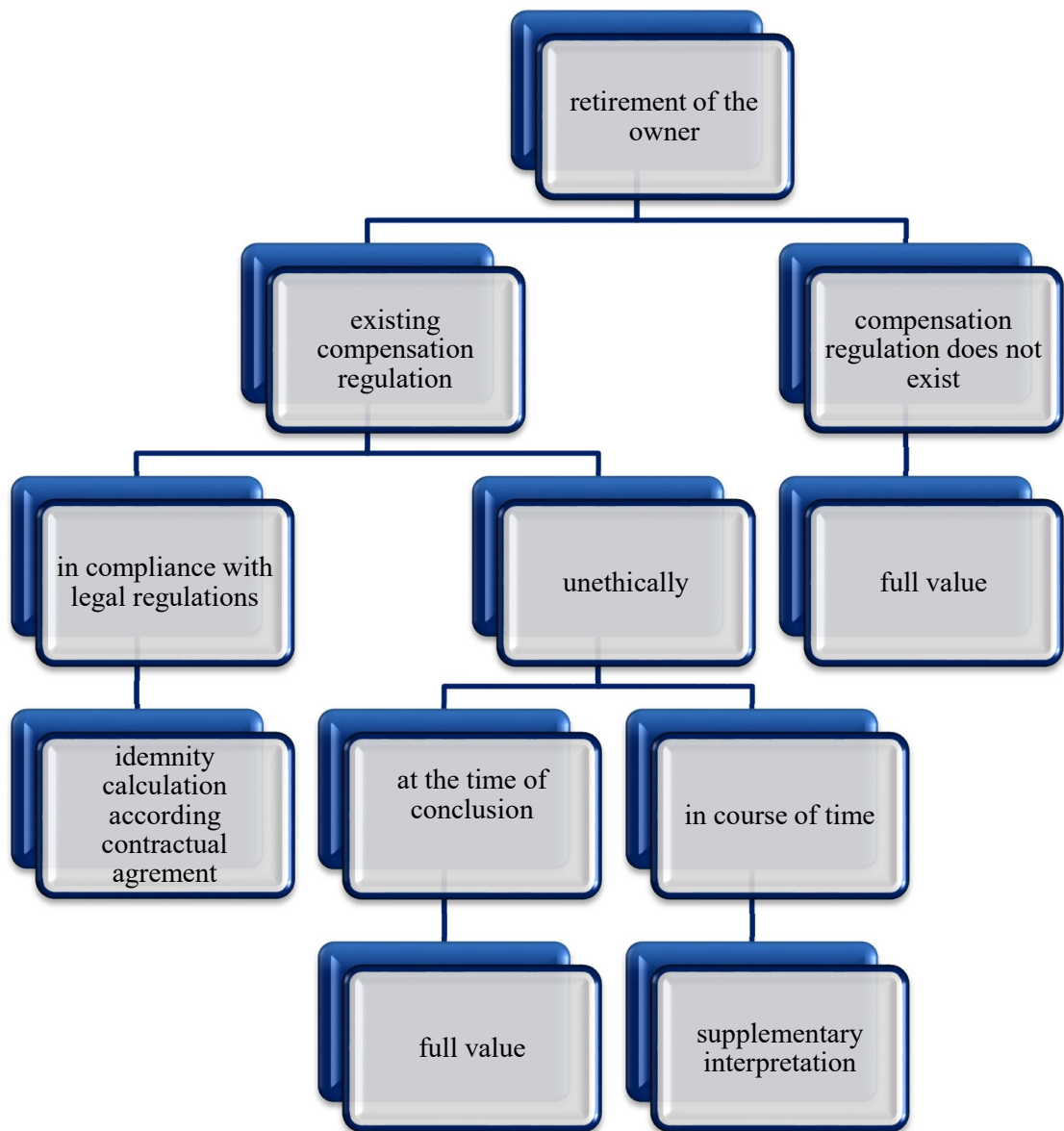


Figure 21. Difference between existing and non-existing indemnity regulation

The legislator provides indications in case law about limitations, e.g. compensation to half book value or the nominal value of the share or modalities such as payment deferral of 15 years are unethical for compensation regulation. However, an overview and combination of acceptable threshold values for limitations and modalities is not available, either in case law or in legal or business literatures.

There are some suggestions for single components e.g. the compensation must be 2/3 of the full value or deferral payments should be at 10 years maximum. Nonetheless, there is potential unethicity from unreasonable disadvantage when considering the individual compensation regulation as a whole. The various provisions, such as limitations of compensation, payment deferral, interest rate and maturity of the claim and their implications are assessed in total.

Compensation regulations that are based on book values or the Stuttgart method still exist and are contained in numerous articles of association. These regulations do not comply with the current legal situation, which leads to insecurity and disagreement among shareholders.

The application of the original will of the parties is endangered for existing regulations, especially when one of the main intentions of shareholder is the long-term existence of the company. Acceptable compensation regulation is needed for new regulations in order to reflect the will of the parties and bring greater security to all shareholders and stakeholders.

Compensation clauses are useful by virtue of their functions, especially the stipulation of the will of the parties at the time of the conclusion of the contract. However, in view of case law in Germany and the previously ambiguous definitions in compensation arrangements, legal issues could arise, which were not foreseen when the contract was concluded. However, the legislator sees no need for action, as contractual arrangements can be made for existing private autonomy. In order to reduce the probability of a future contractual adjustment to SMEs, particular attention has to be given when contracting partners conclude the contract, insofar as they comply with the legal framework.

It has been shown in the literature review that compensation regulations are sensible. There are suggestions for single components, such as not implementing book value or that the deferment payment should not exceed 10

years. However, these components should be viewed in combination. In addition, one finding was that in Germany, these regulations are either not implemented, or potentially not ethical from a legal perspective.

The different sources in the literature indicate that some points such as the will of the parties, valuation methods, consideration of the SME characteristics, appraiser, possible limitations, payment regulations and the interest rate in case of deferral payments should be implemented in compensation regulation. However, there is no study that examines the details and in particular the combination of these points to develop a consistent framework that encompasses business administration and permissible legal perspectives.

One major conclusion from the literature review is that given private autonomy, the will of the parties should be included as precisely as possible to avoid supplementary interpretation in cases of unethicity. These individual outcomes such as the will of the parties or payment regulations are particularly suited to develop a framework for a severance agreement. They provide an initial basis for how to combine the different components so that the framework meets the aim of this research.

The exact content of indemnity regulation could not be found in the literature, in particular findings or recommendations that combine the limitations on the level of compensation, maximum deferment period and adequate interest rate for the outgoing shareholder. Given the role of SMEs and the importance of the parties' interests, it is surprising that previous academic research has neglected to identify the detailed content that could be implemented in the compensation regulation. These points need to be researched thoroughly and this study requires the identification of concrete conditions that are formative for a compensation regulation. A useful and accepted framework is beneficial for all parties, and a balanced regulation that meets the legal requirements is most probable to avoid protracted litigation. Furthermore, establishing such a framework will represent a significant contribution to knowledge.

CHAPTER 3 RESEARCH METHODOLOGY

3.1. INTRODUCTION



Figure 22. Structure of chapter 3

This chapter presents the research methodology, illustrates my philosophical position and its effect on this thesis and discusses the assumptions that underpin my research. It also outlines the methodology and methods used and offers justifications and explains the qualitative approach, research strategy, interviews and transcription procedures and data analysis. Finally, it discusses the validity and reliability of the research and its impact on the findings.

3.2. RESEARCH PHILOSOPHY

It is crucial to understand philosophical issues because they affect the overall research activity (Saunders & Lewis, 2012; Frenz, Nielsen, & Walters, 2009). In addition, knowledge of research philosophies and their appropriate use facilitates research practices and benefits outcomes (Blumberg, Cooper, & Schindler, 2008). It can help to recognize and clarify research design, to understand the possible constraints of certain approaches and even generate new designs beyond the researcher's experience (Easterby-Smith, Thorpe, & Jackson, 2015)

I am aware that interdependent beliefs, perceptions, assumptions and knowledge of reality influence my research and therefore it is important to understand and to discuss the way I shape my research. It is important to recognise my inherent preferences in order to avoid bias and underpin the choices that are connected to my research questions. The definition of the elements of the research methodology (see table 9), as used in this thesis, is outlined in the following.

Ontology	Philosophical assumptions about the nature of reality.
Epistemology	General set of assumptions about the best ways of inquiring into the nature of the world.
Axiology	Role of values within the research process
Strategy	Combination of techniques used to enquire into a specific situation.
Methods	Individual techniques for data collection, analysis, etc.

Table 9. Elements of research methodology used in this thesis synthesized from Easterby-Smith, Thorpe, & Jackson (2015, p. 47) and Saunders, Lewis, & Thornhill (2016, p. 711)

I have to be aware of my fundamental values to complete my research philosophy. The area of philosophy which considers all aspects of values, such as nature, types, character and concepts, is termed axiology (Hart S. , 1971). Values are essential as they represent our orientation, motivation and the priorities that dictate our behaviour and drive our actions (Anheier & Toepler, 2010; Heron, 1996). As stated by Bryman (2016), values, which are the personal beliefs and feelings of the researcher, can arise at any moment in the research process. He continues that this is quite common in social research. Therefore, the role of values is significant for result credibility (Saunders, Lewis, & Thornhill, 2016).

Even positivists who believe that research is value-free (Myers, 2013), recognise that values cannot be suppressed during research (Bryman, 2016). In contrast, interpretivists assume that the researcher has values, even if these are not articulated (Collis & Hussey, 2014). Heron (1996) suggests that the researcher should be able to make their values explicit as they are the basis for making judgements about the research conducted. These values facilitate the generation of data and the interpretations drawn from them (Saunders, Lewis, & Thornhill, 2016).

Heiskanen and Airaksinen (1979) rightly indicate that there are several definitions of the word ‘value’ and it is therefore essential to clarify how the term is used in this thesis. Values are my preferences, ideals and moral and ethical principles that ultimately influence my research approach, my research methodology and even my choice of data generation techniques. These values derive from my ontological and epistemological position. The values most important to me are fairness and justice, along with their implementation and application. The legal principle, ‘*audiatur et altera pars*’ assumes that the arguments of the other party are always heard. In the context of this research, the interests of all parties should be taken into consideration for appropriate compensation assessment. This includes the parties directly concerned, such as withdrawing shareholders and remaining shareholders, but also employees and their families, suppliers, buyers of the company and the family of the withdrawing shareholder. Most SME owners do not have further assets, hence adequate compensation is necessary for their old-age provision. I would like to include fair solutions; therefore, a practicable, workable outcome is important to me. This is the reason why I have chosen this research topic and so my values clearly affect my interpretation, analysis and the thesis’ results.

Neither positivist nor interpretivist seems suitable for my research. In the literature, positivism and interpretivism are often seen as the main opposing research philosophies (Collis & Hussey, 2014; Bryman & Bell, 2015), but much research is based on paradigms that lie in between. These positions have diverse philosophical beliefs that affect their research processes differently.

This thesis tends toward critical realism and in the following the key points in the philosophical assumptions within this research are presented in order to elucidate the approach taken. I also argue for the appropriateness of this paradigm for this thesis and how I became a critical realist.

Ontology	Epistemology	Axiology	Typical Methods
Stratified/layered (the empirical, the actual and the real) External, independent Intransient Objective structures Causal mechanism	Epistemological relativism Knowledge historically situated and transient Facts are social constructions Historical causal explanation as contribution	Value-laden research Researcher acknowledges bias by world views, cultural experience and upbringing Researcher tries to minimise bias and errors Researcher is as objective as possible	Reproductive, in- depth historically situated analysis of pre-existing structures and emerging agency. Range of methods and data types to fit subject matter

Table 10. Critical realism research philosophy following Saunders, Lewis, and Thornhill (2016, pp. 136 - 137)

Critical realism is often associated with, and represented by, the work of Bhaskar (2008; 2009), but other scholars such as Sayer (2000), Mingers (2016), Collier (1994) and Danermark et al. (2002) also contribute to this paradigm. As its name suggests, critical realism is a realist philosophy where one reality exists. This reality is independent from the perception of the researcher and has an external existence. In other words, reality is not necessarily as it appears, so observation can be deceptive. Easton (2010) emphasizes that reality in the critical realist’s view cannot be proved or disproved. Sayer (2000, p. 17) also comments: “*Critical realism acknowledges that social phenomena are intrinsically meaningful and hence the meaning is not externally descriptive of them but constitutive of them (though of course there are material constituents too). Meaning has to be understood, it cannot be measured or counted, and hence there is always an interpretive or hermeneutic element in social science.*”

Supporters of critical realism agree that the world is socially constructed (Given, 2008). This reality is stratified and consists of three different overlapping domains: the empirical, the actual and the real (Bhaskar, 2008). There is a distinction between what is perceived as happening and what actually happens, and between mechanisms and structures that instigate events. These different realms, which are mechanism, events and experiences, are explained below.

The empirical is the domain that includes occurrences that are experienced or observed by a person. This means that a person's perception is needed. However, events occur independently from how they are perceived and this is the domain of the actual; that of material existence (Mingers, 2014). The real includes structures and mechanisms, which exist apart from our experience and knowledge and generate the flux of events (Bhaskar, 2008). To identify these generative mechanisms is one of the main aims of critical realist research "*[w]e will only be able to understand – and also change – the social world if we identify the structures at work that generate those events and discourses*" (Bhaskar, 1989, p. 2).

The aim of critical realist researchers is thus to provide a causal explanation rather than a prediction (Sayer, 2000). These structures and mechanisms have to be uncovered to establish rationally warranted knowledge. Patterns and experiences of phenomena constitute parts of the outcomes (Somekh & Lewin, 2011) and are deemed as indirect traces of causal mechanisms (Sayer, 2000). Mingers, Mutch and Willcocks (2013, p. 797) point out that moving "*from descriptions of empirical events or regularities to potential causal mechanisms, of a variety of kinds, ...the interaction of which could potentially have generated the events*" is the fundamental methodological step when applying a critical realist ontology to research. Hence, the empirical is part of the actual and in turn the actual is part of the real (see figure 23).

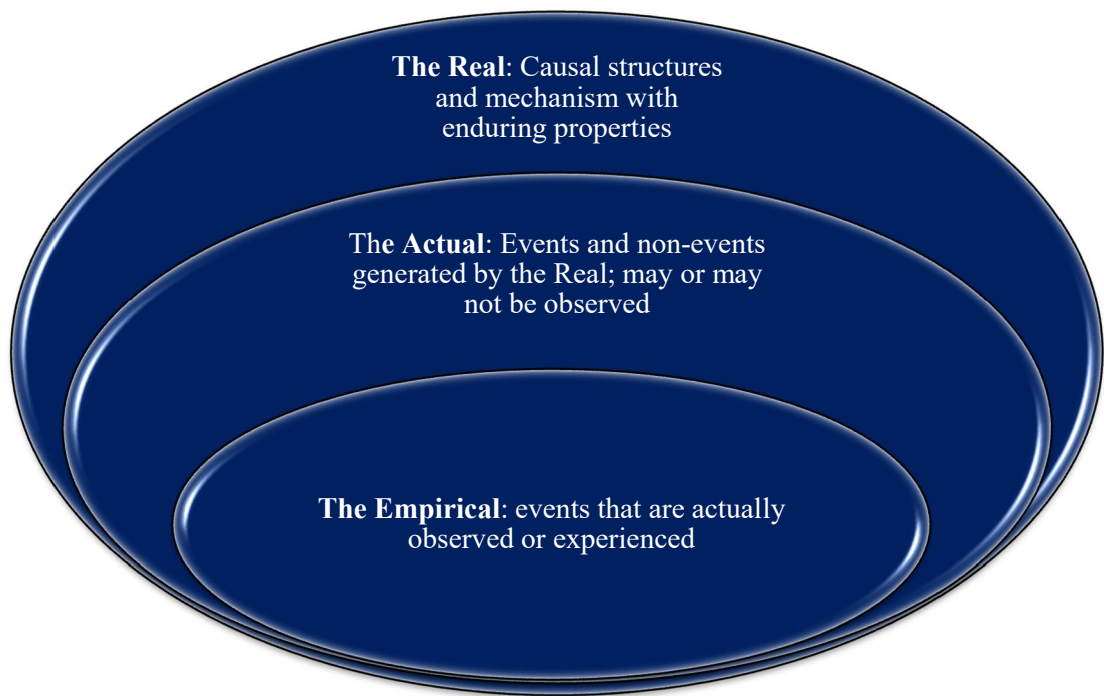


Figure 23. Three domains of the real (Saunders, Lewis, & Thornhill, 2016, p. 139)

In natural science experiments, causal mechanisms can be observed and conclusions drawn, whereas in social science research occurs in open systems. In social science generating knowledge is an interactive process and very much the work of humans (Mingers, 2016) and the same methods as in natural science cannot be applied.

The real cannot be captured by observation and experiences and therefore reality can be reduced to only those events that can be observed; in other words, diverse entities and events coexist in the world. As stated by Bhaskar (2008), positivists can be accused of treating the three domains as one by reducing the world to what can be observed via human senses and leaving no room for the underlying, unobservable mechanism. Critical realists, however, believe that reality is the product of a knowledge-generation process in which the researcher is involved.

Critical realism can be viewed as a mediating stance between the polarized positions on a paradigm continuum, and this has thus led to growing interest in different disciplines (Mingers, Mutch, & Willcocks, 2013), especially in business management studies (Fleetwood & Ackroyd, 2004; Eriksson & Kovalainen, 2016; Danermark, Ekström, Jakobsen, & Karlsson, 2002) and accounting and finance (Modell, 2009; Haslam & Sikka, 2016; Bisman, 2010; Tyfield, 2012; Lukka & Modell, 2010).

There are no predefined data generation methods from the critical realist perspective. Given that understanding and gaining real insight is one of the main aims of research (Gray, 2014), some scholars advise using interviews or observation as data generation methods (Flick, 2014; Eriksson & Kovalainen, 2016). This allows critical realist to accentuate the qualitative factors. These varied interests were examined in a predefined environment by interviewing experts from different professions. The (business) interests, structures and professional associations that affect the research participant need to be considered and these influences need to be taken into account when interpreting the results. Interaction between the research participants and the researcher is required for consideration of these complex 'structures'. The critical realist approach is coherent with the research topic and these influences. It recognises the three domains of reality and acknowledges the interdependency and complexity of indemnity calculation. For these reasons, the critical realist paradigm is appropriate.

CR has the potential to answer the research questions posed in this study. The economic consequences are based on mathematical calculations using well-recognised, state of the art business valuation methods but also the will of the owners, legislation and the perceptions of the stakeholders. The aim of this study is to explain the nature of these structures through an understanding of how the outgoing owner and the remaining shareholder perceive the future reality and thus their expectations. Indemnity is influenced by that perception, so a critical realist paradigm with a qualitative approach to generating and analysing data is appropriate.

This research tends towards the critical realist paradigm to answer questions and understand issues without being forced to adhere to a specific method. I am also convinced that as a researcher, I should adopt a contemporary scientific perspective that is broad in scope, even though it must be determined through interpretation. Critical realism enables this degree of flexibility.

Becoming a Critical Realist

I completed my degree in business administration more than 20 years ago. The thesis I completed as a part of those studies served principally to provide me with knowledge in the researched topic. At that time quantitative approaches and a positivist philosophy were particularly common among professors and lecturers at my university. At that time, I was not able to take a broader view and simply did not know anything about other philosophies and specifically anything concerning qualitative research. Non-positivist research was not a part of my academic background. Even when I returned to academia in 2008 as lecturer, my knowledge in this area was still imperfect. My primary objective as lecturer was to bridge theory and practice, and I placed the greatest emphasis on the latter. Being almost exclusively a practitioner, I had a limited impression of what research, and research methodologies, were and still lacked knowledge of qualitative research at that period of time.

The DBA programme at the University of Gloucestershire provided research training to doctoral students where I had my first encounter with research methodologies. The purpose of the research methodologies module was to initiate the participant into the field of research and furthermore to foster a deeper understanding of research and research methodologies. It became evident that in order to conduct research it is essential that the researcher has a clear understanding about research in general and research process in the specific area of interest. This module offered me new perspectives regarding alternative paradigms for my research project. I learned about myself and how I could shape my research to answer the RQ and meet the RO of the thesis.

To achieve the aim of the research, different perspectives and viewpoints had to be considered. I challenged my perspective, and I realised that my old worldview as a traditional positivist was inappropriate to address an interrelated topic and I understood that a more interpretive approach was necessary. To generate beneficial results in business management, the researcher has to speak the same language as the participants (Myers, 2013), research has to investigate the individual circumstances and gain an in-depth understanding of the research topic by using a qualitative approach (Gill & Johnson, 2010; Creswell, 2013; Rubin & Babbie, 2010). The chosen approach should also be considered in the light of being practical, adequate and beneficial for the research outcome (Eriksson & Kovalainen, 2016; Collis & Hussey, 2014).

Without the particular insights gained in the modules of the DBA programme, my shift from a positivist paradigm to an interpretivist would hardly have been possible. My previous tendency towards positivism is rooted in my first academic education more than 20 years ago. Thus, critical realism provided a compromise between that what might be viewed as the extreme paradigms – positivism and interpretivism – on the continuum (Fleetwood, 2005; Frauley & Pearce, 2007).

Based on the ontology proposed by Bashkar (1989; 2008; 2009), critical realism recognises both the existence of the natural order and the events of the social world (Carlsson, 2006; Easterby-Smith, Thorpe, & Jackson, 2015; Walliman, 2016). As outlined in this study, contemporary issues demand insight from different disciplines and, as Dickens (2003) and Losch (2009) accurately underline, critical realism provides a stratified view of reality and offers the potential to coordinate the disciplines.

One main goal of critical realism is to understand and reveal existing structures and mechanisms (Mingers, 2016; Bhaskar, 2008; Lee & Cronin, 2016) and this was also the case in this research. Researchers sometimes remain unaware that these implicit interconnections influence the outcome of

the study and that can have adverse consequences for research quality. In this context, it is important to emphasize in particular the dependence of SMEs on people (see section 2.6.2. and 4.5.10.) and the interdependence between auditors and courts (see section 4.3.2.). This observed and identified dependency between courts and auditors can be a cause or an effect. Does it exist because auditors do not have an interest in developing a severance agreement that reduces the potential for disputes? Then it is a cause. On the other hand, if a severance agreement that considers the interest of the partners and meets the legal requirements is difficult to develop and has not yet been put forward, then it is an effect. I believe that some professional groups do not have an interest in reducing litigation because of their direct business interests in such litigation. This single example makes it obvious that reflexivity helps to unveil pre-determined conceptions (courts-auditors) and that findings can emerge during the interaction between researcher and interviewees.

As a critical realist I am aware that people (both SME owners and auditors) interact with their environment to enhance their activities to create business opportunities for their benefit or their company and profession respectively. In particular SME-owners are more likely to directly and indirectly influence the success of their companies. One advantage of critical realism is the ability to discover the specific characteristics of SMEs, that lie beneath the surface and that influence business performance. These connections and business relationships are often dynamic and therefore changing. Critical realism helps to explain how and why these interdependence exist and to disclose non-transparent mechanisms. The critical realist paradigm significantly influenced the development of this thesis.

As already outlined, my values (see section 3.2.) and my positionality (see section 1.1.) can influence the outcome of the research. The term positionality includes the researcher's world view, influenced and shaped by his gender, historical context, religion, social class, political stance and life and professional experience in relation to the research subject, the

participants and research process (Given, 2008; Leavy, 2014). Reflecting on one's own positionality enables a researcher to understand the inherent subjectivity – and is particularly important in qualitative studies.

Reflexivity is a crucial characteristic in qualitative research (King & Horrocks, 2010). This was also emphasized in the taught phase of my DBA at the University that it is a prerequisite for interpretation and generation of qualitative findings in research. It applies to both the findings and the research process itself in order to ensure the quality of the research outcomes (see section 3.7.). Furthermore, it is also essential to recognise and express the theoretical and personal motivations that shape the research, i.e. how it is interpreted, generated and completed (Symon & Casell, 2012). For me, reflexivity means the position of researcher (see section 1.1.), the interaction with participants, my experience as a researcher or as a professional and what influence that might have on the research. I need to consider what this might imply and how it might limit the outcome (see section 5.6.). It also involves being critical about how I selected my sources of information (see section 3.6.1.), being thoughtful and questioning existing structures and methods, but also justifying my conclusions by ensuring research quality (see section 3.7.). Examples of this are dependencies between courts and auditors: using a valuation based on IDW S 1¹², not implementing the clear will of the partners in the articles of association, processes embodied in both theory and professional practice that are taken for granted such as SME being valued as listed companies.

There is no one single critical reflection in research. My critical reflection on this topic and research was to follow a line of argumentation related to how the data is generated, analysed and interpreted. This means I also had to judge and decide what was more important in cases of doubt. Moreover, these decisions needed to be made transparently (see chapter 4). What became evident in the research process was the view that valuation is not just a mathematical process to generate figures that represent a value. My priority

¹² Principles for the Performance of Business Valuations

was to understand and acknowledge the complex interrelationships between the stakeholders, - i.e. existing structures, restriction and dependencies and their consequences when owners retire - and a 'critical' approach to investigating and understanding indemnity determination. However, the theory and practice in business administration but also the statutory requirements need to be considered too. Company valuation or indemnity process is a way of making sense of a complex situation by considering the specifics of SMEs and the interests of the partners. Last but not least, reflexivity involves respondent validation, which means that their opinions on interpretations and implications drawn from the interviews must be questioned and verified by other sources (see section 3.7.). I had to be aware that interviews generate further data to be interpreted and the possible limitation of the adopted research process.

The adopted research philosophy is critical realism, and I believe that specific groups have similarities in the way they perceive reality. This was evident in interviewing auditors, M&A consultants and academics. Some examples of such similarities are particular mechanism how to value a company and consequently how to determine the indemnity. Even if there are similarities, it does not mean that these mechanisms are identical within a group of experts, i.e. I had to face differences within these groups which led to further complexity. However, to fulfil the aim of this research different views based on varied experiences from the interviewees were necessary. Therefore, my focus was on looking at the different types and structure used in determining an indemnity for outgoing owner of SMEs.

Critical realism is well suited to explore complex topics such as in this present study, it aspires to offer casual explanations about the knowledge of behaviour and events and provide an alternative for those who are studying complex research problems (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998). This has created substantial interest in business research (Eriksson & Kovalainen, 2016), as it enhances accurate and detailed analyses when answering problems. Nevertheless, I had to face challenges in interpreting

data and generating outcomes from this research. Different viewpoints of these experts and their knowledge must be considered, and it was necessary to reflect on this depth, variety and complexity without simplifying the interpretation. A single and unanimous answer rarely existed, which led to significant interpretative efforts and thorough justifications (see section 3.6.2. and 3.7.).

My approach for interpretation was based on treating all experts as reliable and experienced informants even if their subjective worldview and profession influenced their answers. As with other critical realist researchers, the interviews provided access to the subjective knowledge and experience of each interviewee, a basis for exploring underlying processes or conditions. Accepting the answers without examination in a conversation between researcher and informants involved some risks. Therefore, interviewees' answers needed to be critically assessed by consulting other sources and documents but also by considering data from other interviews within each groups and in comparison with other professional groups.

As already outlined, my values influenced the research, but in addition participant values also had to be considered to ensure that the research is as free of bias as possible. To rise to this difficult task, management and professional skills were required, both in the interview session and also in the interpretation of the results. My professional skills are outlined in section 1.1., and the interviewees' orientations are detailed in section 3.6.2.

Qualitative studies are not value-free and accept that the researcher is part of the research (Creswell, 2013; Flick, 2014). My assumption and individual life experience contribute to how the data is analysed and interpreted. Therefore, my positionality shapes the design of the study, affects my understanding, the acceptance of the results and the validity of the research outcomes. In this context, I am aware that there is a probability that my subjectivity has influenced the research and the practical recommendations that are developed. The researcher's subjectivity cannot be avoided in

qualitative studies (Rubin & Babbie, 2010), however self-reflection and being mindful of our own subjectivity can help allow the reduction of bias and partisanship (Hammersley & Atkinson, 2007)

One major distinction is whether the researcher is an insider or outsider. Insiders are described as being part of what is researched and outsiders as being neutral and independent from the research subject (Eriksson & Kovalainen, 2016; Symon & Casell, 2012). The main benefits of being an insider are: better access to the interviewees that enables more insight to be generated in the researched topic, the specific jargon, the culture and the community (Denzin & Lincoln, 2008; Bryman & Bell, 2015). In addition, it can play an important role in establishing trust with the research participants (Flick, 2014), i.e. the probability of successful communication is higher. The main disadvantages are that possible ethical issues and potential prior knowledge or experience can increase the subjectivity of an insider (Greene, 2014).

The relationship and interaction that I had interviewing experts in the fields of my professions as a banker and lecturer influenced the research process. In other words, another researcher with a different background might have generated diverse data. I expected that my position as experienced practitioner and academic would give access to these people. However, to benefit from their individual experiences and knowhow in order to gain a deep and detailed understanding of the research topic, the major challenge was to establish trust. Conducting semi-structured interviews with participants of different groups, I did not expect to be treated as equal partner to this extent with all the professional groups I spoke to – though this did occur in most instances.

This became evident when I performed and transcribed the interviews. We shared a common concern, a sincere interest in valuation of SMEs. Before starting with the interviews we usually had a general conversation about my background and the specific interest in the topic. I realised that stating my position in relation to the participants, as suggested by Leavy (2014), was

beneficial. Due to my combination of being lecturer and practitioner who is seeking for answers, the interaction was more natural and they were pleased to give me insights in a topic with which I am familiar. They used language that is common in the valuation community, and I suspect these were specific statements and comments that the experts made to see if I am aware of their meaning. Once they realised that I was, which happened relatively quickly, I was one of ‘them’ in this interview situation. So, I am very aware that my position may have achieved a sense of solidarity within this specific community. Having the same interests with the interviewees and striving for answers in the topic researched fosters a greater effort from participants to share their individual knowledge.

Whether I was a full insider or not is quite difficult to answer. It has to be stated that this insider status was to a degree ‘perceived’ by the interviewees and is based on common interests and not on being in the same profession or organisation. Even though there are both advantages and disadvantages of being either an insider or an outsider, I realize that my positionality was not a drawback within the research process. I shifted from an insider in the interviewing phase to being in the outsider spectrum at later points (analysis and write-up), even though I cannot claim to have reached the state of being completely detached from the research object. I therefore struggled to meet my objectives to both be an objective academic and a practitioner who wants to generate applicable research outcomes. To make sure that the trustworthiness in this research is established, I applied specific criteria outlined in section Research Quality (3.7.). These alternate positions (insider-outsider) within the research process enabled to make decisions that are based on my experience as practitioner (see section 4.2.2.; 4.2.6. and 4.5.7.). I am convinced that my positionality is beneficial for generating outcomes as it assists in creating a bridge between personal experience and academic discourse.

As a practitioner, I am interested in making changes when asking questions that address an existing and unsatisfactory situation. The focus in this research is therefore on understanding and applying research results. In particular, the

applications of the outcomes of this thesis lead to practical recommendations for components to be implemented in the articles of association (see section 5.4.3.). A critical realist position supports this ‘practitioner’s objective’ because the analysis of the mechanism and situations uncovered direct possible interventions.

3.3. RESEARCH APPROACH

Having decided to use a critical realist approach, it is important to employ the most suitable framework to answer the research questions and meet the research objectives. Methodological choices can be categorized into mono methods and multiple methods. Mono-method uses a single data collection technique and analysis procedure (Saunders, Lewis, & Thornhill, 2016) and multi-method uses more than one data gathering and analysis procedure.

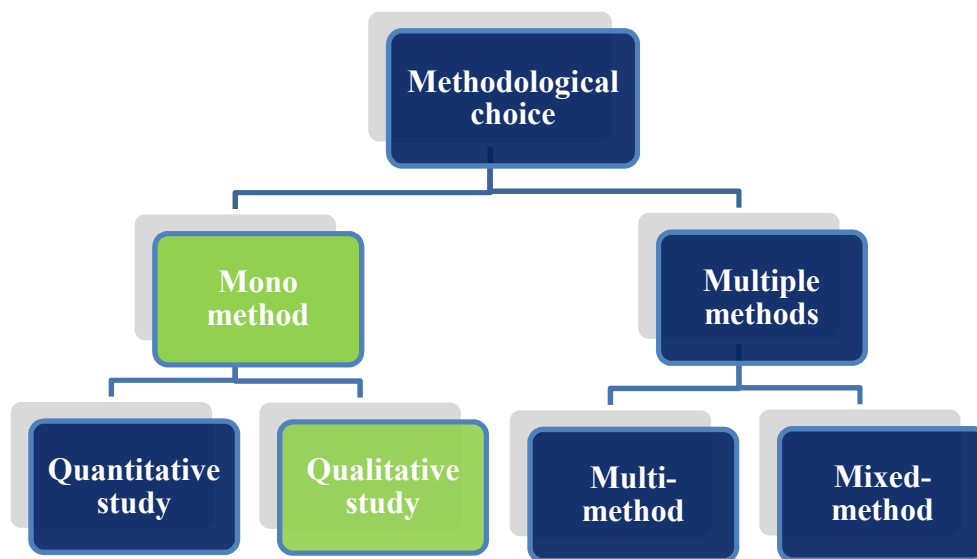


Figure 24. Methodological choice adapted from Saunders, Lewis, & Thornhill (2016, p. 167)

SMEs can be defined quantitatively regarding number of employees, balance sheet total, market share or turnover. As stated, the definition of SMEs is based on characteristics. These are also often qualitative and cannot be counted. Therefore, the specifics of SMEs that influence performance can only be identified with qualitative research methodologies. However, the distinction

between the quantitative and qualitative types of methodologies should not be too dogmatic (Bryman, 2016), even though quantitative and qualitative are two systematic categorizations for conducting research. Qualitative research (QR) tends to use an inductive approach (Leavy, 2014), and to rely more on interpretation (Zikmund, Babin, Carr, & Griffin, 2013) “*reality is seen as a constantly shifting product of perception*” (Walliman, 2016, p. 32). Bryman (1988) goes so far as to say that qualitative research is inclined to be more open. Qualitative data is real, rich, full, detailed and therefore very attractive (Robson & McCartan, 2016; Miles, Hubermann, & Saldana, 2014). QR uses flexible analysis and methods for studying the phenomena that can include both people and the social environment (Denzin & Lincoln, 2013). Qualitative research seeks to discover the unknown and to evolve empirically grounded theories (Flick, 2009). It strives to understand and open up new perspectives on existing knowledge.

I have conducted this study because there is a need for detailed understanding of different relations and interdependences of SMEs and their shareholders. The aim of this research is to find out which valuation methods are most suitable for indemnity determination and whether these methods are appropriate to enable consideration of SME characteristics. Furthermore, the research seek to develop a severance agreement that meets the interests of all partners; increases the clarity of such regulations by being consistent with the legislative framework requirements and has the potential to reduce legal disputes and also takes into account the current state of research in business administration.

The nature of the research questions means that this research will be qualitative. According to Ghauri and Gronhaug (2010, p. 105), “*qualitative research is a mixture of the rational, explorative and intuitive*”. They argue that the researcher’s skills and experience are extremely important in the analysis process. For this study, an inductive approach is used as findings, “*produced by qualitative research tend to follow a bottom-up approach*” (Yin, 2016, p. 24).

3.4. RESEARCH PURPOSE

In this research, it is important to understand the people involved in an SME, as they are key to income generation. It is necessary to interpret their role and impact on performance. Moreover, clear boundaries for private autonomy are not provided by the legislator and existing literature suggests that expert recommendations have to be investigated, analysed and interpreted. Moreover, it is important to consider the research area from different perspectives. Exploratory research (ER) is the most suitable, frequently used and well-known for this (Sekaran & Bougie, 2016; Hair, Celsi, Money, Samouel, & Page, 2016).

This type of study focuses on gaining deeper insights into a research problem and is particularly useful to clarify and understand a particular phenomenon (Saunders, Lewis, & Thornhill, 2016). According to Zikmund, Babin, Carr and Griffin (2013), the main uses of ER are diagnosing a situation, screening alternatives and discovering new ideas. Moreover, ER is beneficial when researching complex issues (Hair, Celsi, Money, Samouel, & Page, 2016; Greenfield & Greener, 2016) such as the connection between SME characteristics, the interests of different parties, legal uncertainty and the impact of owner retirement on SME stakeholders.

Compensation regulations have to be screened and improvement alternatives identified. Interviewing experts, searching the literature and addressing the research problem from different disciplines, such as business and law, provides a comprehensive answer to the RQ by applying ER (Collis & Hussey, 2014). Based on these results, a framework for theoretical purposes and practical application can be generated. ER is usually qualitative by nature and typically employs methods such as interviews (Wilson, 2013; Ghauri & Gronhaug, 2010; Myers M. , 2013). Saunders, Lewis and Thornhill (2016) also emphasize that exploratory research is often conducted through interviewing 'experts' and searching the literature.

The time horizon of the research process also needs to be specified. Qualitative studies regularly require a cross-sectional design (Bryman & Bell, 2015). These focus on a single point in time and capture a particular phenomenon involving a predefined population (Bryman, 2016). This means that the collection of data is usually undertaken within a short period of time. Unlike cross-sectional studies, data in longitudinal studies is collected at least twice (Richtie, Lewis, Mc Naughton Nicholls, & Ormston, 2013) as the goal is to investigate changes over time (Babbie, 2016).

Cross sectional studies focus on the relationships between variables. A key aim of this thesis is the impact of SME characteristics on company performance and their consideration for indemnity determination. The purpose of this study is not to research how changes affect SMEs characteristics or indemnity regulation over time, but to perform the research at one point in time. Therefore, a cross-sectional approach is used.

3.5. RESEARCH STRATEGY

A research strategy (RS) characterizes different ways of collecting and analysing data (Bryman & Bell, 2015). Some authors, including Yin (2014) or Sekaran and Bougie (2016), consider different types of RS, such as experiment, survey, archival analysis, history, case study, action research, survey, grounded theory, ethnography. The RSs most commonly used in qualitative research are case study and survey (Saunders, Lewis, & Thornhill, 2016; Myers, 2013).

Surveys are the strategy most widely used in business management studies and social science (Easterby-Smith, Thorpe, & Jackson, 2015; Zikmund, Babin, Carr, & Griffin, 2013; Vogt, Gardener, & Haeffele, 2012). Surveys enable the collection of abundant quantitative and qualitative data that address the research questions. They can be employed for exploratory research to gather data about people, situations or business contexts (Sekaran & Bougie, 2016).

Survey instruments are predominately questionnaires or interviews (Bryman & Bell, 2015). Interviews with semi-structured or open-ended questions are often used in qualitative research (Silverman, 2011). The final choice of research strategy depends on the type of research, the objectives to be met and questions to be answered. The main focus for the present study is to discover “*how the compensation for withdrawing shareholders of German SMEs can be determined?*” Therefore, a survey strategy is appropriate as it focuses on current events (Yin, 2014). As already stated, indemnity regulation needs to be modified and thus this is a contemporary phenomenon rather than a historical one.

3.6. RESEARCH METHODS

3.6.1. DATA COLLECTION

Data generation is an integral part of the research design and can significantly influence results (Somekh & Lewin, 2011). Initially, different qualitative methods were considered. These include observation, questionnaires and interviews (Sekaran & Bougie, 2016). The choice of data collection method depends on various criteria, including the research questions, research strategy, conceptual framework and the availability of resources (Bryman A. , 2007; Sekaran & Bougie, 2016).

Due to the nature of the research questions and the critical realist approach, qualitative interviews are the primary research method. Interviews are one of the main methods for gathering data in qualitative research (Myers & Newman, 2007). Their purpose is defined by Kvale as, “*to gather descriptions of the life world of the interviewee with respect to the interpretation of the meaning of the described phenomena*” (1983, p. 174).

This method is regarded as the golden standard in qualitative research (Novick, 2008). It is popular among researchers and its flexibility makes it particularly attractive. In addition, according to Alasuutari, Bickman and Brannen (2008) and Denscombe (2014), the main advantages of face-to-face interviews are to:

-
- enable careful respondent selection
 - expect the data to be richer and more detailed
 - enable a high response rate
 - be able to communicate as best as possible (verbal and non-verbal).

The main reason for using face-to-face interview to collect primary data is based on the study objectives. Apart from identifying the most suitable valuation method for indemnity determination in the context of SME characteristics, an additional aim is to develop a new framework for indemnity regulations that reduces problems in determining indemnity by addressing the interests of all partners and takes into account the current statutory requirements.

The degree of standardization in face-to-face interviews needs to be taken into account. The standardized interview was rejected due to the nature of my exploratory research questions. The range of responses might be narrow and deeper probing could have been restricted. Completely unstructured interviews were also rejected due to their lack of a systematic approach. Due to time constraints and the relationship between the themes, comprehensive results could only be achieved by adopting a certain degree of standardization, which led me to use semi-structured face-to-face interviews.

As stressed by Thomas (2009), semi-structured interviews provide the best of both structured and unstructured methods. In other words, questions can be rearranged to follow new directions without losing sight of the issues to be covered. However, semi-structured interviews also have disadvantages. The main issue is ‘the interviewer effect’, where interviewee statements can be affected by the presence of the interviewer and the social interaction (Alasuutari, Bickman, & Brannen, 2008; Brinkmann & Kvale, 2015). In addition, interview bias can arise. To avoid this as much as possible, researchers tend to use open questions (Easterby-Smith, Thorpe, & Jackson, 2015). Thomas (2009) points out that the same words can have different meanings depending on how those words are said and that interviewees can

incorporate various biases within what they are saying. However, these disadvantages are outweighed by the benefits of using a method that enables participants to express their thoughts in their own words. As Gravetter and Forzano (2015, p. 381) note: “*The primary advantage isthat it allows an individual the greatest flexibility in choosing how to answer.is likely to reveal each individual’s true thought or opinions.*”

Although it is very time consuming and entails higher costs (Smith, 2012) the semi-structured interview allows an in-depth exploration of participants’ answers (Richtie, Lewis, Mc Naughton Nicholls, & Ormston, 2013), while remaining focussed on the research questions. Additional information can be gathered in a way that would not be possible with a quantitative approach (Hussey & Hussey, 1997; Leavy, 2014). King (2004, p. 11) states that with a realist approach, “*the accounts participants produce in interviews bear a direct relationship to their ‘real’ experiences in the world beyond the interview situation.*” This statement underlines the importance of the interviewees’ perspective in their real world, where experience and implicit knowledge need to be established.

Even if valuation methods exist and provide a framework of how to proceed, the valuation of a company and the determination of indemnity require the evaluator’s discretion at different stages. Semi-structured interviews are usually conducted by a previously elaborated series of questions or themes (Wilson, 2013), which allows the detailed exploration of topics and new issues by adding and developing new questions at the interviewer’s discretion (Collis & Hussey, 2014).

Semi-structured, face-to-face interviews are the most appropriate collection method for this study (Brinkmann & Kvale, 2015). The data needed to answer the RQ and meet the RO can be generated by semi-structured interviews, as illustrated in the following figure.

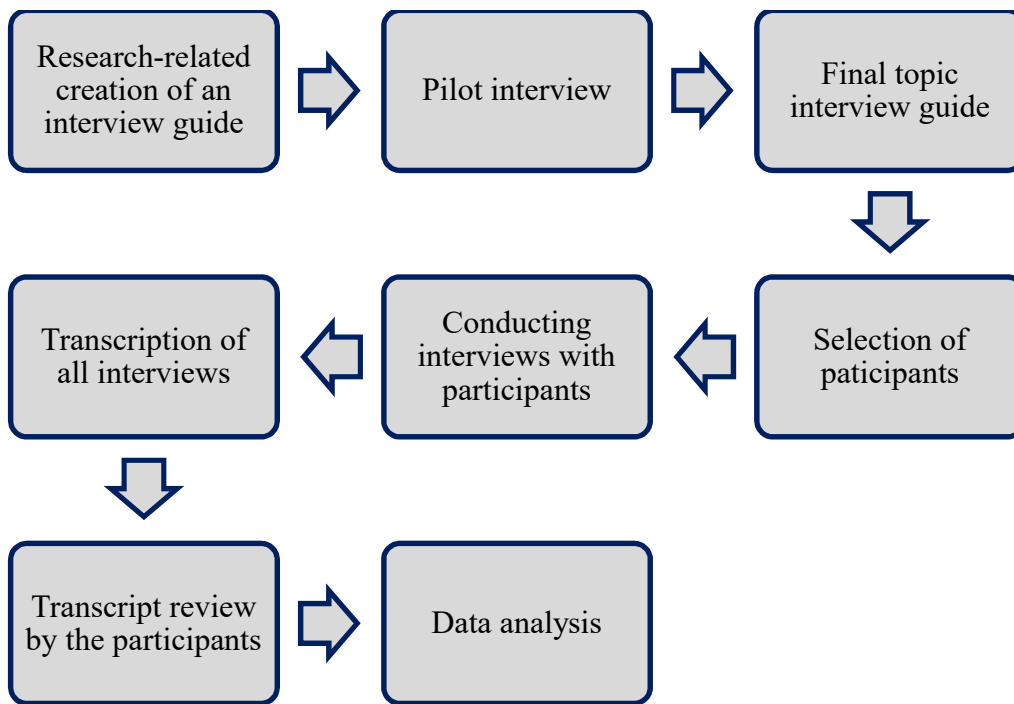


Figure 25. Data techniques and procedure

3.6.1.1. Interview preparation

Semi-structured interviews may be flexible but they require rigorous preparation. I developed an interview guide with themes drawn from the literature that were consistent with my research questions and objectives. The interview guide is not a questionnaire and has to be understood as a list of questions to structure the interview (Hennink, Hutter, & Bailey, 2011). The guide was broadly structured to facilitate the course of the interview and embodied, “*just enough detail to make evident what is wanted*” (Weiss, 1994, p. 48). This allowed substantial flexibility, “*in order to follow interesting lines of inquiry and to facilitate an unbroken discussion*” (Easterby-Smith, Thorpe, & Jackson, 2015, p. 139).

To test the clarity and comprehensibility of the questions, refine the questions and assess the length of the interview, I conducted a pilot interview with a research fellow, who has finance and accounting competence and is aware of the specifics of German SMEs. The final topic interview guide was the result of marginal modification after conducting this pilot.

3.6.1.2. Participant selection

Sekaran and Bougie (2016) suggest that selecting the right people, objects or events for the research is a type of sampling. Sampling techniques can help reduce the quantity of data needed for the study by gathering data from a smaller group of respondents (Saunders, Lewis, & Thornhill, 2016). Sampling techniques can be categorized as probability or non-probability based; the latter is more suitable for qualitative research in which the researcher wants to understand, discover and gain a deep insight (Patton, 2015). Generalizations of a population are based on probability sampling, which is not often possible from non-probability approaches and is a key difference between the two techniques.

It is common to choose respondents who are most suited to answer the research questions and meet the objectives of the study (Saunders M. , 2012). The researcher should concentrate on sampling units that allow a greater and more straightforward analysis of the characteristics researched, as stressed by Alasuutari, Bickman and Brannen (2008).

I adopted a two-step approach to achieve this. Firstly, I analysed the criteria required to be familiar with the research topic, based on the literature review. The requirements are shown below:

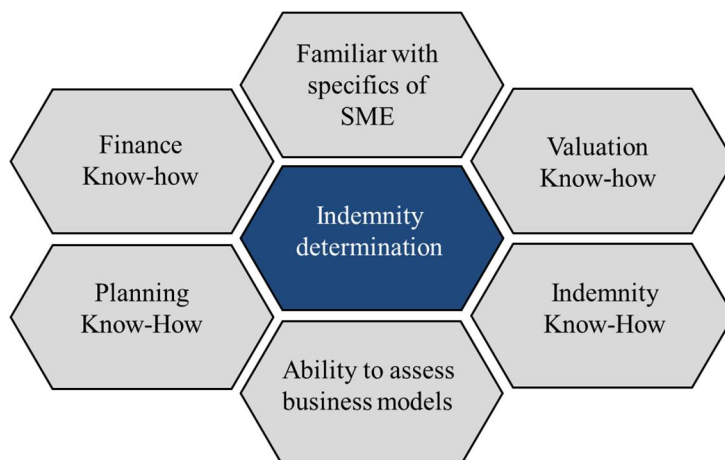


Figure 26. Characteristics required of participants

Secondly, I considered which people are usually involved when indemnity has to be determined or a company agreement has to be established or modified (stakeholder). Given this, I identified outgoing owners, auditors, lawyers, academics and M&A consultants. These stakeholders were chosen as outgoing owners are usually affected when leaving the company, lawyers are frequently involved when the company agreement needs to be drawn-up and auditors are commonly required when indemnity needs to be calculated or determined. Academics are often charged by judges in court cases to give an expert opinion where legal action is taken to determine the indemnity. M&A consultants are regularly asked about the market value of a company or to provide a valuation.

It became evident that the participants had to cover different areas of knowledge and I realised that the interviewees needed to be experts. To have the capability to value a company, or to determine the indemnity of an outgoing owner, requires considerable business management skills, such as planning, assessing business models and financial knowledge.

It also required detailed expertise in valuation methods and techniques, the particularities of indemnity and the unique specifics of German SMEs. The following table shows the expected knowledge and skills of the participant types:

	Owner	Lawyer	Auditor	Lecturer	M&A consultants
Familiar with specifics of SME		✓	✓	✓	✓
Valuation know-how			✓	✓	✓
Indemnity know-how		✓	✓	✓	✓
Ability to assess business models	✓		✓	✓	✓
Planning know-how	✓		✓	✓	✓
Finance know-how			✓	✓	✓
Total	2	2	6	6	6

Table 11. Participant analysis

It was important that the experts came from different groups to gather a variety of views (Hardy & Bryman, 2009). Auditors, academics and M&A consultants were identified as being the most appropriate group of specialists to meet the research objectives. Having established this, I looked through the literature and researched the Internet to find appropriate candidates. Firstly, I chose a selection of audit companies and identified their company valuation specialists. Secondly, I identified M&A companies with company valuation professionals, and finally I selected professors or lecturers who have academic knowledge in company valuation.

All the prospective respondents are recognised experts in the subject area. An ‘expert’ in this thesis is understood to mean those who are interested in the topic under research and have associated knowledge and experience. There is no uniform definition in the literature as to who, or what, can be considered as an expert. For the purposes of this thesis, Bogner and Menz (2009, p. 49) provide a good definition:

“Experts have technical process oriented and interpretive knowledge referring to their specific professional sphere of activity. Thus, expert knowledge does not only consist of systematized and reflexively accessible specialist knowledge, but it has the character of practical knowledge in big parts. Different and even disparate precepts for activities and individual rules of decision, collective orientations and social interpretive patterns are part of it. The experts' knowledge and orientations for practices, relevancies etc. have also - and this is decisive - a chance to become hegemonic in a specific organizational or functional context. This means, experts have the opportunity to assert their orientations at least partly. By becoming practically relevant, the experts' knowledge structures the practical conditions of other actors in their professional field in a substantial way.”

The knowledge and tacit understanding of the experts in this study is applicable in practice and has influence due to their activity in indemnity determination.

I contacted 18 potential respondents (six from each group) from the list of experts generated. In order to recruit these experts, I sent an email (see Appendix IV) explaining the purpose of the research, my professional background and asking for permission to conduct the interview. Two experts declined due to their schedules, one preferred to be interviewed on the telephone and 15 face-to-face interviews took place with five experts from each group.

The experts had to meet the profile shown in figure 26 and be available for an interview at the allotted time. In order to obtain varied perspectives, the selected interviewees worked in different companies/universities and were located in different cities throughout Germany e.g. Berlin, Düsseldorf, Hamburg, Frankfurt, Stuttgart, Cologne.

	Auditors	M&A consultants	Academics
Education	Two participants are master graduates, three have doctorates.	Three participants are master graduates, two have doctorates.	All participants have doctorates, four are professors and one is a lecturer.
Valuation Knowledge	All participants are specialised in company valuation and responsible in their organisation for this topic area.	All are specialised in company valuation and responsible in their organisation for this topic area.	Indemnity or company valuation is one of their main areas of research or lecture topics.
Experience	More than 10 years' experience in company valuation.	More than 10 years' experience in company valuation.	More than 10 years' experience in research or as lecturer in this area.

Table 12. Expert profile

I was surprised at the interviewee response rate and commitment given their schedules. Many respondents said that two factors were decisive in agreeing to participate; firstly, they have an ongoing interest in the topic and secondly, my assumed knowledge as a lecturer in this field with practical expertise in acquisition finance. I was regarded as an 'equal' partner in the interview. As stated by Brink (2013), when interviewing experts, the interviewer must have a significant knowledge of the topic, otherwise s/he will not be accepted as a competent and capable dialogue partner. Even though I work in acquisition finance and have working relationships with auditors and M&A consultants, to minimize potential power relationship issues I did not interview anyone with whom I have a direct working relationship.

Once I had received a positive response, the participants were called to arrange an appointment, which was always challenging due to their schedules. I asked all participants where they preferred to be interviewed and I accepted their suggestions. I wanted the respondents to feel comfortable in their preferred environment so interviews either took place in the interviewee's offices or a meeting room. I sent a follow-up email after agreeing on a time and location. The email (see Appendix IV) expressed my gratitude for their willingness to participate in my research and gave an overview of the main interview topics, the consent form (see Appendix V) and the confirmation of

date, time and location for the interview. Research ethics had to be respected (Marshall & Rossman, 2011) and therefore informed consent was needed from the participants. The content form included the permission to record with a digital voice recorder and to transcribe the interview, the guarantee of confidentiality and anonymity of the participants, institutions and organizations and the right to withdraw at any time without consequence. All consent forms were signed by the participants so their participation was voluntary and they were not compensated. This procedure was essential to ensure participants:

- i) were reminded of the upcoming interview and therefore of their commitment
- ii) were aware of the degree of detail to be covered in the interview
- iii) had the opportunity to check their expert status in the area under research.

3.6.1.3. Interviewing respondents

A researcher should be well prepared and completely familiar with the interview guide before interviewing participants (Bryman & Bell, 2015). Hence, I was conversant with the topic to be investigated and also had prepared follow-up questions to cover possible key themes or a more detailed insight that might emerge during the interview. It is important to acknowledge the role of the experts as without them, there would be no research. I therefore addressed them with appropriate respect, in particular to appreciate their participation.

All the interviews were conducted in German. As stated by Morris (2015), interviews should be performed in the first language of the interviewee to avoid misunderstanding. Prior (2014) also argues that if the participants and the interviewer do not share the same linguistic basis, there is a high risk of working with diverging standards and assumptions.

To create a relaxed atmosphere, all interviews started with general conversation, then I introduced myself and explained my background and research interests. All the interviewees were keen to know why I am interested in the topic and why they had been chosen for the interview. I explained this and gave the following provisos regarding the rights of the participants to create confidence (Seidman, 2013):

- i) the interviewee can reject questions,
- ii) s/he can stop the interview or withdraw at any time and that
- iii) s/he will be provided with a transcript of the interview after completion.

Again, permission to record the interview was requested and two digital recorders were placed at different positions to ensure data if one device failed and allow for an accurate transcription if the interviewee spoke in a different direction. This was helpful to understand everything the interviewees said. There are many advantages of recording the interview rather than just taking notes, including those listed by Kuckertz (2014, p. 123): “*Accuracy, direct quotation possible, relaxed interview setting, easier to analyse, increased reputation in the scientific community.*”

The interview guide allowed me to ask structured open-ended questions which allowed for comparable responses from the respondents. I adopted a relatively passive approach to give the interviewee the opportunity to explain themselves and take the more active role. However, I was still able to build rapport and encourage the interviewees without intervening in their train of thought e.g. by nodding and to ask clarifying questions. I was also able to maintain control of the interview interaction process to maintain its scope and encourage interviewees to elaborate further when answers or discussions led to other important areas. I also took notes to:

- i) show interest
- ii) focus on a specific topic during the interview and to make sure that I did not forget to ask any follow-up questions
- iii) record my own ideas during the interview

-
- iv) register any unexpected information that arose that should be followed up either in the interview or in the following interviews or interpretation/analysis
 - v) highlight major themes

The questions were not always posed in the order scheduled in the interview guide but I generally asked all the questions or at least with a “*similar wording*” (Bryman & Bell, 2015, p. 481) to prevent modifying the intended aim. Sometimes interviewees answered questions before I asked about that particular point or gave an explanation to a question elucidating their view and so covered two or three of the following questions. However, the primary aim was to shed more light on the themes under research and not to keep to the chronology of the topics under discussion. Even if I used an interview guide, I made sure that other themes could emerge from the participants. Meuser and Nagel (2009) emphasize that the interview guide should be used flexibly and non-bureaucratically and as a thematic idea rather than a standardized process.

The interviews took place between April and July 2014. They usually lasted for more than one hour (between 1-1.5 hours) because the interviewees were happy to share their knowledge and experience and spoke freely. Moreover, I was patient and tried not to interrupt the interviewees so that they could finish their point. This was particularly important to avoid missing useful information (Morris, 2015). As a result, all the interviews provided abundant information on the topic researched.

3.6.1.4. Sample size

At the beginning of the study I did not know how many interviews would be necessary to provide a deep insight into determining the outgoing owner’s indemnity.

How many interviews are sufficient for academic research is often questioned but in the literature I have consulted this is never precisely defined. There are merely indications, which range widely, and so do not provide a standard.

Some authors argue that one interview can be enough in certain situations (Denzin N. , 2012; Passerini, 2012). Adler and Adler (2012) suggest between 12 and 60, Rugin (2012) recommends 20 for masters and 50 interviews for doctoral theses and Charmaz (2006) 25 participants.

The number of interviews carried out is only sufficient if no new findings can be derived and may not reasonably be expected (Myers, 2013; Sekaran & Bougie, 2016; Bryman, 2016). Therefore, data saturation in qualitative research cannot be known in advance, i.e. the interviews need to be conducted. Pratt (2009, p. 856) stresses the difference between quantitative and qualitative studies and that, “*there is no magic number of interviews that should be conducted in a qualitative research project.*” Moreover, data saturation in qualitative studies depends on several factors; scope and complexity of the investigation, heterogeneity of the interviewees and the quality of the data (Given, 2008; Morse, 2000; Bryman, 2016). In my field of research data quality and homogeneity can be assumed as all interviewees are experts. The main focus of the data collected from the interviewees is “*to provide a complete and truthful picture of the object of study*” (Braun & Clarke, 2013, p. 56).

Even before the 15 interviews were carried out, I could see that there was agreement regarding several points across professional groups e.g. adjustments, planning, and financial feasibility. However, opinions differ regarding the valuation method to be applied or the question of whether the CAPM is suitable for the evaluation of SMEs. Here, no new arguments and perspectives were provided and most of the views and opinions were repeated up to the completion of the last interview. The same can be said of emerging issues (transferable profitability) that recurred until the last interview was completed. I therefore concluded that the number of interviews conducted was sufficient for saturation.

3.6.2. DATA ANALYSIS

Expert interviews are seen as a particular communication process that has to be planned and structured and enable the generation of all the information needed (Gläser & Laudel, 2010). Experts are not only seen as the catalysts for the research process but also as the distributors of objective information (Bogner & Menz, 2002, p. 38). The main purpose of expert interviews is to encompass their subjective and authentic experience (Flick, 2014). Standardized quantitative procedures are not seen as suitable to analyse expert interviews because only knowledge that the researcher is aware of, or that all the cases have in common, can be extracted and analysed. The specific knowledge of the experts would be lost.

As stated by many authors, data analysis is essential in qualitative studies, as Langley and Abdallah (2011, p. 208) accurately describe: *“A good research question, a strong design and excellent data are clearly helpful for developing novel and credible insight, but it is the analysis that this all come together.”*

The data analysis process for this study is based on content analysis. Qualitative content analysis reduces the large amount of text material in order to make it more manageable and so that important information can be retained (Flick, 2014). Krippendorff (2013, p. 24) defines content analysis as: *“...a research technique to make replicable and valid inferences from the text to context.”* In this research, analysis is based on the qualitative content analysis according to Mayring (2010). Qualitative content analysis allows texts to be systematically analysed on the basis of a category system and can be seen at the broadest level as a basis for text interpretation. The process model includes 9 steps:

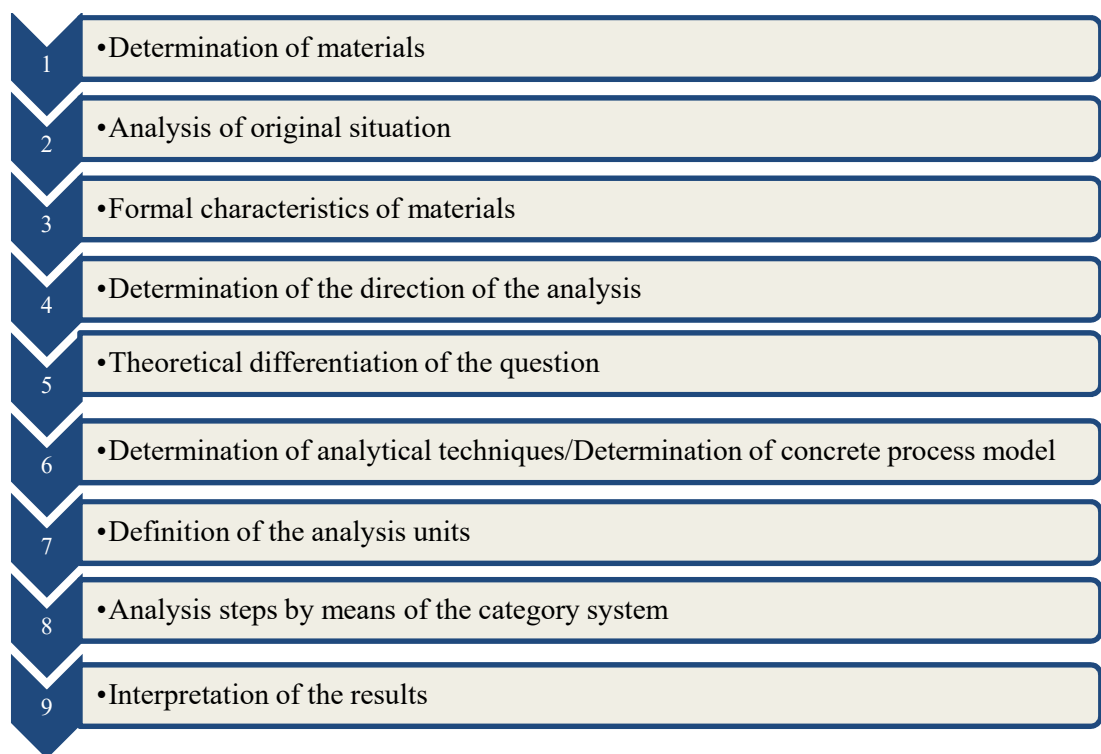


Figure 27. Process model (Mayring, 2010, p. 68)

Determination of materials: According to Given (2008), analysis should determine the materials to be considered as part of the process. In this thesis, all data is taken into account, particularly from the interviews. The original set of interviews was not been altered during their analysis (Früh, 2011) to allow equal consideration of all the interviewees (Gläser & Laudel, 2010). This ensures that the analysis can be replicated enabling reliability and validity and preventing any distortion.

Analysis of original situation: Primary data was generated through interviews. The interaction with the research participants is captured by recording the interviews so that the original situation can be reconstructed from the audio. The circumstances and the setting of data collection are set out more in detail in section 3.6.1.

Formal characteristics of the materials: ‘Text’ is necessary for content analysis (Drisko & Maschi, 2016). All the interviews were transcribed verbatim to provide written text. The transcription process is laid out in Appendix X.

Determination of the direction of the analysis: In this study, content analysis follows Mayring’s suggestions (2010). Gläser and Laudel (2010) and Bogner, Littig and Menz (2014) also recommend using content analysis for expert interviews. Although the experts’ mode of expression is good and statements will primarily be classified by content, I have incorporated professional and personal aspects into the analysis of statement for the reasons detailed below.

Market orientation and sales orientation are paramount for the M&A consultants. I noticed a latent impatience regarding questions concerning company evaluation and the implementation of knowledge based on fast and easy to handle results. This could be because results that work in practice seem to be sufficient as this requires solutions for existing problems and not lengthy research. Although research is appropriate, it is crucial to have findings that will be accepted in practice. Comprehensive analyses or safeguarding through scientific methods hinders business transactions and practitioners can view it as disruptive. This was evident in the interviewees’ reasoning with transactions introduced as evidence where, for example, evaluation on the basis of multiples is sufficient, otherwise the market actors would not agree on this basis and agreement would not be concluded.

A further point is consistent target focus and sales orientation. Optimizations and modifications should lead to simplification and not hinder feasibility and market acceptance. This became clear in compensation agreements where the tendency was to apply simple rules that are quick to implement. Complex evaluation methods or severance agreements, even when substantiated in theory, could unsettle participants (remaining and resigning shareholders) or lengthen negotiations. This practitioner perspective and the benefits that result from particular insider knowledge, experience and feasibility of results are

important. Uncovering such issues was the intention when interviewing experts from different professional groups. Linking practitioner perspectives, methodical rigour, critical analysis and result discussion leads to the generation of knowledge from a holistic perspective.

The auditors' answers were predominantly shaped by the requirements and arguments of their profession and aligned to the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, 2008). Answers differing from this standard were rare and concerned individual topics. This is because auditors have a degree of dominance in the acquisition of judicial and extrajudicial expert activities due to clearly defined standards (see section 2.4.5. and Appendix II).

Many courts and judges rely on these standards for auditors' procedures, despite existing criticism. Every change to the methodology and procedure requires a well-founded and comprehensible argument, so that this position and the approved approaches are not lost. This means that the "second best" solutions are preferred (see CAPM section 2.4.3.1.), as an empirical and theoretical foundation for the best solution is not available in its entirety. The focus of these standards and their external perception is, and should be, transparency, although they are intersubjective and will only change if the research arrives at unambiguous results.

In the course of the interviews and the analysis, it became clear that the evaluation methodology and procedure or severance agreements should not be contestable, as far as possible. In the discipline of company valuation, there are margins of discretion; even the Auditor Handbook (Institut der Wirtschaftsprüfer, 2014) concedes this. Although it is understandable, it must be noted that auditors tend to work towards preserving existing processes. This is mainly to ensure acceptance, which critics would term dominance (see section 4.3.2.).

Academics, as expected, emphasize process transparency, solid theoretical foundations and empirical evidence as the basis of a thorough and conclusive procedure. If they believed that procedures were inadequate for practice or from an academic perspective, they were very willing to take alternative paths, even when there was no empirical evidence.

Theoretical differentiation of the question: The research questions and objectives are stated unambiguously in order to ensure a comprehensible analytical process.

Determination of analytical techniques/ Determination of concrete process model: Mayring (2014) provides three main techniques for text interpretation: summary, explanation and structuring. I decided to use structuring as this enables the identification of experts' individual knowledge. One of the reasons for interviewing experts was to give respondents the chance to take a stance on themes that had not been anticipated and thus generate new insights. Mayring (2014, p. 64) defines structuring as: *The object of the analysis is to filter out particular aspects of the material, to give a cross-section through the material according to pre-determined ordering criteria, or to assess the material according to certain criteria, and that it can have typifying or scaling or content issues* (Mayring, 2010). In this case, content issues are the focus, particularly the procedure for determining the retiring shareholders' compensation, taking into account the interests of the other parties and the legal requirements.

Definition of the analysis units: Eriksson and Kovalainen (2016) recommend defining the analysis units in order to code and interpret the content consistently. This includes both the minimum and the maximum section of the text, which can be words, themes, sentences or a paragraph. I decided to define the analysis unit by meaning as making these parts comparable to statements from other interviewee's facilitated interpretation (Schreier, 2012).

Analysis steps by means of the category system: I generated abundant information by collecting data through semi-structured interviews and I used NVivo (10) to manage data more efficiently. The coding process is outlined in Appendix X. According to Seidman (2013), Easterby-Smith, Thorpe and Jackson (2015), Robson and McCartan (2016), Bryman and Bell (2015), Brinkmann and Kvale (2015) computer aided software has the following main advantages:

- It can handle large amounts of data, which is usually unstructured, more efficiently.
- It can index parts of the text to particular categories and link related themes or classifications.
- The use of memos can include information gathered from the interviews that are important for the analysis and findings.
- Transcripts, codes, categories, memos, etc. are permanently accessible. This increases the flexibility of the analysis process.
- It enables retrieval operations, complex and compound searches on specific topics or text.
- The consistency of codes can be maintained and checked more easily.
- The systematic process of coding, categorising and storing the data permits a comprehensive, transparent and replicable analysis process that increases the reliability and validity of the analysis.

Qualitative studies can determine prevailing opinion on the basis of majority opinion. Nevertheless, individual opinions can bring new approaches that offer new perspectives and results. Such alternative opinions are also essential in qualitative work to improve analysis and assess the robustness of the findings (Easterby-Smith, Thorpe, & Jackson, 2015). In this respect, individual opinions are taken into account in analysis and discussion.

Two principles must be adhered to in qualitative content analysis, according to Schreier (2012): validity and reliability. However, for Mayring (2010) and Lamnek (2005) validity is the most important criterion. Here, given the

approach used, the process steps are transparent, which is ensured through explicit procedure documentation. Additionally, through triangulation, for example by the renewed submission of the interlocutors' results, research validity and reliability are safeguarded (Eriksson & Kovalainen, 2016; Strang, 2015). The results are inter-subjectively transparent through the systematic approach (Flick, 2015), in particular through the creation of the coding guidelines and definition of appropriate categories and codes (Krippendorff, 2013; Drisko & Maschi, 2016; Mayring, 2010).

My experience of computer aided analysis in this project was neither fast nor easy, especially given that category building and subsequent coding were developed over several different versions and therefore involved considerable time and patience. Some subcategories had to be transferred back into existing categories, as they were either not able to be selectively separated from each other or, the meaning in the general context could not be preserved and thus a later interpretation or analysis would be difficult. The challenge was, therefore, to keep the categories manageable and not to allow them to become a container for multiple aspects. That could have caused difficulties in analysis and interpretation. Equally, it is important that individual segments are not too small as they could then be taken out of context and rendered meaningless.

3.7. RESEARCH QUALITY

Quality is an enduring and essential issue in research. Any researcher needs to make sure that the research conducted is 'sound' and appropriate for the method, especially the validity of the final conclusions. Scientific rigour has to be demonstrated and the methods have to be justified to ensure findings are accepted by the research community and can contribute to knowledge. To ensure validity and reliability, methods and techniques have to be applied that demonstrate findings are credible, authentic and accurate. The importance of this has been made explicit by Morse et al. (2008, p. 14), who state that, "*without rigor, research is worthless, becomes fiction, and loses its utility*". From a philosophical perspective, terms such as 'validity',

‘reliability’ and ‘generalizability’ are associated more with quantitative studies and a positivist paradigm. Given the more interpretative approach used in this research, the term trustworthiness seems to be more appropriate.

It is worth mentioning that, given the variety of qualitative research approaches, there are no widely agreed and defined criteria for assessing qualitative studies. Sandelowski and Barroso (2002, p. 8) stress that, “*the only site for evaluating research [...] is the report itself*”. Flick (2007) emphasizes that, due to the nature of qualitative research, a standardized set of criteria is not suitable for all kinds of research and therefore a specific solution is needed. Nevertheless, several authors provide guidance on how qualitative researchers can address this problem by incorporating measures to evaluate research quality. It is difficult to find an apodictic set of criteria that is appropriate to assess the quality of this study. However, some writers on qualitative research methods have corresponding criteria referring to the term trustworthiness, at least from the content point of view. Lincoln and Guba (1985) and Denzin and Lincoln (2011) were the first to offer the following four criteria to ensure qualitative study trustworthiness:

a) Credibility is seen as an analogy to internal validity

Authors such as Lincoln and Guba (1985) and Bryman and Bell (2015) argue that credibility is one of the most crucial aspects for demonstrating trustworthiness.

Credibility is related to whether the research findings are believable or not: Was the researcher able to establish confidence in the outcome generated? (Carcary, 2009). Furthermore, if the findings represent participants’ reality (Guba & Lincoln, 1989), is the observation, interpretation and conclusion the participant’s original view? The researcher has to ensure that these views are plausible and that they have correctly understood the social world researched (Bryman & Bell, 2015). The researcher can enhance research credibility as illustrated in table 13 by adopting certain strategies.

b) Transferability (is seen as an analogy to external validity/generalizability)

Transferability refers to the extent to which the results of the qualitative research can be applied to other contexts, situations and environments with other participants (Strang, 2015), including where the research has taken place and where the results might be transferred. In qualitative research, the population of a study is usually small due to the aim, depth and breadth of the research phenomena. Although generalizability is usually not the goal of qualitative research, the results can be applied to a similar context or a broader group (Arthur, Waring, Coe, & Hedges, 2012). To ensure judgements about this transferability, it is necessary to provide enough detailed information about the research in question (Firestone, 1993; Bryman & Bell, 2015). Bitsch (2005) adds that judgement can be facilitated using purposeful sampling. Given that the results generated from qualitative studies must be understood within the specific situation, a detailed description is indispensable. Ultimately, the researcher cannot answer whether the findings can be applied to other contexts or not cannot be.

c) Dependability (seen as analogous to reliability)

This criterion for judging qualitative research refers to the stability or consistency of the research process and its findings over time (Bryman, 2016). Dependability is defined as, “*a systematic process systematically followed*” by Patton (2002, p. 546) and is also identified as an important quality criterion. In positivist and in quantitative studies, reliability is addressed by showing that similar results can be generated by repeating the research process. It is quite difficult for qualitative researchers to achieve as their aim is to gain a deep understanding of a specific phenomenon at a certain time and the phenomena changes over time, altering the stability of the findings (Leavy, 2014). Nevertheless, Lincoln and Guba (1985) stress the interdependence of credibility and dependability, stating that ensuring credibility demonstrates dependability over time. In this context, Patton (2015) emphasizes the

importance of ‘verstehen’, which implies a deep understanding of the research phenomenon. This particularity should be consistent. In order to show the dependability of a qualitative study, the researcher should demonstrate proper research, being careful and consistent in reporting the research methodology, data collection process, interpretation of the data and the results. The consistency demonstrated increases the dependability of the study. This can also be achieved by applying other methods. One of the most important strategies is to document as many steps of the research process as possible (Yin, 2014). These are shown analogously in table x.

d) Confirmability (seen as analogous to objectivity)

This standard of quality refers to the researcher’s degree of neutrality and the objectivity of the results as a means to use instruments that are independent from human skills and perceptions (Patton, 2015). The goal of confirmability assessment is to show that the results are supported by the data and that the findings, “*are not figments of the inquirer’s imagination*” (Tobin & Begley, 2004, p. 392). This process ensures that the researcher has not been biased during the study. It also acknowledges whether other researchers have corroborated the findings. Reference to other researchers and their findings can underpin the confirmability of the results.

The strategies applied to establish trustworthiness are compared with recommendations from different authors in the following table:

Quality criterion	Applied strategy
Credibility	Triangulation of sources, interviewing different groups, auditors, M&A-consultants and lecturers Findings were partially triangulated by existing literature Transcripts were sent to interviewees for review (member checking) Long-lasting experience of the researcher in the research topic, both academic and professional (prolonged engagement) Semi-structured in-depth-interviews requires being present and part of the research setting (prolonged engagement) Meetings with an external expert in business valuation, who was

	<p>not involved in the research (peer scrutiny of the research project)</p> <p>Explicit documentation and justification for participant-selection and their ‘qualification’ for the research project (persistent observation and depth of experience)</p> <p>Study of existing literature in the research topic to generate knowledge, to enable the researcher to relate and compare the findings (examination of previous research findings)</p> <p>Questioning strategy in interviews to avoid contradiction (iterative questioning)</p> <p>Research was conducted according to the ethical standards of the University inter alia to ensure honesty (tactics to help ensure honesty in informants)</p> <p>Adoption of adequate and well recognised research methods (academic rigour)</p>
Transferability	<p>Explicit description of the background and the context of the research to enable comparison or transferability to other situations</p> <p>Documentation of data collection techniques, participants background, number of participants, data collection sessions, time period of data collection</p>
Dependability	<p>Detailed description and justification of data-collection</p> <p>Recording and transcription of interview-data</p> <p>Double-check of transcripts</p> <p>Implementation of a code-book and a systematic review-process of the defined codes</p> <p>Storage of transcripts in software NVivo</p> <p>Detailed description and justification of data-analysis</p> <p>Systematic analysis approach</p> <p>Use of NVivo software to enhance quality in analysis-process</p> <p>Detailed description of the interpretation and conclusion</p> <p>Documentation of the contribution to knowledge and limitation of the study</p>
Confirmability	<p>Documentation and description of the research process</p> <p>Triangulation, member-checks and peer-debriefing to reduce researcher bias</p> <p>Explicit description of researcher’s background, epistemology, ontology and axiology</p> <p>Abundant use of participant’s quotations</p> <p>Use of figures and tables to illustrate the research process and findings</p> <p>Awareness of limitations of the study and their effects</p> <p>Reflection on the research process and researcher</p>

Table 13. Quality criteria synthesized from (Lincoln & Guba, 1985; Guba & Lincoln, 1989; Creswell, 2014; Gibbs, 2007)

The next chapter outlines the interpretation of results as the outcome of qualitative data analysis.

CHAPTER 4 RESULTS AND DISCUSSION

4.1. INTRODUCTION

This chapter focusses on the interview findings, highlighting the opinions, perspectives and particular knowledge of the expert participants. This chapter is structured as follows:

1. Summary of the categories derived from the interviewees' statements.
2. Discussion of exemplary statements as an evidentiary basis. As stated by Bowling & Ebrahim (2005), interviews generate abundant and quotable statements, therefore further exemplary interviewee statements that underline the results are listed in Appendix VIII.
3. Analysis and discussion of statements. These are interpreted and considered in relation to the knowledge generated from the literature review, as Yin (2016, p. 234) stresses, "*The ideal interpretations will connect the ideas of interest –reflected....by the relevant literature- with your reassembled data.*"
4. Outline of outcomes. This is according to the RQ/RO, in particular categories generated during the research process.

The discussion is structured according to the research questions (see figure 28), although the themes addressed are interconnected.

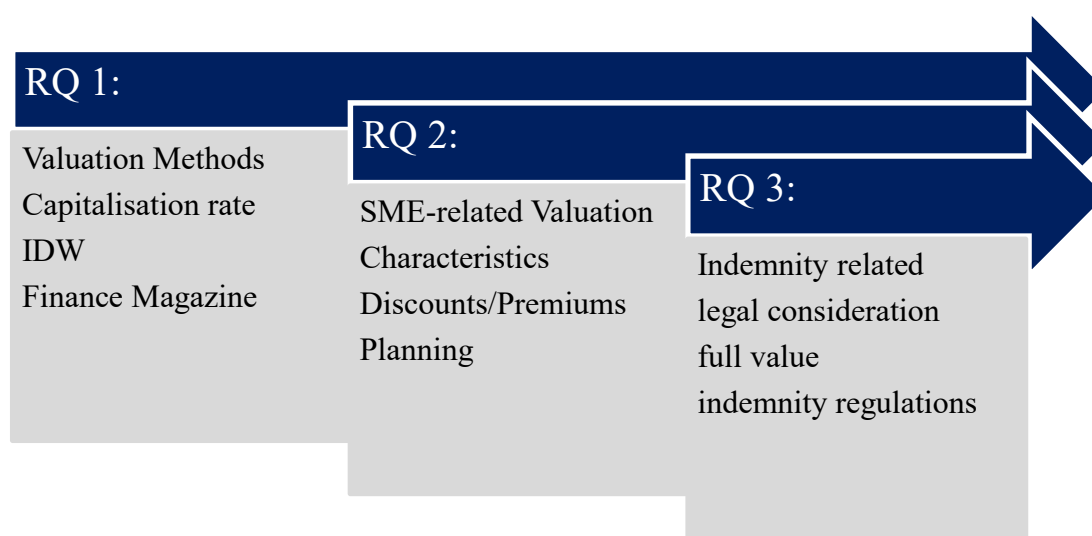


Figure 28 Discussion of the research topics

4.2. VALUATION METHODS

Company valuation is used to determine compensation. All interlocutors from all occupational groups were unanimous. Article 738 BGB uses the term ‘estimate’. However, the business and legal literature (Matschke & Brösel, 2013; Naumeier, 2015; Ihlau, Duschka, & Gödecke, 2013; Koch A. , 2014; Großfeld, 2012; Schäfer, 2013) (Sprau, 2016) and case law (BGH, 2003; OLG München, 2009; OLG Stuttgart, 2012; OLG Frankfurt, 2012; OLG Düsseldorf, 2012), state that a valuation is implied. Different methods were suggested by interviewees and these are summarized according to the interviewee roles.

4.2.1. NET ASSET BASED METHODS

4.2.1.1. Statements of the interviewees

All the interviewees considered book value and net asset value as out of date, unfair and with no useful simplification, i.e. a disadvantage for the retiring shareholder. There is no analogy between the asset position of a company and its value, and this can therefore lead to an incorrect value. There is no theoretical basis for the valuation and furthermore it is not meaningfully applicable in practice because it is not accepted by the market. Therefore, these methods are considered unsuitable as a determination for compensation. Net asset value is merely seen in the sense of liquidation value i.e. with a lower value limit. Net asset value in the sense of liquidation value is seen as a value by which the continuation of the company is no longer guaranteed, i.e. in insolvencies. As a rule, the continuing value of the company is assessed to be higher than its break-up value.

"We really only have net asset value in case of insolvency or liquidations."

CONS

"One can say that the net asset value of a company is the lower limit of the CEM or the multiples methods." CONS

"...because a valuation has to be future-oriented and a net asset value is not future-oriented." LEC

"... since it has no future and decision field, I can only reject it as nowadays clearly antiquated and not state of the art." LEC

“Net asset value is more for a liquidation scenario. Otherwise the method is not very reliable from a theoretical and scientific perspective and does not make sense in practice for a valuation/compensation. Only as a test for a lower value.” AUD

“... there is regularly no connection between what is on the balance sheet and what the company is actually worth.” AUD

4.2.1.2. Discussion of Net asset based methods

The net asset value method was previously acknowledged as a leading valuation method in business administration. This has changed, as shown in section 2.4. The usefulness of the net asset value method is not consistently upheld in the business management literature.

Net asset methods have different limitations, as presented in section 2.4.1. One of the main shortcomings is that internally generated intangible assets such as goodwill, trademarks, services, quality, management skills, human capital (Behringer, 2012; Langguth, 2008; Kunath, 2014) and intellectual and industrial property rights are disregarded (Ihlau, Duschka, & Gödecke, 2013). Furthermore, customer base, quality of management, technology and human capital are significant value drivers for cashflow generation and this is also not taken into account (Schacht & Fackler, 2009).

It is difficult to assess the valuation of intangible assets such as patents and licenses and they are therefore vulnerable (Wolter, 2011). Net asset value, such as intangible assets must be considered as separable from the company (Thommen, 2011). Schütte-Biastoch (2011) underlines that these assets are important, particularly for SMEs. They are major drivers of technology and innovation in Germany (see section 2.4.1.)

Nevertheless, in business administration, and particular auditing, some importance is attributed to the net asset value method. Matschke and Brösel (2013) refer to the economic importance of the future issue savings and auditors (Institut der Wirtschaftsprüfer, 2014) and underline the importance

of determining non-essential assets in business valuations. In a decision dated 8th May 1998 (BGH, 1998), The Federal Court of Justice of Germany emphasised the importance of the net asset value of individual assets in the valuation of lands because the property value has a corresponding importance for farmers.

As described earlier, the assessment of a company organized under the developed valuation theory in Germany depends on the event or purpose (see section 2.4.). Usually, there is economic interest in the future profits and cash flows that can be generated by the business. After all, the operating assets are the only means to achieve that goal. The disadvantage of the net asset value method is its approach, which is relevant for valuation. Another criticism is that although hidden reserves and liabilities are taken into account, the self-created goodwill is not considered (Seppelfricke, 2012).

If reproduction value, including the difficult determination of intangible assets and a possible estimation of goodwill, can generate the same future income stream, then the net asset value corresponds to the earnings value (Schütte-Biastoch, 2011). However, the fulfilment of all these premises is very unlikely and therefore does not occur in practice.

Net asset value only has meaning in specific individual cases and the intrinsic value method only has theoretical relevance at most (Mandl & Rabel, 2015). These asset values are auxiliary functions for business appraisal with future-oriented processes, e.g. as a computational basis for income statements (depreciation, interest) or potential risks arising from the acquisition of assets or liabilities (Langguth, 2008). It follows that this information must be included in integrated planning activities.

As already explained, business administration assumes that the entrepreneur behaves rationally insofar as the liquidation value is considered the company's minimum value. For example, if the going concern value is less than the sum of the liquidated assets minus its liabilities and all liquidation

expenses. There is consensus about this in the literature (Fleischer & Schneider, 2013; Mannek, 2012). Legally, the liquidation value is not the unconditional minimum value. On 17th January 1973 (BGH, 1973), The Federal Court of Justice decided that it is mainly a question of whether: i) the contractor intends to liquidate; ii) the company is obliged by compensation claimants to liquidate, iii) the continuation of the company is not economically feasible, that is whether the entrepreneur wants to continue and if the company will still earn income or the perspective is positive.

This observation was confirmed in additional verdicts. The Higher Regional Court of Düsseldorf confirmed on 27th May, 2009 (OLG Düsseldorf, 2009) that the liquidation value is not always to be calculated. The Higher Regional Court of Koblenz (OLG Koblenz, 2009) argued that the continuation value and not the liquidation value is relevant for the assessment of indemnity. On 28th January 2009, the Higher Regional Court of Düsseldorf (OLG Düsseldorf, 2009) decided that a differentiated approach is necessary if the company is continued and it is not unreasonable from profitability aspects.

The interviewees' statements are consistent with the prevailing view in the literature. Authors from both legal and business administration disciplines agree that individual valuation procedures have lost importance (Schacht & Fackler, 2009; Kranebitter, 2012; Große-Frericks, 2015). Among the individual valuation procedures are the net asset and liquidation value method, in which components of an entity are measured individually with a specific scale. Possible synergies or economies of scope are disregarded by the joint consideration of the individual constituents (Dreher, 2010; Koelen, 2009; Matschke & Brösel, 2013). The true share value might be determined by chance through an asset value clause (BGH, 1984). The net asset value is not meaningful and therefore is rarely used in legal practice (Henselmann & Barth, 2009; Hannes, 2015; Schütte-Biastoch, 2011). Assets are seen as "a means to an end" for generating earnings or cashflows (Timmreck, 2006; Ballwieser & Hachmeister, 2016).

Only the individual profit of the business can be considered for continuation of the company. Thus the future potential of dividends and the individual valuation procedure as a result, are negligible in the context of a company valuation (Wollny, 2012; Matschke & Brösel, 2013; Kranebitter, 2012; Fellner, 2017).

The value of liquidation simply acts as a minimum value if it is not possible to continue the company due to a non-given profitable perspective which leads to a valorisation of assets. Furthermore, the liquidation value is the rating scale for any existing non-operating assets and the minimum value as a fictitious lower limit in the determination of a continuing value (Drukarczyk & Schüler, 2016; Ihlau, Duschka, & Gödecke, 2013).

The net asset method is unsuitable for the determination of indemnity. Apart from auxiliary functions and minimum value, this method is rejected explicitly in case law (LG Dortmund, 2007; OLG Stuttgart, 2011; LG München, 2014) in business economics (Ballwieser & Hachmeister, 2016; Ihlau, Duschka, & Gödecke, 2013; Schütte-Biastoch, 2011; Keller M. , 2015; Kranebitter, 2012; Fellner, 2017; Pummerer, 2017) and by all the interviewees.

Due to these shortcomings, these methods should not be implemented in the article of association as a main valuation method for compensation determination. However, for the minimum value it serves as part of the indemnity determination concept for SMEs.

4.2.2. MULTIPLE METHOD (MM)

4.2.2.1. Statements of the interviewees

The majority of M&A consultants preferred this method for the following reasons:

- Industry-specific characteristics of the company to be valued and the actual market situation are reflected in the multiples.
- The characteristics of SMEs are reflected.
- An objectification of company value was possible to some extent through the multiples.
- The practical knowledge of M&A consultants is profound and reliable, as all endeavour to collect current data.
- An individual valuation of the company is possible by analysing the sustainable earning power and scenarios should be developed where appropriate.
- The EBIT is the basis for a multiple derived from transaction multiples for non-listed companies e.g. SMEs.
- Transparency is given through publications that collect data from a large group of M&A consultants, e.g. the Finance Magazine.
- The MM is a proper valuation method and therefore explicitly suited for calculation of compensation.

One consultant was critical that the multiples can prejudice, as vendors and purchasers can orient themselves towards it and the individual risks to be considered with the business model will not be adequately considered.

“... all of which are striving to collect these data, and on the other hand there are publications such as Finance for example where M&A consultants disclose their estimation of specific multiples. That is quite a profound story on which we rely on.” CONS

“It must therefore also be considered individually in the MM [multiples method], developing scenarios and then evaluating with the adequate factors with regard to the company (income).” CONS

Lecturers rejected the MM for indemnity calculation for the following reasons:

- It is too simple.
- It does not have sufficient future reference due to one-dimensionality (one figure, e.g. EBIT) or any individual consideration of the company through the multiples to be used.
- The characteristics of SMEs are not taken into account.
- The broad assumptions (multiples) move within a large range of values and the data from transactions is not reliable.
- It is not legally robust.
- This allegedly simple method cannot avoid lengthy (court) disputes and therefore neither arguments nor costs.

“... because the other (multiples method) is too simplifying, in my opinion you cannot surely integrate the special features of SMEs.” LEC

“We are here in the severance payment context – for the determination of a compensation, it is a too primitive method in any case, as here too is no sufficient future reference and no reference to the image of individual decisions.” LEC

Auditors are also sceptical of using the MM as the primary method of indemnity determination for the following reasons:

- It is not a recognised valuation method and therefore is not appropriate or suitable for a company valuation for retiring shareholders.
- The process is too simple and incomprehensible, as industry-specific factors, fungibility deductions or size discounts are factored in.
- The transactions serving as a basis for the multiples are not known.

“That is, we usually make a capital value-based procedure through the discounting of future earnings and validate the plausibility of this result by a multiples method.” AUD

“Credibility is limited, as it deals with singular transactions. “The numbers are not representative and particularly not for SMEs. These transactions are not published. They are distorted factors.” AUD

Most auditors use the multiples method simply as a plausibility check procedure. Only one auditor could imagine calculating the severance payment on the basis of a MM. However, this is on the condition that it takes place analogous with the IDW S 1 guidelines for valuation. On this basis, the past is adjusted, a comprehensive analysis is carried out, appropriate scenarios are developed and then an assessment is carried out. The future sustainable EBIT of the company is also still to be determined.

4.2.2.2. Discussion of Multiple method

The MM is accepted in practice, particularly for indicative valuations of stock-listed companies or by investment banks in the framework of acquisition financing (Ballwieser & Hachmeister, 2016; Schütte-Biastoch, 2011; Kranebitter, 2012; Schwetzler, 2017). Banks generally impose requirements for the support of financing in terms of maximum debt ratios e.g., net debt 3.5 times EBITDA maximum, as well as for the valuation of SMEs.

The main reason for this is that complete annual financial statements and integrated budget figures are not required for the determination of a bandwidth. The application of multiples, particularly in the case of SMEs has gained a high level of acceptance in practice (Ihlau, Duschka, & Gödecke, 2013). The supporters regard the main reasons for the popularity of the MM as follows (Krolle & Schmitt, 2005; Schütte-Biastoch, 2011; Schacht & Fackler, 2009; Kelleners, 2004; Voigt, Voigt, Voigt, & Voigt, 2005; Dreher, 2010; Ernst, Schneider, & Thielen, 2012):

- It can be used for all companies
- It is easy to explain and to communicate
- It is not a complex valuation method with different parameters
- The valuation is market related and thus the company value is intersubjective verifiable
- It is generalizable as it uses the same factors

The multiples most suited for valuation depends on the individual enterprise. However, there are significant differences with regard to industries and the stages of a company's lifecycle. The following table shows the advantages and disadvantages of the relevant multiples.

Base	Advantages/Disadvantages (+/-)
Turnover	<ul style="list-style-type: none"> + Applicable even if the profit is unknown + Positive also for unprofitable companies - Does not consider the different margin of the company to be valued and the peer group companies
EBITDA	<ul style="list-style-type: none"> + Is not influenced by different accounting standards - Does not consider the different capital intensity and therefore the different reinvestments requirements of the company to be valued and the peer group companies
EBIT	<ul style="list-style-type: none"> + Consider the different capital intensity - Distortion may occur due to different depreciation techniques
Operative cashflow	<ul style="list-style-type: none"> + Is based on payment surpluses - Can fluctuate due to irregular investments and accruals
Capital employed	<ul style="list-style-type: none"> + Based on operational capital - Net-asset-approach, earnings are not taking into account
Annual profit	<ul style="list-style-type: none"> + Can be distributed - Can be influenced by accounting policy and - debt ratio
Equity book value	<ul style="list-style-type: none"> - Net-asset-approach, earnings are not taking into - account - Can be influenced by debt ratio

Table 14. Advantages and disadvantages of different multiples following Löhnert & Böckmann (2015, p. 795)

The earnings figures might be affected by accounting principles, thus revenue might also be used as basis for certain industries (Ernst, Schneider, & Thielen, 2012). On the other hand, only earnings figures, i.e. the value-relevant figures which reflect the benefit for the valuation object, ensure significance with regard to profitability. EBITDA and EBIT multiples are therefore used predominantly (Drukarczyk & Ernst, 2010; Kranebitter, 2012; Drukarczyk & Schöler, 2016). Moreover, the earnings figures provide a

sound basis for the forecast of future earning power (Gleißner & Meier, 2001). Both key figures allow for the elimination of different tax effects (Drukarczyk & Ernst, 2010).

It is possible to resort to EBITDA to prevent possible inconsistencies in the comparability of different depreciation methods (Wöltje, 2012). One of the disadvantages of this is that capital intensity and the need for reinvestment have to be identical to allow for a meaningful comparison (Schacht & Fackler, 2009). This comparison is based on the assumption that capital ratios and investments are congruent.

An analysis of the company to be valued has to be made to determine the basis for comparable companies that is as consistent as possible (Langguth, 2008). The evaluator has to develop an understanding of the company's business model, sector, capital structure, value drivers, market position and prospect. Where appropriate, historical values have to be adjusted in order to determine sustainable future-oriented value indicators (Krolle & Schmitt, 2005). Otherwise, unusual factors might distort the valuation basis and thus the valuation result. A substantiated future-oriented valuation by means of multiples also requires planning of the valuation object (Löhnert & Böckmann, 2015).

The application of the multiples requires a sufficient number of benchmark 'peer group' companies to mitigate the impact of the individual characteristics of one or more companies (Langguth, 2008; Schüler A. , 2014). The relevant multiple can then be calculated based on the arithmetic average or the median of the multiples of the comparison group (Seppelfricke, 2012). It can be difficult to select a benchmark of companies that are suitable as reference values (Drukarczyk & Ernst, 2010). This is mainly because no companies are identical. The value-determining features of the reference companies should be comparable especially with regard to yield, growth, and risk (Kranebitter, 2012; Schwetzler, 2017).

The following value-relevant characteristics have therefore evolved among the comparison features (Schütte-Biastoch, 2011; Langguth, 2008; Kranebitter, 2012): industry affiliation, market, products, profitability, size, market position, business model, real net output ratio and capital structure. It is important to look at the capital structure for the application of equity multiples otherwise the debt ratio that affects equity costs would not have been considered (Peemöller, Meiseter, & Beckmann, 2002).

The selection of the peer group is at the discretion of the evaluator (Langguth, 2008). A transparent selection process and an acceptable justification are required for the determination of this peer group (Schüler A., 2014). The reliability of comparative values and thus of prices that could be charged, presupposes a well-functioning market and the availability of relevant data. The only reason why the multiples method can support plausibility or market assessment is that companies are not homogenous goods, but heterogeneous complexes (Aschauer, 2009).

Besides the group of M&A advisors, interviewees confirmed that the MM is an appropriate method for a plausibility check of the company's value. However, they explicitly noted that the MM is not a proper business appraisal method and should not replace an acknowledged method in business administration.

The criticisms made by the interviewees reflect those in the German literature, both in business economics (Kranebitter, 2012; Ihlau, Duschka, & Gödecke, 2013; Loßagk, 2014; Schacht & Fackler, 2009; Kruschwitz, Löffler, & Essler, 2009; Drukarczyk & Schüler, 2016) and law (OLG Schleswig, 2004; OLG Frankfurt, 2011). Therefore, the multiples method is not recognised as a valuation method in its own right and cannot replace one of the procedures acknowledged in business administration (OLG Frankfurt, 2010). The main points of criticism are as follows:

-
- The determination of relevant benchmark companies is as SMEs only represent parts of the business segment or the market of stock-listed companies. In other words, pure play companies are rare to find in practice (Loßagk, 2014; Schütte-Biastoch, 2011) and most companies do not reflect the risk profile of the SME to be valued (Schütte-Biastoch, 2011; Loßagk, 2014; Behringer, 2012)
 - SMEs operate in niches that are not, or are only to some extent, served by stock-listed companies (Ihlau, Duschka, & Gödecke, 2013).
 - It is difficult to compare SMEs to benchmark companies in size, ownership, conditions for research and development, production and sales and life cycle (Matschke & Brösel, 2013; Seehausen, 2014).
 - Multiples are market prices that can be affected by different influences and are not based on fundamental values (Langguth, 2008) e.g. the speculative bubble of the new economy.
 - The database in Germany is insufficient (Schütte-Biastoch, 2011); transactions of SME are not or only rarely made public (Ihlau, Duschka, & Gödecke, 2013). SME entrepreneurs involved in M&A transactions typically do not agree to disclose any details since they put major emphasis on discretion (Seiler, 2004).
 - The method is too simplistic and the multiples are only based on earnings without additional information (Kunath, 2014).

The MM is not suited as an independent valuation method for the determination of compensation as the special characteristics of SMEs cannot be taken into account. This may lead to an inaccurate appraisal (Olbrich & Rapp, 2012). Market-typical purchaser fiction cannot determine reasonable compensation as business valuation must be subject-related (Hering, 1999; Matschke & Brösel, 2013). According to Olbrich and Rapp (2012) the application of the MM is unsuitable for determining marginal prices for valuation. The market proximity considered an advantage of the MM may have an adverse effect in extremely volatile market phases (Langguth, 2008; Matschke M. , 2013) as it produces economically substantiated data.

A valuation by means of multiples for comparative purposes or as a means to validate the plausibility of other valuation methods, only appears easier at first glance. As with acknowledged valuation methods, the evaluator should have valuation know-how. The analysis of business models and value drivers and the assessment of a sustainably achievable performance measure for the future must be conducted in a substantiated manner. Particularly in the case of SMEs, adjustments have to be made where appropriate. The selection of benchmark companies requires relevant experience to meet both the risks and the opportunities of a given business model.

The data referring to transactions should be analysed and interpreted to see if it can be compared to the company being valued. This is not very different from the basic valuation methods such as CEM or DCF, considering the comprehensive process associated with any company valuation.

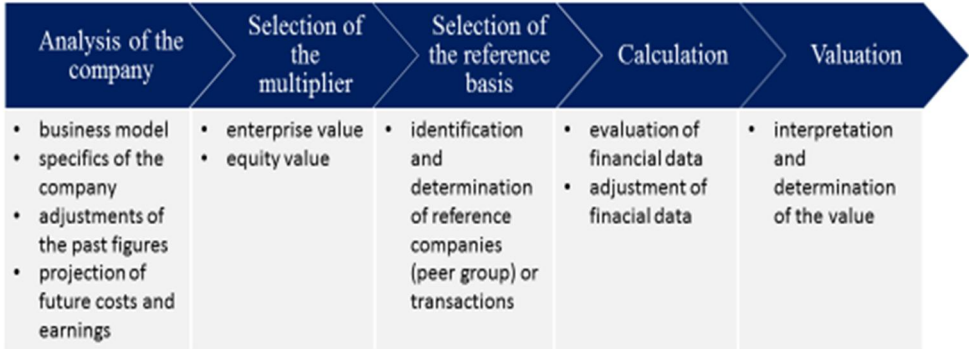


Figure 29. Valuation process using the multiples method (Löhnert & Böckmann, 2015, p. 793)

Despite the criticisms mentioned, MM can contribute to the valuation concept and determination of indemnity. The multiple-based valuation can be used to validate the plausibility of company values determined on the basis

of traditional valuation methods, in particular with regard to their market appropriateness (Ihlau, Duschka, & Gödecke, 2013; Löhnert & Böckmann, 2015; Schacht & Fackler, 2009; Drukarczyk & Ernst, 2010; Muschol, 2016; Aschauer & Purtscher, 2011) (Zwirner, 2012).

Several interviewees pointed out that multiple-based methods use future earnings as a basis and include the adjustment of these earnings and an analysis of the sustainable value drivers. This data is the basis for verification and, where appropriate, for a correction of the budget figures. The above approach loses the benefit of simplification by means of the multiple-based method. A generally recognised valuation method could also be used. However, it makes sense to use the multiple-based method to review the valuation, based on traditional methods.

M&A consultants requested the application of the multiple-based method so that an adequate determination of compensation was based on market values. Große-Frericks (2015), Karami (2014) and Lauber (2013) also claim that the determination of compensation values should be geared towards market values. Reasoning and the decisions of courts also take this line, although sporadically (LG Frankfurt, 2014; OLG Stuttgart, 2013; OLG Frankfurt, 2013). The majority of the interviewees as well as case law, increasingly opt for a comparison with market values.

Ballwieser (1991) states that anyone who takes account of the characteristic features of a company within a specific industry by means of variations of the multiples method, can do this in an arbitrary manner that is hardly controllable. Therefore, the MM may be used as a method of verification of a valuation performed on the basis of a total valuation that takes account market values into account.

The statements of the interviewees are heterogeneous regarding the MM. Consultants in particular prefer the MM as a valuation method, whereas lecturers and auditors reject it as the main valuation method for indemnity

determination. Due to this divergence of opinion among the professional groups, I had to analyse and interpret the arguments and the literature to decide which arguments to follow. The made decision is based in particular on the findings in the literature. Despite the acceptance in practice, the academic literature rejects the MM and the reasoning presented for this appears sensible.

These arguments are underpinned by my own experience in acquisition finance where enterprise values are determined by using the MM, but also future-oriented methods such as DCF. MM could be argued as being too simplistic and generalized; therefore, the value does not reflect the individual characteristics of the company in case of indemnity determination, and apart from the academic reasons mentioned, it can, in practice, lead to problems among the shareholders.

4.2.3. STUTTGART METHOD

4.2.3.1. Statements of the interviewees

All interviewees were in agreement about this method. The M&A consultants rejected it as it not accepted by the market. The main criticism is that the Stuttgart Method is not future-oriented. It is out-dated, as the legislature introduced the SCEM for the valuation of companies as a basis for inheritance tax in 2010. Furthermore, assets serve at least partly as a basis for the valuation. The relevance was derived from the tax rating and it is now most likely legally vulnerable as it serves as a calculation of severance payments and was not further developed. Neither the evaluator nor the parties know which version of the Stuttgart Method would be used. As a mixed method it is not economically justified.

There were generally analogous statements regarding the mixed method. The same rationale as in the Stuttgart method was given with regard to future-orientation and substance. It is very rarely used in practice and is only used for reasons of simplification. It is a mix of bad alternatives, namely the combination of income and assets and therefore has no basis for determining a severance payment.

“Business models are future-oriented and cash-flow-oriented, therefore they cannot be properly depicted with the Stuttgart model.” CONS

“No security in application, as it is no longer being advanced by the legislature.” LEC

“The Stuttgart method can neither avoid dispute nor is it theoretically persuasive.” AUD

4.2.3.2. Discussion of Stuttgart Method

The Stuttgart method is based on net assets and earnings. Ballwieser and Hachmeister (2016) argue that mixed valuations methods can only be as good as the net asset value. As a result, all mixed methods are regarded as unsuitable in business management (Mandl & Rabel, 2015). The discussion regarding the suitability of net asset based methods are presented in section 4.2.1. and the shortcomings, in particular regarding the past oriented earnings, are presented in section 2.4.2.1. This justified criticism was the reason for abolishing this method for tax purposes. Case law and legal literature meanwhile focus on forward looking valuation methods. Butz-Seidel (2004) and others (Verspay, 2014; Jula & Silmann, 2014; Hülsmann, 2007) explicitly point out that the Stuttgart method is not suitable for determining the indemnity for outgoing shareholders.

For these reasons, the Stuttgart Method does not fulfil the objectives even in the case of existing compensation regulations (Hülsmann, 2007). The evaluation is not simplified, there is no minimization of conflict and the method does not ease the liquidity of the situation or the company’s sustainability (Müller J. , 2007). Therefore, the Stuttgart method should not be used for new partnership agreements and the compensation regulation of existing agreements should be modified. The Constitutional Court has declared it unconstitutional in terms of tax assessment as it results in unrealistic values. Moreover, there is a broad consensus in the literature on business administration that it is an inadequate valuation method (Schröder S. , 2014; Keller M. , 2015; Hannes, 2015; Großfeld, 2012; Ballwieser & Hachmeister, 2016).

The will of the parties is an issue for existing agreements. This regulation was selected deliberately by the parties for the determination of compensation. For existing agreements, the method has to be replaced as the withdrawing partner must not be disadvantaged and the regulation must not offend morality. Therefore, the value must not deviate significantly from that determined using a valuation method recognized in business administration and case law. There is enormous potential for disputes arising from the company values determined which would result in a legal dispute, unless another agreement was reached.

4.2.4. SIMPLIFIED CAPITALISED EARNINGS METHOD

4.2.4.1. Statements of the interviewees

Here again, all interviewees responded consistently. The approach introduced by the legislature as a basis for calculation inheritance tax should not be used for severance payment calculation. It is not future-oriented and it does not fit the capitalisation rate for risk representation of companies. It uses a common interest rate for all companies, and is considerably lower than the capitalisation interest rate for determining market values.

“It is very simplified and the previous years as a basis for future development is questionable. The capitalisation rate does not reflect the individual risk of the company, as the interest rate is fixed and the same for all.” CONS

“It should be a future value, hence the SCEM is not appropriate to determine a severance payment.” LEC

“One always looks to the future, it is always a value derived from future profits, only the future looks very different from simply the updated past.”
AUD

4.2.4.2. Discussion of Simplified Capitalised Earnings Method

The company valuation for tax assessment purposes in case of inheritance or gift can be based on the SCEM in accordance with Article 199 Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016). If it leads to incorrect results, the valuation has to be conducted using a method that is recognised in accordance with the principles of business administration.

The statutory wording suggests that even in cases where the SCEM produces correct results, the taxable person can make an orderly business valuation the basis for taxation (Zwirner, 2012; Wegmann & Wiesenhahn, 2015). The SCEM can be used for compensation determination and, where appropriate, taken as a substitute of the Stuttgart method. It is therefore useful to provide an overview of the major differences between the SCEM and the traditional CEM. These differences are shown in section 2.4.2.2.

The SCEM is based on the assumption that the historical results will continue in the future. These results are discounted by a capitalisation interest rate. This consists of a statutory market risk premium and an annually determined base rate.

The SCEM is exposed to considerable criticism in literature. It deviates from the overall valuation approach due to the additional individual assessments of assets required for operational purposes (such as investments). An overall assessment and the balancing of results would be more appropriate for constellations where the holding company makes profits while the subsidiary incurs losses. The SCEM would not take into account the losses as the asset value is added as minimum value. Wollny (2012) finds fault with the fact that the earnings situation is orientated towards the past and perceives clear business-related weaknesses.

The full extent of an incorrect valuation is apparent in times of volatile economic trends such as financial and economic crisis, since the historical data will probably differ considerably from the future earnings. The base rate

specified once a year is also not a convincing factor, since even within a single year the capital market is subject to fluctuations that are not taken into account. The risk premium is one of the major weaknesses, since it is assessed as a lump sum for all companies. Therefore, the higher the risk to generation of future earnings, the clearer the overvaluation by SCEM. An individual assessment of the company-specific risk, the sector or the capital structure is not taken into account (Scheffler, 2014) and it remains questionable whether it is possible to determine a realistic company value (Müller, 2016).

The tax authority itself points out that the typifications made (historical data and standardized risk premium) may lead to deviating values (Ländererlass zum Bewertungsgesetz, 2011). The figure below illustrates that, assuming a constantly stable earnings situation, the company valuation has clearly led to higher values that peaked in 2015. These figures and the standardized relatively low risk premium show that the definition of the parameters for valuation is geared towards fiscal criteria.

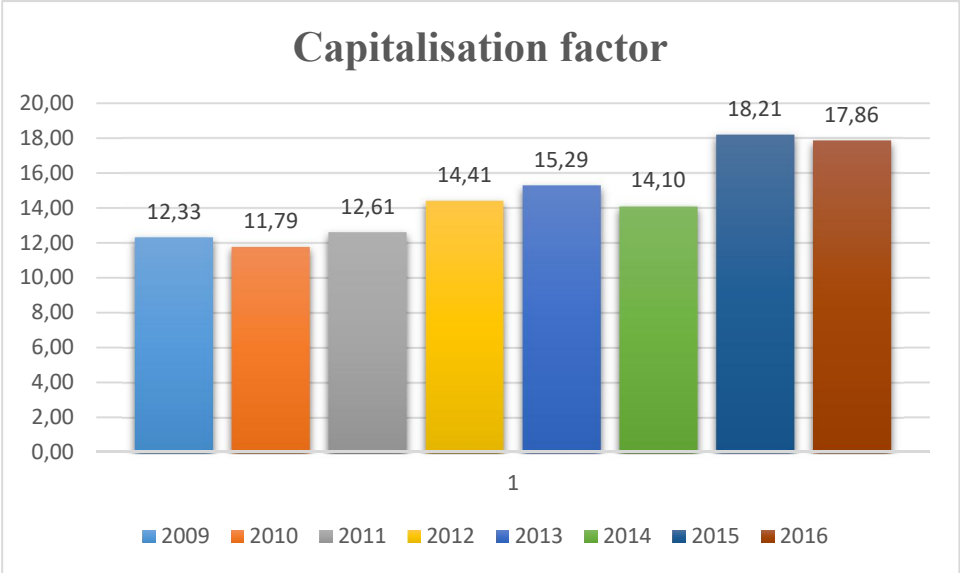


Figure 30. Development capitalisation factor (2009 – 2016)

The Stuttgart method was superseded by the SCEM. However, critics were still not silenced because they suspect a pro-fiscal intention as this method furnishes incorrect results with a tendency towards excessive values. This is caused by the capitalisation rate determined by the Federal Ministry of

Finance in a uniform manner (Jonas, 2009; Creutzmann, 2008; Kohl & Schilling, 2008; Dorfleitner, Ilmberger, & Meyer-Scharenberg, 2010; Dirringl, 2009). The fixed capitalisation rate is regularly adjusted and has changed since its introduction. This is shown in Figure 31.



Figure 31. Development of capitalisation rate for tax purposes

This does not include an individual assessment or a capital market-based determination of an adequate risk premium, as practised in company valuations or for business purposes. In his study relating to the valuation of SMEs using the SCEM, Kappenberg (2012) concludes that this method often causes overvaluation and rarely results in a reasonable value assessment based on valuation methods such as CEM or DCF-methods. This method has no practical relevance for other valuations and should not be applied (Beck & Osterloh-Konrad, 2009; Kreutzinger, 2009). The exception is inheritance taxation when the legislator grants an option to use either the SCEM or another method to calculate the tax, according to Article 199 Valuation act (Bundesministerium der Justiz und Verbraucherschutz, 2016).

For these reasons, compensation determination on the basis of the SCEM is neither appropriate nor opportune. Criticisms such as typifications must be acknowledged. Possible deviation values are generated that do not consider the impact of the outgoing owner or changes that have occurred to the future prospects of the company. The interests of the parties involved are not taken into account and it does not promote simplification or the avoidance of conflict.

4.2.5. CEM/ DCF METHOD

4.2.5.1. Statements of the interviewees CEM

All lecturers and auditors consider the CEM to be suitable for the determination of indemnity of retiring shareholders of German SMEs. They justify this as follows:

- i) It is a total valuation method
- ii) It is future-oriented
- iii) It is the current state of research in business administration and
- iv) is recognised by the courts, as judges are familiar with it and use it for judicial opinions
- v) The characteristics of SMEs can be taken into account
- vi) The operative success of a company (earnings) on the basis of the individual business model can be determined
- vii) It is a fair method, i.e. leads to accurate values

“The CEM is adequate for the determination of compensation in a SME.” LEC

“The severance payment must in any case evaluate the future prospects of the company, that is, what is classically called the ‘earning power indemnity’.”

LEC

“... but here in Germany I would recommend the CEM in any case, because it is simply more recognised, also in case law, and judges are familiar with it.”

AUD

“... because I believe that ultimately the value of the company is actually what it can generate in the future and that ultimately that is what can also be expressed through the CEM.” AUD

4.2.5.2. Statements of the interviewees DCFM

The DCFM is recognised as appropriate by lecturers and auditors for similar reasons to the CEM. They are both total valuation methods, which are future-oriented and can depict the characteristics of SMEs. However, the DCF method was considered somewhat preferable, as the characteristics are better reflected in cash-flows than in income, i.e. the cashflows necessary for an operational business and to be distributable (e.g. for outgoing shareholders). It

is also recognised internationally and can be better communicated even in non-listed companies, since it corresponds to the thinking pattern of a businessperson with respect to liquidity. The CEM has a greater prominence in Germany and thus enjoys a high level of acceptance in courts so it is preferred by the auditors. The use of CAPM, WACC and β is seen as critical by the lecturers in the valuation of SMEs.

“DCF method is good for SMEs, as you can display the special features in the cashflow.” LEC

“...the premises, that is, CAPM and WACC are not suitable for SMEs.” LEC

“Adequate method for SMEs also. Leads to the same result as the CEM. “AUD
“In transactional practice in middle-sized companies it is often the DCF method that is considerably more easily communicated, as the typical businessman thinks the way the DCF method functions.” AUD

4.2.5.3. Discussion of Total Valuation Methods (CEM/DCF)

The development in business appraisal doctrine caused a renunciation of individual valuation methods (Henselmann, 2015) towards overall methods that consider the company as a unit and evaluate it as a whole (Matschke & Brösel, 2013). The principle of overall evaluation is an important finding in today's business appraisal practice (Große-Frericks, 2015). This view is supported by the current state of research. Authors such as Kunath (2014) and Ballwieser and Hachmeister (2016), as representative of the prevailing opinion, state that company valuation has to be performed with total valuations methods. The CEM and the DCFM are seen to be equivalent in terms of valuation results (Naumeier, 2015; Institut der Wirtschaftsprüfer, 2014; OLG Karlsruhe, 2013). The liquidation value is merely seen as a minimum enterprise value and for a continued business, the value can be determined only from the future yields or cashflows.

The MM is not considered as an independent and loadable assessment procedure (see discussion multiple method). It is merely suited to check the plausibility of the value with a total valuation method. The M&A-advisers

consider the discount cashflow method as well as the MM as a possible method to determine the compensation of an outgoing shareholder. Based on inquiries, the CEM was seen as an equivalent method beside the DCFM. However, it is not preferred because it is used predominantly by the auditors. Moreover, the CEM is recognized and accepted predominantly in Germany by law (BGH, 2003; OLG München, 2009; OLG Stuttgart, 2012; OLG Frankfurt, 2012; OLG Düsseldorf, 2012) and in business economics (Drukarczyk & Ernst, 2010; Kunath, 2014; Mandl & Rabel, 2015; Peemöller & Kunowski, 2015; Schütte-Biastoch, 2011).

The MM and DCFM are preferred for transactions that move across national borders (Ihlau, Duschka, & Gödecke, 2013). In today's climate of globalization, in which SMEs are alien to foreign investors, merger and acquisitions advisers also consider the assessment methods as appropriate for determining compensation.

The DCF method has crystallised into the method accepted by all groups of interviewees for the severance payment calculation of SMEs. The economic literature shows there is an equivalency with the CEM that is widely spread in Germany and generally accepted (Naumeier, 2015; Kranebitter, 2012; Ballwieser & Hachmeister, 2016; Drukarczyk & Schüler, 2016; Fellner, 2017). The IDW explicitly includes equivalency of the methods (Institut der Wirtschaftsprüfer, 2014).

The principles of valuation focus on the future as has already been shown. Consequently, forward-looking values in the numerator and denominator are involved both in determination of the surplus and the discount rate. (Matschke & Brösel, 2013). This can be reached with the DCF method alone.

In individual cases the judge decides which valuation method results in an adequate outcome (BGH, 1982; OLG Düsseldorf, 1988; BVerfG, 2012). In other words, the court generally has the freedom to choose the method. The DCF method has been recognised explicitly by the court in Munich (OLG

München, 2014). Furthermore, a citation in the court judgements of the Higher Regional Courts Cologne (2012) and Karlsruhe (2008), and reference to CAPM and the acceptance of the valuation results, according to IDW S 1, is indirectly accepted as a method by courts (OLG Düsseldorf, 2011; OLG Frankfurt, 2014; OLG München, 2014; OLG Karlsruhe, 2015; OLG Karlsruhe, 2015).

An evaluation based on the cashflows instead of the earnings has the advantage that the valuation results from the discounted net flows. The value of investments is derived from the funds received by the investor less the capital employed (Obermeier & Gasper, 2008). A valuation is comparable with an investment in that the shareholder is invested in the company at the same time. The consideration of the yield may be affected by the use of capitalisation options or divergent application of accounting provisions (Drukarczyk & Schüler, 2016). The DCF-method is generally accepted internationally and preferred in business (Drukarczyk & Ernst, 2010; Ihlau, Duschka, & Gödecke, 2013; Voigt, Voigt, Voigt, & Voigt, 2005; Arens & Tepper, 2013).

	DCF Method (WACC)	CE-Method
Methodology	Gross method	Net method
Numerator	Free cashflow (cashflow available to outside creditors and equity investors for disbursements)	Distributable surplus profits
Discount rate	Weighted and calculated average cost of capital from return on equity and interest on borrowed capital	Return on equity
Investments	Directly factored into the cashflow from investments	Factored indirectly into amortization and interest cost
Expected distribution	Irrelevant, since consideration is based on free cashflow	Relevant in terms of distribution assumption

Table 15. Differences of DCFM and CEM (Schacht & Fackler, 2009, p. 241)

Despite the aforementioned advantages, Busch (2008) and Helbling (2015) consider the DCFM unsuitable for the valuation of SMEs. This is surprising as the procedure is essentially the same as with the universally accepted CEM. This is because accounting and thus the quality of target figures for SMEs needs further optimisation (Helbling, 2006). There may be a revenue plan but integrated planning is hardly found (Zwirner, 2013; Franken & Koelen, 2015). Busch and Helbling's estimation is comprehensible but nowadays this is not the case to the same extent. Target figures are available in SMEs for different reasons. One of the main reasons is that these days stakeholders increasingly require SMEs to provide relevant figures for the following reasons:

- SMEs have the appropriate software (Feindt, 2014; Schön, 2012) e.g. ERP (Enterprise Resource Planning) for auditing and tax purposes. In 2011 the legislator introduced an obligation to submit the balance sheet by electronic transmission to the tax authorities (von Sicherer & Cunderlikoa, 2017). This software provides reliable past data for authorities and for planning and control purposes and can generate integrated planning figures such as profit and loss-statements, balance sheet and cashflow-statements based on actual data (Schön, 2012).
- Credit institutions demands that are required for loan decisions, since bank loans are the major source of funding for SMEs. It is estimated that up to 90 % of SMEs are funded by loans (Becker, Ulrich, & Bozkowski, 2015; Alt & Kaschny, 2015). Due to Basel II, the requirements for granting loans have also changed in the mid-sized sector. In accordance with the criteria of Pillar III of Basel II, banks are bound to expanded disclosure, particularly focussing on methods for the measurement and management of risk (Deutsche Bundesbank, 2016). According to Article 18 of the German Banking Act (2016), financial institutions must keep themselves informed about the borrower's financial circumstances for the duration of the credit agreement. Apart from the financial circumstances of the past, banks are obliged to give particular attention to forward-looking information, such as sales development, business plans as well as profit plans and liquidity plans in particular (Bundesverband Öffentlicher Banken, 2005).

-
- Suppliers, credit insurers and even customers (OEMs for auditing or categorization as the preferred supplier) require disclosure of figures (Lührs, 2010; Faulhuber & Grabow, 2009; Drees, Koch, & Nell, 2016)
 - Publication duties to increase transparency of company information has increased for SMEs (Schütte-Biastoch, 2011)
 - Integrated planning is indispensable for the formulation, review and implementation of a company strategy (Huber A. , 2008).

In this respect, integrated planning is becoming an increasingly important factor for more and more SMEs (Schmid-Gundram, 2016; Krämer, 2014; Schön, 2012) crisis More SMEs have implemented planning tools since the financial crisis and the challenges of globalisation will accelerate the process (PricewaterhouseCoopers, 2010; Rütz, 2012; Avela, 2013).

Transparency of financial figures and their quality has increased and will increase due to digitalisation (Greulich & Riepolt, 2016; Demary, Engels, Röhl, & Rusche, 2016) which has impacted accounting (Kay, Schleppehorst, & Schröder, 2015). Therefore, there is no impediment to the suitability of the DCF-method for SMEs regarding the availability of planning figures.

As stated in section 2.4.3, there are some disadvantages to TVM, such as forecast problems that cannot be avoided by most companies and the determination of the discount rate or capital structure. These limitations and how they can be mitigated are addressed in section 4.5.9. Planning and 4.2.6. Capitalisation rate.

Henselmann and Barth's (2009) survey on methods of business appraisal showed that variations of DCF methods were used twice as often as the CEM, in accordance with IDW S1. The survey referred to non-dominated review occasions. This begs the question of why the parties with a free choice prefer the DCF method to the CEM when it is deemed superior by auditors (Schwetzler, Adlers, & Adolff, 2012).

These requirements regarding the quality of the target figures are irrespective of whether the CEM or the DCF method is used, because even when applying the CEM, the distributable earnings have to be determined in the framework of the liquidity assessment.

As a result, there currently appear to be no obstacles to a clear preference for the DCF method. The DCF method is therefore also preferable for SMEs in calculations of severance payments, due to its focus on liquidity. This method is favoured by consultants over the multiples method even though this has the most support from all groups of interviewees and in literature. In my view, the DCF method is the most appealing and appropriate valuation method for SMEs because it takes a forward looking perspective which can reflect the impact from leaving the company. The characteristics of SMEs can also be considered (see section 4.5.4.2.).

4.2.6. CAPITALISATION RATE

4.2.6.1. Base interest rate Statements of the interviewees

The auditors unanimously prefer the Svensson method. This is because it is future orientated and accepted by the courts in Germany. The German Institute of Public Auditors recommends the use of the Svensson method in valuation according to their principles of valuation (Institut der Wirtschaftsprüfer, 2008).

“The Svensson method has the advantage that it is recognized by all courts.”

AUD

“The main advantage of the Svensson method is that it is future orientated and does not have a retrospective view.” AUD

The Consultants agree that the base rate has to be risk free. This can either be achieved by taking Germans state loans with a maturity of minimum 10 years or by using the Svensson method. Valuing a German company has to use a German basis and therefore the German interest rate. The M&A consultants do not see an alternative to the Svensson method and therefore stated:

“Svensson Method, basically yes.” CONS

“I would prefer the ten years state bond.” CONS

One lecturer completely rejected CAPM due to the criticism shown in section 2.4.3.1. hence, also the determination of base interest rate. All other lecturers agreed to using the Svensson method.

“In the meantime, the Svensson method is preferred.” LEC

“Even for the base rate you should be future orientated, therefore Svensson method.” LEC

4.2.6.2. CAPM Statements of the interviewees

The lecturers and the consultants rejected the use of CAPM for SMEs and considered it to be inappropriate for assessing an enterprise. The main criticisms of SMEs were the following:

- The used capital market data cannot be applied to SMEs.
- SME owners are usually not diversified.
- SMEs cannot finance capital markets and are not able to finance on traditional capital market rates.
- The unsystematic risks (in CAPM) of SMEs are not considered.

One lecturer considered the comparison of listed enterprises and SMEs for not being true-to-fact and another lecturer presumed that the CAPM can act as a starting point for the determination of an adequate discount rate. The M&A consultants stress that the yield expectation for SMEs is not illustrated by CAPM and does not correspond to the equity yield required by the market.

"The CAPM describes the investor, but it does not describe the investor/owner of SMEs...." LEC

"And the argument: We have nothing better. We had just already mentioned this in the preliminary talk, from my view this is one of the least persuading arguments in science." LEC

“What can be derived from the quotation, is that some sectors are valued lower than others. CAPM is not as adequately as a calculation interest rate. In the Mittelstand you do not have comparative values.” CONS

“Individual consideration of the enterprise and on this basis is determined, according to market appraisal and not with CAPM.” CONS

The auditors consider CAPM adequate and applicable for SMEs. The determination of capital cost for SMEs by using CAPM is assumed to be straightforward by one auditor. The majority acknowledge the criticisms but regard CAPM as the better solution than the individual interest surcharge method. Moreover, CAPM is understandable and, hence, is more objective than an arbitrary additional risk interest rate by assessor, particularly with interest collisions and juridical discussions.

One of the main arguments is the dominant acceptance of CAPM in Germany. One auditor considering the criticism of CAPM questioned CAPM as a basis for inquiry of individual interest rates with SMEs and whether these are allowed with surcharges on CAPM.

“CAPM is the second-best solution, but the best one is unknown. Surcharges are arbitrary and not understandable and not to be recommended. Even if CAPM is an auxiliary construction for SMEs, it is still superior to the risk-premium method.” AUD

“No need is seen to move away from CAPM as long as this model enjoys the acceptance.” AUD

4.2.6.3. Beta Statements of the interviewees

Betas remain problematic for the consultants and the lecturers because they are convinced that SMEs are not comparable with listed companies. The main problem is the non-diversification of SMEs and, hence, the remaining insecurity. It is called a ‘pseudo quantification’, because there are no comparable peer groups ultimately. The consultants add that if the Beta is

necessary on account of the assessment with the DCF method, it should be taken from an enterprise in the same sector and if necessary from European companies.

“If you have a range, then the company has to be analysed anyway in detail to estimate the risk and the stability and therefore the beta within a corridor. With dependence on individual transactions it is rather likely that the Beta just does not amount to one.” CONS

“The problem remains in which I have no comparable enterprise in terms of the size, because SMEs are not listed.” CONS

“There are not really comparable enterprises to SMEs. To filter the business from the diversified business model of a listed enterprise will not succeed.” LEC

“..., however, it is just already presumptuous to take betas from public companies and apply to SME.” LEC

Auditors are convinced that using Betas is preferable to individual derivation of risk-bandwidths. Even if it would be more advantageous to have Betas from SMEs, which unfortunately it is not, the comparability should be produced with business models. These should be analysed in detail to identify the suitable risk factors. A comparability is seen in value added chains and market affiliation based on risk factors. However, ultimately judgmental discretion is required from the person involved in evaluation.

“Here one acts as an auditor with adequate discretion, however, the derivation of the Beta and the discretion has to be transparent. This derivation is still superior to an intuitive derivation.” AUD

“General difficulties are to find comparable enterprises. One must try to find comparable risks in the business model.” AUD

4.2.6.4. WACC Statements of the interviewees

WACC is regarded critically by the consultants and lecturers compared to CAPM for the following reasons:

- No adequate interest rate can be determined for SMEs.
- A comparison between SMEs and listed enterprises is not given.
- The misjudgement of the debt- equity structure can lead to accumulation of defective premises and the results will not be meaningful and the current structures (equity/debt capital) of the enterprise should be taken rather than fictive or optimum ones
- The assumed diversification of SMEs is not based on reality.

The discount rate should be determined individually according to the risk for enterprises under valuation. As with CAPM, the proposal was made to use WACC as a basis for a proper adapted interest rate. The consultants argue that the discount rate should be adapted according to the risk of the individual enterprise by using the appraisals of the market.

“The only thing which one can derive from listed enterprises is that some sectors are higher valued than others. WACC does not correspond to the adequate interest rate.” CONS

“WACC cannot be taken for SMEs, there are gigantic differences between listed enterprises and SMEs.” CONS

“WACC is not applicable either for listed enterprises or for SMEs. Modigliani Miller said that this is only a first approximation. There are many points of criticism concerning CAPM and WACC.” LEC

“With WACC the difficulty of the debts arrives, if one misjudges the debt/equity - ratio, one has added up this mistake several times. Hence, this method is unsafe and should not be taken.” LEC

The auditors argue that as with CAPM, the WACC is applicable for SMEs and is recommended for the following reasons:

- The systematic risks are considered with WACC.
- The unsystematic risks are illustrated in the cashflow.
- The real equity-debt relation can be attached to SMEs rather than fictive or optimum ones.
- As with CAPM, WACC is widely accepted in Germany (particularly in courts) and therefore, a divergence is not necessary.

"In actual life, I find it sensible to display more realism (regarding the debt/equity ratio)¹³. AUD

WACC enjoys like CAPM a wide acceptance, hence, it should be used, as long as there is no better solution, by assessments as well as by compensations. AUD

4.2.6.5. Discussion of Capitalisation rate

The determination of the discount rate was one of the most contentious points for the interviewees. This discord refers to risk premium, regarding the base rate their opinion is almost unanimous. Apart from one consultant, all the interviewees agreed on the Svensson method which reflects the dominant opinion in literature. The future orientation of base rates is preferred in business management (Metz, 2007; Steinbach, 2015; Drukarczyk & Schüler, 2016) and law (OLG Düsseldorf, 2012; OLG Frankfurt, 2013; OLG Stuttgart, 2011). This is due to today's transparency caused by the future-directed interest structure curve. The principle of equivalence is therefore fulfilled with forward-looking data in the numerator when using total valuation methods such as CEM or DCF-methods.

Questioning the use of CAPM or WACC as appropriate methods for the valuation of SMEs was one of the most significant issues addressed in the research questions and thus in the interviews. The consultants and lecturers agreed that CAPM is not suitable for determining the calculation base for the

¹³ Clarifying note of the author

following reasons: 1. Beta factors of comparable stock-listed enterprises have to be used because SMEs are not stock-listed. Capital market data are not transferable to SMEs; 2. unsystematic risks are not taken into account; 3. shareholders in German SME's are not diversified and their outweighing assets are bound up in the company.

In practice, there are various (chargeable) sources of information for the determination of Betas based on both freely selectable intervals of time and different indices. These Betas are called 'levered Betas' as the disparate capital structure has to be levered from the individual SMEs and then levered again in the existing capital structure. The application of Beta values that represent the risk to SMEs is challenging and requires interpretations that give room for discretion (see section 2.4.3.1.2.). In addition, the valuation of an individual company endowed with special characteristics on the basis of branch Betas is very inaccurate (OLG Stuttgart, 2014; Metz, 2007; Scheld, 2013). Even a weighting of the various sectors on which the company operates or for which there are dependencies, merely causes a spurious accuracy (Dirringl, 2009; Große-Frericks, 2015; Ernst & Gleißner, 2012; Weimann, 2015). The model of the fundamental Beta developed as a result of Scheld's (2013) research should serve to check the plausibility of Betas for non-listed companies. However, just as he emphasizes, no statements can be made yet with regard to the forecasting quality since this model has not yet been tested. An expert survey carried out by Ernst and Gleißner (2012) revealed that the majority of the interviewees viewed the market risk premium and the Beta with scepticism.

The CAPM is subject to considerable criticism in the literature. The fundamental dispute focuses on whether CAPM is a suitable model to determine the cost of capital. Company valuation is not the subject of this work and so it is not expanded here. It is not possible to provide a complete and detailed scientific review of the relevant literature and studies with regard to the application of the CAPM for the determination of equity costs, in particular for SMEs so the following section will focus on the main criticism.

Based on empirical studies (Dörschell, Franken, & Schulte, 2012) CAPM suffered its acceptance. In this context, Fama and French (2004, p. 44) give the following advice: *...we also warn students, that despite its seductive simplicity, the CAPM's empirical problems probably invalidate its use in application*". The model assumptions of the CAPM are also questionable due to numerous anomalies in capital markets (Dietrich & Dierkes, 2015; Stock, 2002). The main advantages and disadvantages are specified in section 2.4.3.1.3.

CAPM is a capital market model, which does not apply to companies such as SMEs that have no access to capital markets. One of the main arguments is that shareholders of typical SMEs are not diversified and furthermore, they cannot borrow capital on the capital market (Matschke & Brösel, 2013). Theory suggests that with CAPM a large amount of the shareholder's money and human capital is tied up in the company (Kruschwitz & Löffler, 2014; Stahl, 2015).

The suitability of a capital market-oriented procedure for the determination of the cost of capital (CAPM/WACC) for SMEs is brought into question. SMEs have higher risks than public companies and so the discount for the SME shareholder is supposed to be higher than the interest rate calculated for the market (CAPM).

Capital costs for SMEs derived using CAPM are normally too low unless the valuation object is part of a well-diversified portfolio (von Weizsäcker & Krempel, 2004; Hackspiel & Fries, 2010; Dreher, 2010; Kranebitter, 2012; Volkart, Vettinger, & Forrer, 2013). If SMEs ignore unsystematic risks this will result in overestimation (Schütte-Biastoch, 2011).

The survey of professors, analysts, companies and financial services companies carried out by Fernandez, Linares and Fernandez Acin (2014) shows the market risk premium amount in Germany as 5,4 %. The market risk premium in Germany usually varies between 5 % and 6 % (Hachmeister,

Ruthardt, & Autenrieth, 2014; Huber, 2014) and the IDW recommends between 5 – 6 % (Institut der Wirtschaftsprüfer, 2014). However, the return on equity for SMEs is clearly higher, as shown in different studies (Deutscher Sparkassen und Giroverband, 2016; KfW Bankengruppe, 2009).

Many of the proponents of CAPM to corporate law measures in Germany are closely affiliated to the Institute of Auditors (IDW). They are either auditors or current or former members of the technical committee for business valuations and commerce (FAUB)¹⁴. It is therefore understandable that they take this view in literature¹⁵. Nevertheless, Ihlau, Duschka and Gödecke (2013) argue that the characteristics of SMEs mean an adjustment of the risk mark-up is appropriate. However, they point out that for company valuations, these adjustments must be sufficiently justified and documented (Schütte-Biastoch, 2011; Nestler, 2012). Zwirner (2014) goes a step further and calls for an adjustment, due to the lack of diversification of the shareholder and the lack of liquidity of the shares. Nickertz and Kühne (2014) believe that CAPM is not applicable for the valuation of SMEs, since the method produces incorrect results and requires a clear declaration from the Federal Chamber of Tax (Bundessteuerkammer)¹⁶. Zeidler (2006) acknowledges the need for adjustments in the case of SMEs. Since there are no objective quantifications of these characteristics, he recommends taking these features into account subsequently. He also points out that the evaluator plays a crucial role. This statement refers by implication to the subjective approach and the margin of discretion left to the evaluator. Kruschwitz and Löffler (2014) find fault with the fact that in the valuation of SMEs, the full diversification of the investor, which is the basic assumption of the CAPM, is infringed. It should therefore not be applied, either in a pure form or with surcharges on the Beta (total Beta).

¹⁴ The FAUB sets out the principles for company valuation of the Institute of Auditors and develops them further

¹⁵ The current members include: Andreas Dörschell, Lars Franken, Susann Ihlau, Martin Jonas, Matthias Popp, Wolfgang Schultze. Wolfgang Ballwieser belonged to the FAUB until 2014

¹⁶ The Federal Chamber of Tax (Bundessteuerkammer, an association of German tax consultants under private law has adopted the valuation principles of the IDW.

The criticism of the CAPM is particularly valid with regard to the determination of returns on equity for SMEs. The dislocations caused by the financial market crisis and the concurrent capital market anomalies result in distorted values (Scheld, 2013; Meitner & Streitferdt, 2015). The decreased returns on German government bonds and the low basic interest rates associated with this provoke ongoing discussions in literature about the possibilities of adjusting the market risk premium in the framework of the CAPM (Jonas, 2009; Zeidler, Tschöpel, & Bertram, 2012; Kemper, Ragau, & Rüthers, 2012). The following figure shows the interest rate development of German government bonds.



Figure 32. Development of interest rate of German bonds (Deutsche Börse, 2016)

If Beta factors, market risk premiums and expected values (earnings, cashflows) are constant, equity costs decrease and, as a result, the company values are lower than in the past (Ballwieser, 2013). One possible approach would be an increase of the market risk premium. The IDW currently recommends an increase of between 5.5 % and 7 % (Institut der Wirtschaftsprüfer, 2014).

Another approach is to raise the basic interest rate to a long-term average, as suggested by Jonas (2014). This is necessary to determine company values in line with market requirements. However, the justifications of the proposed

changes in the framework of CAPM are unconvincing (Große-Frericks, 2015; Kruschwitz & Löffler, 2014). This makes the model very susceptible and loses the publicized advantages of market-orientation and transparency.

Hachmeister and Ruthardt (2014) understand the search for a measurable risk-mark-up but they argue that the limits of the applicability of the CAPM should be accepted with regard to SMEs. SME-specific literature largely rejects the CAPM for the calculation of the discount rate for SMEs. Hütteman (2007) is sceptical of the establishment of CAPM for the valuation of SMEs. Busch (2008) considers it inadmissible and nonsensical to apply the CAPM for non-listed companies as the required adjustment cannot be objectified or intersubjective due to the special characteristics of SMEs. Furthermore, he states that there is a wider margin of discretion than might be suspected at first glance and CAPM offers no advantage compared to a plausible free individual risk premium. Knackstedt (2009) is astonished that the CAPM is still applied for SMEs as the assumptions of CAPM do not correlate with SMEs. He also considers the method inappropriate as it is associated with considerable margins of discretion and is essentially subjective.

Pummerer (2015) follows a similar line of argument and calls for a consistent approach on a case-by-case basis. If these key assumptions are available, the interest rate should be calculated by applying the CAPM (stock-listed companies). If these assumptions are lacking the interest rate should be determined individually (for non-listed companies). He justifies this with the absence of correlation between capital market data and SMEs and the fact that the transference to SMEs cannot be traced intersubjectively. Finally, this equally subjective valuation is not superior to the individual determination of the capitalization interest rate. Similar points of criticism and reasoning are brought forward by other authors (Keller M. , 2015; Muschol, 2016; Knabe, 2012; Behringer, 2012).

There are courts that recognise the application of the CAPM (OLG Stuttgart, 2009; OLG Karlsruhe, 2008; OLG Düsseldorf, 2009; OLG Frankfurt, 2012) but others refuse to acknowledge CAPM due to a lack of methodological superiority (OLG München, 2008; OLG Stuttgart, 2007; OLG München, 2009). Furthermore, courts that recognise CAPM in principle still criticise its shortcomings (OLG Düsseldorf, 2014; OLG Stuttgart, 2011). Therefore, the two accepted methods remain in case law.

The calculation of adequate return on equity for SMEs continues to pose challenges in theory and practice. Science is required to provide further models and procedures that offer improved data quality and a more reliable empirical basis.

The SME-specific literature on business valuation expresses the need for the interest rate to reflect the unsystematic risks of SMEs. This endorses the statements made by the interviewees. There are various suggestions for how this could be done, including surcharges on the Beta, a surcharge on the market risk premium for the CAPM and determination of the risk premium on an individual basis. The value relevance of the characteristics of SMEs and their reflection are generally acknowledged (Schütte-Biastoch, 2011; Hackspiel & Fries, 2010; Zeidler G. , 2006; Zwirner, 2013; Hachmeister & Ruthardt, 2014; König & Möller, 2014). This can be done by determining the risk premium individually (Kappenberg, 2012; Behringer, 2012; Munkert, 2005).

There is still no consistent approach in case law for calculating the risk premium. Courts have accepted the individual determination of the market risk premium in principle (OLG Stuttgart, 2010; OLG München, 2009; OLG Düsseldorf, 2008; OLG München, 2014; OLG Düsseldorf, 2011; OLG München, 2008). An evaluation of judicial decisions regarding structural measures under company law carried out by Hachmeister, Ruthardt and Lampenius (2011) in 2000 and 2010 revealed that, in 42% of decisions the risk add-on is based on the CAPM and in 58% it is based on flat rate estimates by

an expert or the court. It is therefore logical to encourage an individual interest rate, taking into account the specifics of the company on a case-by-case basis; as long as business administration has developed a reliable method for determining equity costs for SMEs, where appropriate based on the further development of the CAPM. The Federal Court of Justice ruling (BGH, 2015) also clarifies that, while a standardized valuation practice may be desirable, this could not be realized as each valuation case has to be given individual consideration. The legislator has clearly established protocol for consideration on a case-by-case basis which is recognized and accepted.

It is necessary to take the market conditions of SMEs into account in order to determine their relevant capitalisation interest rates. These can be determined through databases in which transactions are represented, such as, Bloomberg, Thomson Financial SDC, Broker Reports, Finance (Schacht & Fackler, 2009; Schütte-Biastoch, 2011). Meanwhile, the market approach has also been highlighted by the courts (OLG Stuttgart, 2013; OLG München, 2012; OLG Frankfurt, 2013). Even though transparency could be optimised further, an improvement of data quality can already be seen (Behringer, 2012; Schütte-Biastoch, 2011).

The discount rate can be determined by the appraiser by adding an individual risk surcharge on the base rate (see figure 33).

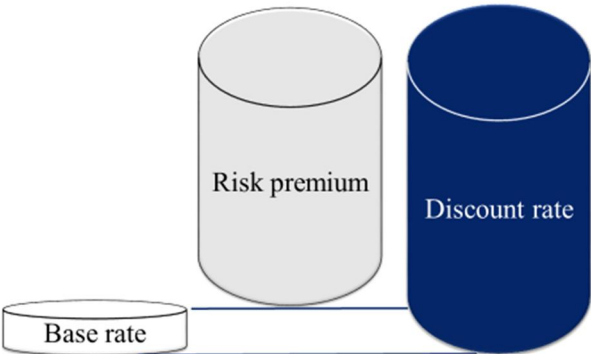


Figure 33. Individual determination of discount rate

The findings regarding the determination of capital costs have to be applied for the indemnity calculation with WACC in the same way as for CAPM; the capital structure has to be discussed.

As outlined (in section 2.4.3.1.), the cost of debt is composed of a risk free base rate and a risk premium. This risk spread is computed on the basis of the company's specific creditworthiness and the risk of the investor and ancillary costs accrued from borrowing debt capital must be taken into account (Volkart, Vettinger, & Forrer, 2013). Publicly traded debt securities cannot be used to calculate debt for SMEs as they do not issue bonds to the capital markets. Instead, it can be calculated with the following two methods (Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013; Volkart, Vettinger, & Forrer, 2013):

1. It can be based on the average current interest rate observed on recently issued bonds by comparable enterprises. 'Comparability' refers to the companies' probability of default corresponding to the same credit rating. The cost of debt complies with weighted average interest rate for debt capital that has to be paid in the capital market.
2. It can be calculated by means of effective and actual cost of debt. This can be attained by the rates of interest charged by investors on bank loans and ancillary costs for borrowing debt capital in relation to the average interest-bearing liabilities. Historical costs and current debt cost can be determined by the use of existing contracts.

As with equity costs, debts cost the same insight and view can be applied. SMEs cannot raise money directly in the capital markets or abroad. Their refinancing ability from external sources is mainly dependent on traditional local banks. Existing liquidity requirements that are met by loans or overdraft imply additional costs. There are further components determining banks' interest rate and therefore effective costs, which include the risk-free base rate, credit risk, liquidity costs, operational costs and profit margin (Wöhe, Bielstein, Ernst, & Häcker, 2011). Higher risk aversion, lower competition and

market transparency are also factors that influence interest rates. Due to their risk profile, such as single person risk, non-diversified business model and insufficient assets for collaterals, financing costs are typically higher for SMEs than for large enterprises (Schütte-Biastoch, 2011; Seehausen, 2014; Volkart, Vettinger, & Forrer, 2013). The market power of banks and the lack of capital market access to SMEs lead to less comparability of interest costs for conventional bank lending. However, determining costs of debt for SMEs by using debt costs from listed benchmark companies is hypothetical and does not correspond to the actual cost (Loßagk, 2014). It is not sensible because the premise is incorrect and leads to divergent results. Cost of debt has to be determined on the premises of a real individual company (Gleißner & Wolfrum, 2008).

Using the approach of effective costs should also be used with caution. The current debt costs are based on credit contracts agreed in the past. If the credit standing or interest level change, no adequate results can be obtained. Moreover, existing collaterals have to be checked in case of retirement. If the collaterals belong to the outgoing owner e.g. mortgage then *ceteris paribus* an increase in debt cost can be assumed. For this reason, the historical debt costs can barely be considered as representative of the cost of debt, especially if the current debt structure and their collateralisation are expected to change in the future. Therefore, effective debt cost of the company has to be considered and adjustments should be made where necessary.

The company's capital structure has to be determined as well as the capital costs. The capital structure influences the interest rate by the weighting factor of equity and debt. In practice, a target capital structure is determined hypothetically, according to the future development of the company that is not a realistic assumption (Ballwieser & Hachmeister, 2016). Given the weighting factor, the capital structure is crucial when estimating the cost of a company's financial resources.

The projection of the capital is challenging even for the management, although it has to be predicted as realistically as possible (Kunath, 2014). The challenge for the appraiser is to check the plausibility of these assumptions. Beside the consistency of the economic aspects, such as the operational development of the company, the debt capacity also has to be assessed in order to realise the implication for the transferable earnings as a whole. A realistic representation of the target capital structure based on existing ratios can then be defined (Schacht & Fackler, 2009; Drukarczyk & Schüler, 2016).

The definition of the target capital structure and the debt costs are ultimately subject to discretion. Consequently, it is not possible to only have one valid determination of capital components and their costs. A detailed analysis of the debt cost or their derivation is essential and has to be critically reviewed.

Both methods to determine the cost of debts for SMEs have their disadvantages. The benefits of using realistic costs outweigh the disadvantages of the discretionary powers of the valuator. Market related cost of debts from comparable stock listed companies do not correspond to the reality of SMEs. Using the most realistic assumption for the valuation of SMEs is in line with the insights of this thesis. In addition, using a realistic target structure and realistic capital cost relate to the principle of equivalence for a future oriented valuation.

This gives the evaluator considerable room for manoeuvre in encouraging adequate discount rates for the determination of compensation in line with market conditions. Thus the evaluator can ascertain, on the basis of market values and, where appropriate, through a plausibility-check by means of the multiples method, whether the adequate target rate used and thus the valuation result range is within an allowable bandwidth (Steinbach, 2015; Große-Frericks, 2015; Tinz, 2010; Kranebitter, 2012; Schacht & Fackler, 2009; Drukarczyk & Ernst, 2010).

As stated above, the correct point value does not exist. Thus, the determining the value of the company has to range within a band that complies with the legal and economic requirements and thus with the interests of the parties involved.

In the framework of this thesis, I am aware of the weaknesses in the individual determination of the risk mark-up and the adequate target rate, which exist due to margins of discretion. Currently, there is no method for determining discount rates for SMEs that does not suffer from shortcomings. It remains at the discretion of the evaluator who therefore bears a great responsibility. However, the most important thing is that it is a transparent process with the plausibility check made through the MM. In this way the current market data and valuation is intersubjective and comprehensible and large divergences can be avoided.

Professional groups have different views regarding the capitalisation rate. The main disagreement concerns CAPM, WACC and Beta. In other words, the main question is whether capital-market-oriented methods are suitable to determine the cost of capital for SMEs. In trying to reconcile the disagreement that exists in particular in the academic literature, I was influenced by the arguments that these methods have so far not been empirically tested and that SMEs cannot be compared to listed companies due to their qualitative characteristics. In particular, the SME-related academic literature rejects CAPM, WACC and Beta, and authors stress that the individuality of the company has to be considered. In addition, lecturers and the consultants are unanimous that an individual determination of the capitalisation rate has no structural disadvantage in comparison with capital-market-oriented methods. The auditors cannot deviate from their professional guidelines in the interviews, and this was a further reason to place more emphasis on lecturer and consultants' statements. In addition, my own experience with SMEs in my business underpins the stressed arguments. Therefore, I decided in favour of the individual determination of the capitalisation rate.

4.3. INSTITUTE OF PUBLIC AUDITORS IN GERMANY

4.3.1. STATEMENTS OF THE INTERVIEWEES

M&A consultants and lecturers were very critical about company valuation in accordance with IDW S 1 and thus the objectified company. The so-called ‘objectification’ suggests an impartiality that is not there. The market is seen as an objective standard of comparison. The IDW S 1 has weaknesses, particularly the calculated interest rates of the CEM and DCF methods, which are not in line with the market. In addition, the existing typifications, premises and the discount rates (CAPM, WACC and β), which do not correspond with the reality of SMEs, are viewed critically. This makes other procedures legally vulnerable, since those who use this method are covered through the common case law. However, the lecturers consider a structured and transparent procedure advantageous, i.e., the valuation principles are adhered to and the valuation methodology is documented. Reference is made to the judicial recognition that can be achieved through this methodology. A stronger individualisation is necessary from the perspective of academics who pay particular attention to the planning and characteristics of SMEs.

“The auditor’s IDW S 1 has weaknesses, as the assumed interest rates do not correspond with reality. The return on equity is too low.” CONS

“There is not one objective value and therefore it is also not objectified. The auditor seeks to suggest that ‘objectified’ is objective. That is, a valuation is always subjective. Only the market can be objective and that is reasonable. Therefore, the market valuation is preferred.” CONS

“...it has the appearance of a structured and reasonable approach. Despite the existing weaknesses in the premises and in the adequate discount rate.” LEC

“So, perform an individual valuation and look at the market and check the plausibility, that is to consider the individual risks. The IDW S 1 is quite plain, that means I will continue as before.” LEC

Auditors prefer the IDW S 1, as this corresponds to their own profession. They justify this as:

- It is a standardised and transparent procedure
- Total valuation methods are used for the valuation that are recognised in business administration
- The objectified valuation is accepted in legal disputes which gives the acting parties safety and reliability in the valuation
- It is market-conforming
- Individual characteristics of SMEs can be considered by checking the plausibility of planning
- It is suitable for determining the severance of retiring shareholders

“IDW S 1 is preferred because it is recognised by courts and the approach of the valuation is structured and intersubjectively reasonable.” AUD

“Under corporate law severance payments are to be evaluated objectively, that is, according to IDW S 1 the evaluator can/has to check the plausibility of the plan, to grapple with the company intensively.” AUD

4.3.2. DISCUSSION OF INSTITUTE OF PUBLIC AUDITORS IN GERMANY

The term ‘objectifying’ is defined as bringing into a particular form what is available for objective observation and includes the elimination of subjective influences (Duden, 2016). The intersubjective comprehensibility of a statement or of a procedure is not contingent upon the subjective assessment of the individual and is therefore verifiable by anyone. With intersubjectivity a given fact is equally comprehensible to different observers (Baetge J. , 1970). For Popper (2005), intersubjective verifiability exists when the generation of information is based on regularities. As far as company valuation is concerned, a third party comes to the same conclusion when it applies the same valuation method and procedure, (Baetge & Kruse, 2001; Schmidt A. , 2002). Objectifiability eliminates discretionary powers (Moxter, 1983). Baetge (1970) notes the conflict of targets between the objectified and thus intersubjectively verifiable information and the relevant future cashflows

required for the valuation. Naturally, purely historical data can be better intersubjectively verified than forward-looking information or assessments (Steinhauer, 2007) as future developments are uncertain and unreliable (Hering, 2006).

The objective value has considerable appeal from a scientific perspective. The concept of objective language is associated with universality, verifiability, certainty, scientific character and honesty (Matschke & Brösel, 2013). These terms suggest that an objectified company valuation ensures the neutrality of the evaluator and the systemic subjective assumptions in company valuation can be directly related to it (Karami, 2014). To clarify, the term ‘objectified’ refers to the valuation procedure and not to the quality of the result (Moxter, 1983).

The typifications established by the IDW (Institut der Wirtschaftsprüfer, 2014) require that:

- The purchaser is established within the territory of the country
- The company is continued in its present form (status quo principle)
- Composite effects are not achieved (stand-alone principle)
- Premises are made with regard to future dividends
- The company is subject to flat-rate tax rates
- The risk assessment for the company is geared to capital market risk perceptions

Lauber (2013) denies that investors of this sort can be found in reality and that the premises above are characteristic of potential buyers. Lütkeschümer (2012) points out that the positive impact of interest on external funds due to credit enhancement cannot be taken into account as composite effects are not taken into account.

In ‘objectified’ company valuation ‘as is on the valuation date’ (‘stand-alone’ principle) the past is the basis for a forecast of future development and thus of future payment surpluses (Karami, 2014). The objectified value is oriented too

strongly towards past company profits to determine the future value (Schmeisser, Görlitz, Spree, Clausen, & Schindler, 2008). In this way the previous development continues and is only adjusted by future contributions. These can also be achieved without implementation of the measures adopted for the valuation as the IDW does not take into account prospected revenues arising from measures that have not yet been initiated or explicitly specified (Institut der Wirtschaftsprüfer, 2008).

Although Ballwieser (2002) points out that intersubjective verifiability cannot be equated to truth, the use of historical data for valuation by means of methods that are recognized in business administration is only significant as a basis for analysis.

The existing concept of the IDW also includes the distribution policy that should be geared towards the planned distribution in accordance with the business concept (Institut der Wirtschaftsprüfer, 2014). However, this would not be appropriate in the event of the withdrawal of a partner since the compensation to be paid will impact the company's distribution policy.

In the general guidelines for the determination of the company value, the IDW (2008) emphasizes that the valuation principles have to be comprehensible. However, it fails to provide any further specification. A comprehensible language and a formulation avoiding misinterpretation is only recommended (Institut der Wirtschaftsprüfer, 2014). Therefore, Naumeier (2015) calls for further specification of the transparency rules.

The consensus in business administration is that unless information can be procured at reasonable expense, a typification is required (Matschke & Brösel, 2013; Große-Frericks, 2015; Hachmeister, 2006; Langguth, 2008). Moxter (1983) points out that typification and objectification should not be confused as typification reduces effort, while objectification eliminates the discretionary powers of the evaluator.

The IDW attempts to establish objectifiability by means of typifications and the partial use of historical data, status quo and the stand-alone principle (the same business concept implies the same value drivers in the future). In the relevant literature, the typifications of the IDW are considered as simplifications and thus as inappropriate and unsuitable (Schmeisser, Görlitz, Spree, Clausen, & Schindler, 2008; Baumhoff, Dücker, & Köhler, 2010; Henselmann, 2006). Hachmeister (2014) emphasizes that typifications should not be sweepingly predefined.

Moreover, the objectified company value is regarded as seller value (Busse von Colbe, Crasselt, & Pellens, 2011; Langguth, 2008; Matschke & Brösel, 2013) and so it was sharply criticized (Langguth, 2008; Hommel, Braun, & Schmotz, 2001; Gröger, 2009; Fischer-Winkelmann W. , 2003). A value that only reflects the perspective of the vendor while neglecting the buyer's development opportunities cannot be classified as neutral (Matschke & Brösel, 2013; Moxter, 1983). Thus, the auditor does not fulfil his role as neutral expert (Ballwieser, 1995) and this lack of neutrality could disadvantage either the transferee or the withdrawing partner.

Despite the typification of subjective influences, the objectified value actually represents a subjective future performance value (Jonas, 2007; Kappenberg, 2012). The objectified company value is based on estimates with regard to future earnings or cashflows and thus is fraught with uncertainties (Hering, 2006). The evaluator has a number of discretionary powers as it is the nature of company valuation that assumptions are made which cannot be objective (Schacht & Fackler, 2009; Kunath, 2014). As result, the term 'objectified' is also led *ad absurdum* from a linguistic point of view.

Thee 'objectified' value is still subject to criticism due to its proximity to the objective value. The objectified value is contrary to the generally recognized valuation theory established in business administration. It states that only the future development and the earnings and cashflows generated from it are crucial criteria for valuation rather than the statically transferable value

contributions of the past. For the reasons set out above, economists in particular tend to reject the objectified company value and the framework of dominated occasions for valuation (Hering & Brösel, 2004; Bertl & Schiebel, 2003; Fischer-Winkelmann W. , 2003; Matschke & Brösel, 2013).

The IDW recognises that business valuation requires the consideration of special features for SMEs. The Practical Guidelines for the Valuation of SMEs (Institut der Wirtschaftsprüfer, 2014) provides the evaluator with the opportunity to partially eliminate these criticisms. Here, emphasis is placed on qualitative characteristics such as, the significance of the owner to success, lack of access to the capital market, smooth transition between the private and the business sector, limited accounting system and inadequately detailed business planning (Institut der Wirtschaftsprüfer, 2014). Therefore, in the valuation of SMEs greater significance is attached to subjectivity due to the influence of the owner (Behringer, 2012). In principle, however, the guidelines of IDW S1 require the determination of an ‘objectified’ value assessing companies in the framework of an unmodified business concept (Institut der Wirtschaftsprüfer, 2014).

In addition to the general criticisms of IDW S1 and thus of the objectified value for all companies, there is disapproval with regard to the implementation of IDW S1 for the determination of the business value of SMEs. The IDW practical guidelines contain information on accounting for the specific characteristics of SMEs in the valuation. However, this is only a recommendation and it explicitly states that the implementation of this recommendation is the personal responsibility of the auditor (Institut der Wirtschaftsprüfer, 2014). It is at the discretion of the evaluator not to proceed in cases of doubt due to security considerations and to prevent himself from being attacked. Any deviation from the professional principles should be categorized as incorrect valuation (Hecker, 2000) whereby the evaluator jeopardizes his admission as auditor (Kruschwitz, Löffler, & Sloane, 2010).

The question of transferable earnings power must therefore be addressed so that the future actions and interests and preferences of the remaining shareholders are taken into account. These changes such as the altered influence of the management have to be quantified. Thus, the personal responsibility and discretion of the evaluator remains.

Jurisprudence argues that an objectified value does not exist, in line with the criticism expressed in business administration (Großfeld, 2012; Adolff, 2007; Lauber, 2013). According to several court decisions, a precise value does not exist and company values can be determined within a certain bandwidth due to the inaccuracy of forecasting methods (OLG Stuttgart, 2003; OLG München, 2006; OLG Stuttgart, 2014; OLG Karlsruhe, 2013; LG Frankfurt, 2014; OLG Karlsruhe, 2012; OLG Düsseldorf, 2015). Nevertheless, case law accepts the valuation in accordance with IDW S1 (OLG Stuttgart, 2014; OLG Düsseldorf, 2014; OLG Stuttgart, 2014; OLG Düsseldorf, 2009; OLG Karlsruhe, 2008; OLG Karlsruhe, 2013).

According to a number of interviewees, this is the cause for the existing dominance of the auditors when drawing up valuation reports for courts. In his doctoral thesis, Lauber (2013), who performs the function of a presiding judge at the Cologne District Court, self-critically describes the interdependence between auditor and court. He argues that the specific challenges of business valuation lie in a specialist field outside his area of expertise. He therefore engages a neutral expert who draws up an expert report.

As a rule, these experts are auditors who conduct a valuation in accordance with their professional principles as the latter takes recourse to valuation principles established in case law. Although valuation and the determination of compensation constitute a question of law (Hütteman, 2007), the judge will not oppose the proposal of the expert, due to his own lack of detailed knowledge. Even in cases of doubt where the judge commissions an expert report, it is likely that an objectified value is determined in accordance with IDW S 1, provided that he fails to define an alternative valuation method.

However, this is probably rare in actual practice and therefore the relationship between court and auditor is interdependent. The expert's contribution to reaching a verdict is significant.

Nevertheless, courts have come to harbour doubts with regard to valuations in compensation cases following the principles of the auditors. For example, the decision of the Cologne Regional Court (2009) on 24 July 2009 challenges the objectified value. Instead it assesses the market value since a package of shares of 50 % was sold on market terms close to the reporting date. This clearly shows that court favours market prices provided they can be determined reliably and timely.

Moreover, the Frankfurt Regional Court refrained from the IDW S1 with two decisions on 25 November 2014 (2014) and 16 December 2014 (2014). They gave different reasons but one was quite significant: *“The IDW S1 is a release issued by a (civil-law) organisation of auditors, that is regularly taken as a basis on the occasion of court proceedings relating to business valuation, however, this does not imply that it is in all cases mandatory to take it as a basis for a business valuation. Rather, this release of an ultimately private association has no legally binding effect on a state court, particularly in circumstances that require, in the opinion of the court, in law or in fact, a deviation.”*

The professional principles of the auditors and thus the valuation in accordance with IDW S1 is not legally binding. It is the judge who selects and specifies the valuation method (see section 1.1.3.). It remains to be seen whether or not the cited verdicts constitute a major change in the perspective of jurisprudence.

Both economists and jurisprudence are critical and disapprove of the objectified company value. Proceeding from the recognized future orientated total valuation theory, it is now considered that an objectified company value

does not exist. As Brösel (2003) appositely noted, from an objective point of view, only subjective values exist.

The determination of the 'objectified' value in accordance with the principles of the Institute of Auditors (IDW) has primarily been designed for capital market-oriented companies (Zwirner, 2013; Dirringl, 2009). Actually, only subjective values are geared towards the purpose of the valuation. Therefore, the objectified value postulated by the IDW remains a subjective value. This is particularly true in the valuation of SMEs, provided that the scopes for manoeuvre are consistently used and the capitalisation interest rate is determined individually.

Fundamentally speaking, a valuation may, but need not be conducted in accordance with IDW S1. Thereby, the procedures described have to be considered if the valuation is to reflect the specific characteristics of SMEs and to satisfy the interest of the parties involved. According to Hachmeister (2014), there is an increased necessity for individualisation of the valuation parameters in restricted groups of people or if the valuation object is known (e.g. in the event of the withdrawal of a partner).

Zwirner (2013) sees a need for adjustment of the IDW S 1 with regard to valuations of SMEs in view of their heterogeneity and draws attention to the appropriate implementation of the practical guidelines of the IDW (2014). In this context, it has to be pointed out that the principles for the auditing profession give professors and other experts such as M&A consultants significantly greater freedom with regard to the drafting of expert reports (Kruschwitz, Löffler, & Sloane, 2010).

The criticisms are justified and there is no legal obligation or statutory requirement for the implementation of the practical guidelines for the determination of an objectified value in valuations of SMEs. Therefore, the determination of an objectified company value should be avoided when determining the compensation as it is neither appropriate nor practicable. As

Metz (2007) points out, consideration of the risks and the assessment of relevant impact remains a matter of judgement. It is crucial in the valuation of SMEs for the evaluator to have expertise and a sense of proportion.

The professional principles of auditors have some shortcomings that are evident and have been shown in the discussion above. The disagreement of the professional groups – auditors versus consultants and lecturers – are perhaps because auditors cannot criticise their own guidelines. Furthermore, I could uncover the structures between the auditors and judges, and this is one reason why these principles are accepted by courts even though they have some disadvantages in particular when determining the indemnity of SME owners. These issues, as well as the reality of SMEs, were the reason why I decided to favour the arguments of the lecturer and consultants – which also aligned with those from the SME-related academic literature. I was also influenced by my academic and professional experience and my knowledge regarding the characteristics of SMEs.

4.4. THE FINANCE MAGAZINE (THE FINANCE)

The Finance Magazine was frequently mentioned with the MM in the context of the method discussion. Approximately four times a year the magazine publishes assessment multiples depending on sectors and sales size. This magazine enjoys great popularity with investment bankers, entrepreneurs and M&A advisers. The value of a company is supposedly recognisable at first sight but the statements of the interviewees were differentiated.

4.4.1. STATEMENTS OF THE INTERVIEWEES

As with the statement about the multiple method, the published values in the Finance are viewed critically by the auditors and lecturers for the following reasons:

- The MM is not accepted as an independent valuation method and these multiples can only be used for plausibility check, the data should be triangulated from other sources

-
- The origin of the data is not traceable and therefore cannot be reproduced
 - It is doubtful that real data from transactions was reported
 - The industries are not sufficiently differentiated, so the multiples for the company, which should be valued, can be read off directly
 - The values are too general and based on large bandwidth
 - A detailed analysis of the valuation object and a plausibility concerning further sources are necessary, which is quite useful as an indication for the valuation of a company from a particular sector
 - The magazine does not substitute a detailed analysis of the enterprise
 - A simplification of the valuation process cannot be seen and the multiples cannot prevent conflict, especially concerning the compensation regulation.

In the opinion of the auditors and lecturers, the multiples from The Finance Magazine cannot be used for the assessment.

“The differentiation with the sectors does not have good selectivity. In this respect when analysing a company, it is not enough to have a look in the finance magazine.” AUD

“A disadvantage, however, is that the origin of the data is not known and cannot be understood.” AUD

“The Finance multiples are not credible. They are also not simplifying, cost-effective and cannot avoid dispute.” LEC

“These values can serve at most as a plausibility check after a detailed analysis and assessment with another method.” LEC

The statements of the consultants were heterogeneous. The majority of the consultants assume the Finance multiples to be useful for an adequate market valuation because:

- These are current data
- Finished transactions are the basis for published values. Finance requests these values regularly from the connected M&A-consultants.

However, some were critical, as the data basis cannot be evaluated. Whether every M&A-consultant has a transaction in each quarter was questioned. Furthermore, about 50 % of the transactions are not published as the owner of the medium-sized company does not want this. Nevertheless, the general multiples of the Finance were viewed as a basis for a market-consistent valuation. They regard the EBIT multiples as up to date and can therefore use them as a base for an assessment.

“The Finance retrieves the values by the M&A advisers. These are values of just taken place transactions and estimated values of the asked advisers.”

CONS

“These (M&A-adviser)¹⁷ count on their practical knowledge. But more than half of the enterprise purchases are not published.” CONS

4.4.2. DISCUSSION OF THE FINANCE MAGAZINE

The Finance Magazine¹⁸ focuses on finance-related themes. This work looks at the published multiples rather than the editorial content of the. These were also discussed in the interviews.

For over a decade The Finance Magazine has regularly published multiples (at least every three months) according to the size of the company and industries.

The size of the company is taken from three size classes, which are defined according to sales. It should be critically noted that the indicator varies in the different sectors, especially with regard to trading companies or financial

¹⁷ Clarifying note from the author

¹⁸ The FINANCE-multiples are based on market assessments of experts from M&A-consulting companies. In total, corridors for the EBIT- and sales multiples from 16 sectors are requested and determined. The figures are updated four times a year. The FINANCE-expert panel consists of professionals from the following institutions: Angermann M&A International, Aquin & Cie, C.H. Reynolds Corporate Finance, Clairfield International, Hübner Schlösser & Cie, IEG – Investment Banking, IMAP M&A Consultants, Interfinanz, Ipontix Equity Consultants, Keller & Coll., Lincoln International, Mayerhöfer & Co, Network Corporate Finance, SBCF & Cie., Sigma Corporate Finance, VR Corporate Finance. Furthermore, the FINANCE-owned research of the FINANCE-DealBank and stock exchange data have flowed into the determination of the multiple. Source of the stock exchange data is the OSIRIS-data base of Bureau van Dijk Electronic Publishing, Frankfurt am Main. Source of the emphases is the Gruppe Deutsche Börse AG (Finance Magazin, 2016).

service providers. The latter are not published at all. Other common quantitative characteristics such as balance sheet total or number of employees are not considered.

For check the plausibility of the statements, I called some of the mentioned M&A consultants in 2014 to find out how the reported data was assembled. They stated that the multiples are requested regularly and if there was no transaction in the appropriate industry or size class, an estimated value is reported. This is necessary as there is not a transaction in every quarter in the appropriate sector and size class.

The majority of the citations by the interviewees refer to the multiples method and to the reliability of the data. The published data is an indication for company values, determined through an accepted valuation method. These values should be checked with other databases or information as the values of the Finance are not enough to check the plausibility of the valuation. There are no explicit statements in literature about the Finance Magazine, but about the multiples method and the published multiples for large companies as well as for SME (see section 2.4.4.).

A comparison of the transaction multiples is made against this background. The Finance publishes band widths, i.e. a minimum value and a maximum value is given. The sector automobile industry and supplies, machinery and equipment, construction and building industry are compared to show the important branches regarding SME. SME have a significant economic importance in these sectors because of the number of companies, the number of employees and the generated sales (Statistisches Bundesamt, 2013).

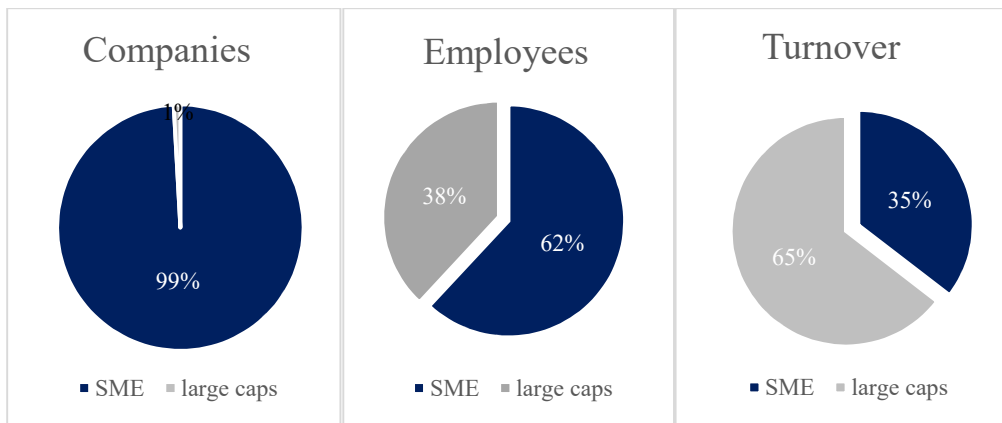


Figure 34. Automotive industry

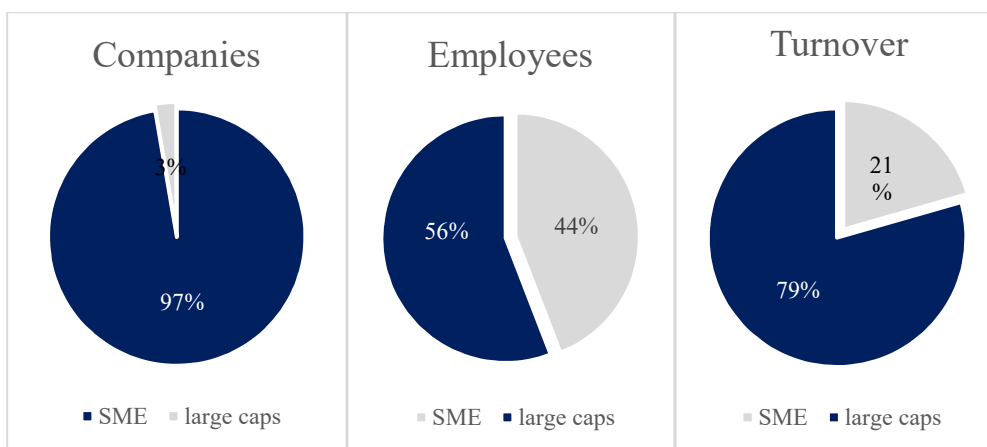


Figure 35. Machinery and equipment industry

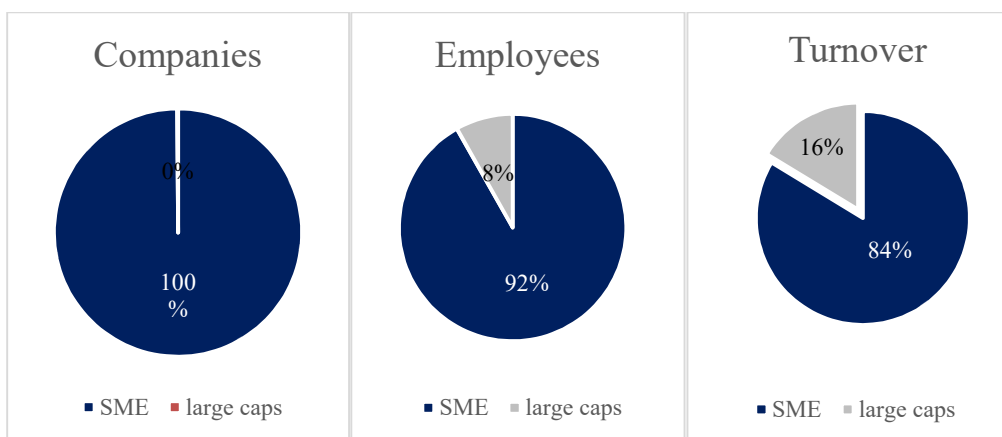


Figure 36. Construction and building industry

The following surveys refer to the period from 2008 – 2015, namely the 4th quarter of each. According to a study carried out by PWC, most of the transactions take place in the 4th quarter (PricewaterhouseCoopers AG, 2011). The values displayed in figures 38 - 40 compare the minimum-multiples and the maximum-multiples of small caps and large caps and show the deviation.

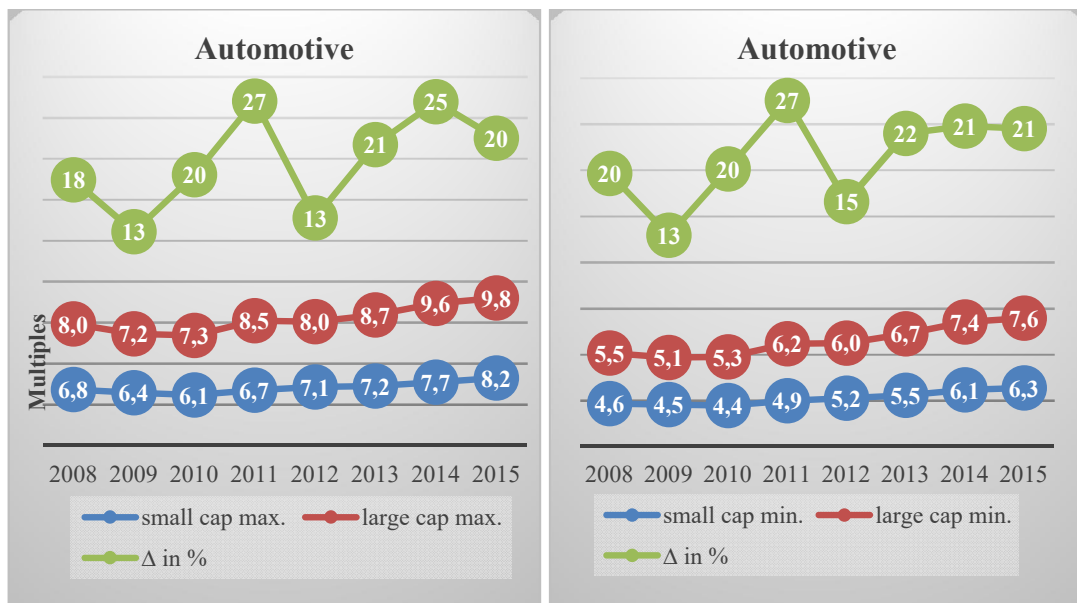


Figure 37. Comparison automotive industry maximum and minimum multiples

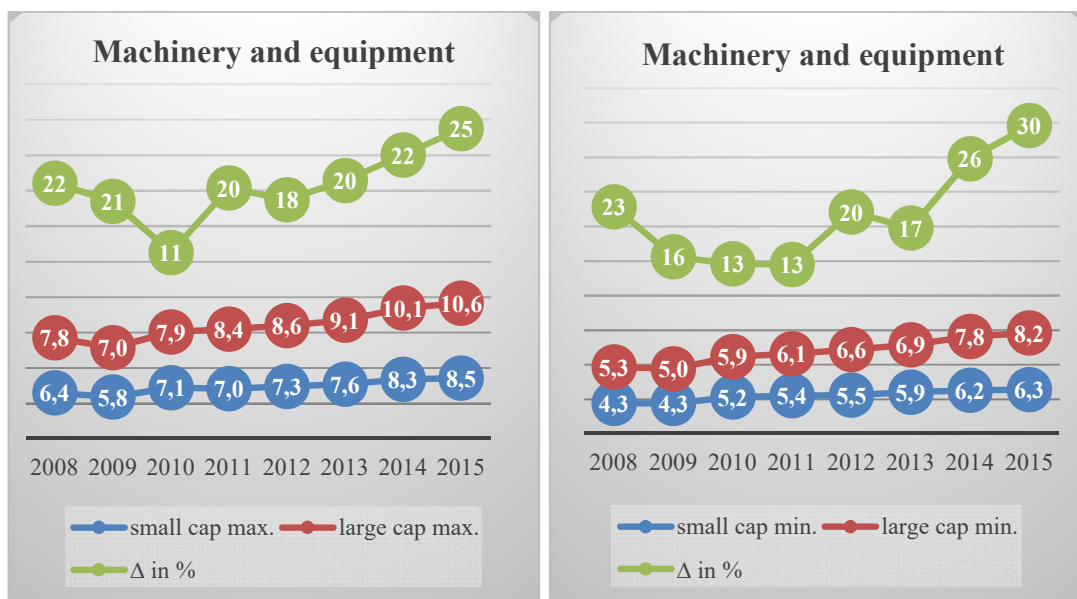


Figure 38. Comparison machinery and equipment industry maximum and minimum multiples

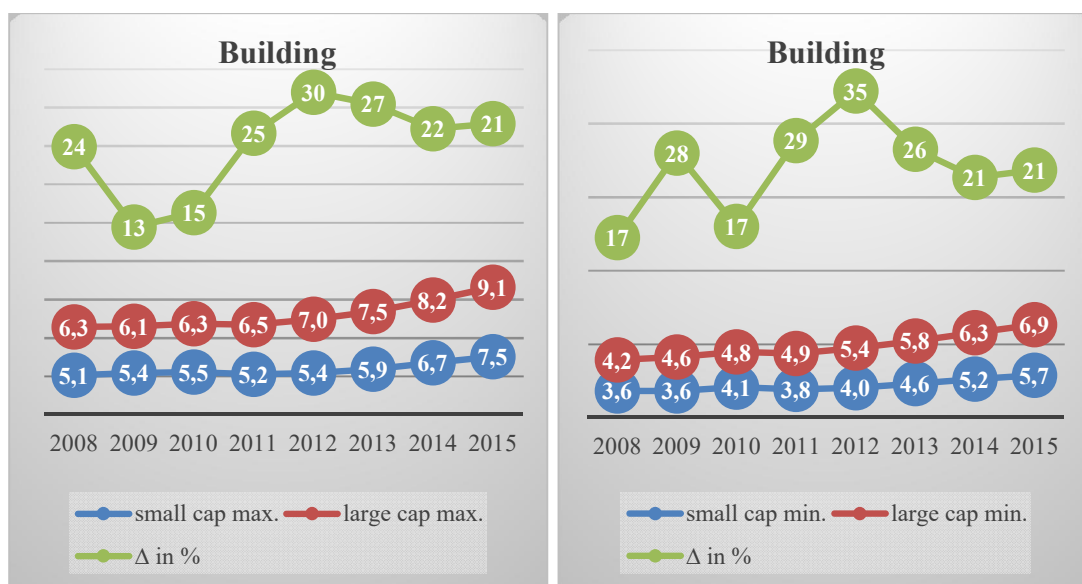


Figure 39. Comparison building industry maximum and minimum multiples

The automotive industry and supplier sectors show the difference in the transaction multiples between 13% and 27% at the maximum and minimum values during the displayed period. In machinery and equipment construction the deviation is between 11 % and 25% at the maximum values and 13% and 30% at the minimum values.

In the building industry the difference is between 13% and 30% at the maximum values and between 17% and 35 % at the minimum values. This shows the large dimension of the differences.

As already mentioned (see section 2.4.3.1.2.), companies are not identical and can only be compared through generalizations. The multiples published in the Finance and divided in sectors are analogous to other sources of information. The values of the sectors are aggregated and cannot be exactly separated, i.e. a certain band width has to be accepted. Therefore, the multiples of the industries of the Finance can only be regarded as an indication which has to be confirmed through other sources. Possible sources are the website of professor Damodaran of Stern University (2016), the magazine Corporate Finance biz (2016) or Markt und Mittelstand (2016) and finexpert (2016).

The overview shown above only demonstrates that companies are priced differently on the market due to their size. The analysis of the exemplary sectors shows that smaller companies also have smaller transaction prices than larger companies. This is due to the characteristics of SMEs and the derived pricing of the systematic risks and therefore the demanded return on equity. Smaller Ebit-multiples mean ceteris paribus, a higher adequate target rate at the DCF- or CE-method. As the origin of the data cannot be validated and a reliability cannot be proven, these differences can be used to confirm the discounting interest rate at compensations but triangulation of the data of the Finance should be made by other sources.

In this case, the decision to follow the arguments of the auditors and lecturer were quite simple. Finance is a magazine and the sources of the data cannot be verified. Therefore, as an academic, I rely more on academic principles. *Finance* could be one source for market orientation. However, these data need to be validated by using different sources where the data are traceable and based on real companies or transactions. Furthermore, an accepted valuation method for indemnity determination such as DCF or CEM should be used. In addition, experience shows that, in practice, these multiples are too large, so owners of SMEs have distorted impressions about the value of their company based on the multiples in Finance.

4.5. SME RELATED VALUATION

4.5.1. PERPETUAL ANNUITY AND GROWTH RATE

4.5.1.1. Statements of the interviewees

The perpetual annuity (PA) is rejected by the M&A advisers because they consider the everlasting growth as inappropriate and leading to unrealistic values and factors, which market participants are not willing to pay. One proposal is to fix the growth rate at zero, which leads to a shrinkage of the company. This is quite difficult to communicate to the entrepreneur so they suggest taking a low growth rate. The discount rate is to be adapted so that the result reflects the usual market-values.

“The PA leads to unrealistic values, e.g., 15 times EBIT. No market participant will pay this.” CONS

“One assumes around 2% for instance to equalize the inflation, but whether this really exists or not, you do not know. Hence, you can think about zero.”
CONS

The PA is rejected by the lecturers and auditors and will only be taken into consideration if there are indications of an ending of the enterprise. They argue the following:

- The PA represents the sale of the enterprise occurred at a later time (it is the balance for a liquidation or sales).
- The enterprise can also be continued by others and the new owner is able to generate more cash.
- Essentially there is growth and inflation.
- The value contribution decreases gradually in the event of discounting and after 100 years the proportional value is almost imperceptible.

Reduction of growth should still be chosen carefully if necessary because the enterprise cannot grow stronger than the market. Models with growth reduction and zero growth should be confronted to see the effects of the growth. Another proposal is that, if necessary, a longer period should be modelled to adapt the growth. Nevertheless, all assumptions should be justified accordingly.

One auditor believes that temporary growth should become more important to the valuation of SMEs and if a foreseeable limited business model is given, a PA should not be used. They suggested that the growth factor is not necessarily extrapolated from the yield or cashflow value from the last detailed planning year, but from a possible cyclical business model predicted from ascertained values. This is seen in line with the identification of the possible transferable earning capacity.

“If one knows a concrete ending time, then you can plan that. If, however, you do not know how long an enterprise exists, then you take the PA.” LEC

“A PA is a conservative assumption. Either I sell the enterprise someday and invest the money to generate interest yields, or I continue it.” LEC

“In general, the calculation of the PA is adequate, unless it concerns a limited business model. For example, dismantling of the mineral resources which we may reach only in a few years.” AUD

“The infinity in the PA contains the insinuation that at the end, the enterprise is liquidated and then a suitable cashflows.” AUD

4.5.2. PROBABILITY OF INSOLVENCY (POI)

One of the controversial topics in the evaluation of SMEs is the question of probability of bankruptcy, which is supposed to be higher than for large companies.

4.5.2.1. Statements of the interviewees

The M&A consultants have different opinions about the consideration of the PoI. Most of the consultants think that PoI should not generally be considered for SMEs for the following reasons:

- The risk to SMEs is already displayed in the discount interest rate
- The economic robustness of the “Mittelstand” means there are few insolvencies in Germany
- German SMEs cannot be compared to those in the USA
- There are many reasons for insolvencies that are not SME-specific.

One consultant states that the PoI is generally higher at SMEs than larger companies as there are more SMEs. Two consultants think that SMEs show a smaller PoI, as the typical factors for medium-sized companies such as active persons play an important role e.g. founder, owner and family. These people would fight to the last to avoid insolvency. In addition, due to their size, SMEs can react more flexibly to market changes and secure their existence.

The prevailing opinion of all consultants is that PoI should only be considered if the company shows indications of insolvency. However, there are different statements about the kind of implementation of the PoI. Two consultants think that a recognizable insolvency should be displayed in scenarios and three prefer a risk premium to the discount interest rate. Nevertheless, the quantification of the PoI is generally viewed as problematic.

“There are more insolvencies at SMEs, because there are a lot more SMEs than larger companies, that is just the way it is.” CONS

“...that some medium-sized companies, especially family-run businesses, are much less in danger of insolvency than some large companies.” CONS

The lecturers and auditors agree that that the size of the company is not a relevant basis for the PoI. They think the idea that SMEs go bankrupt more often is a platitude. Some SMEs have a large economic power and their small size implies advantages such as flexibility and speed of operations which enable a lasting survival. There is no empirical evidence for a higher PoI of SMEs in Germany and it is not accepted in literature or practice. An individual view of the company is emphasized. The analysis of the business model and the economic situation of the company are crucial as indications for probable insolvency. It not appropriate to "hang a valuation-related canon ball around the neck of SMEs" just because of the size. There are concerns that the PoI might be abused to justify smaller values, for example, towards the tax authority, small shareholder or even the withdrawing shareholder.

The business plan is crucial. This should be critically analysed during valuation to estimate the probability of occurrences, independent from the size of the company. Quantification is considered to be difficult but a generalisation through surcharges or discounts is rejected. However, if the company shows individual risks, the PoI should be considered in the counter, therefore in the planning. The unanimous opinion is that, however the PoI is applied, the risk should not be counted twice, i.e. in the counter and in the denominator.

“I do not have empirical evidence, which proves, that large ones go bankrupt less often...that has to be examined.” LEC

“And when they (existential risk) ¹⁹ are recognizable, then this will be considered in the valuation.....” LEC

“... if you have a company with 80% of equity and assets mostly in cash, then it is a long way to insolvency. Such companies are especially among SMEs.”

AUD

“I think finally it is crucial, if the scenario of insolvency is a scenario, which will occur due to a halfway assessable probability.” AUD

4.5.2.2. Discussion of PA, GR and POI

This section looks at the PA, the GR and the POI. These issues are interrelated regarding the long-term-existence of SMEs due to their specifics.

For each business appraisal, the reviewer has to deal with the question of how the corporate revenue or cashflows can grow positively or negatively (Tschöpel, Wiese, & Willershausen, 2010; Friedl & Schwetzler, 2010). This assumption is particularly important because the growth is actually estimated in the detailed planning phase and this is done as a standard surcharge in the PA (Kranebitter, 2012; Dörschell, Franken, & Schulte, 2012; Schieszl, Bachmann, & Amann, 2015).

There is general consensus in literature that the growth rate has a very strong influence on the present value and thus the enterprise value (Naumeier, 2015; Bark, 2011; Hasler, 2013; Held, 2013). This shows that the growth-rate is seen to be critically reviewed (Voigt, Voigt, Voigt, & Voigt, 2005; Tinz, 2010; Schütte-Biastoch, 2011; Matschke & Brösel, 2013).

However, a company that is not able to equalize inflation will inevitably decline (Keller M. , 2015; OLG Düsseldorf, 2012) and thus is incapable of surviving at all. The inflation-based growth is debated in literature (Baetge, Niemeyer, Kümmel, & Schulz, 2015; Bark, 2011; Tinz, 2010). The following

¹⁹ Clarifying note of the author

question is asked: to what extent is the company prospectively able to pass price increases to its customers and therefore secure its revenue? (Wagner, Jonas, Ballwieser, & Tschöpel, 2006; Drukarczyk & Schüler, 2016). In business appraisal, it is assumed that a growth-rate in the amount of inflation is qualified (Seppelfricke, 2012; Institut der Wirtschaftsprüfer, 2014). Dörschell, Franken and Schulte (2012) suggest quoting each present inflation rate of a valued company in perpetuity. In practice, a discount of 1-2% is generally considered (Wagner, Jonas, Ballwieser, & Tschöpel, 2006; Zwirner, 2012; Weimann, 2015). According to Baetge, Niemeyer, Kümmel and Schulz (2015) the discount-growth lies between 0.0 % and 3.25 %. A study carried out by Munkert (2005) shows that the average discount growth rate of 171 company valuations between 1986 – 2003 was 0.69% within a spectrum from 0.0 % to 3.25 %.

In several verdicts the court in München points out that the growth rate is not mandatory 1 % (OLG München, 2012; OLG München, 2008; OLG München, 2008; OLG München, 2014). Even in the last verdicts the rate was set by 1 % (OLG München, 2014; LG München, 2011; OLG München, 2009; OLG München, 2015). In several verdicts The OLG Stuttgart has fixed the growth rate at 1 %. The judges expressly point out that growth rate is not immovable and the individual circumstances of the company have to be taken into account (OLG Stuttgart, 2011; OLG Stuttgart, 2009). The OLG Koblenz (2007) also fixed it at 1 %. Other OLG, such as Karlsruhe (2012), fixed it to 1.5 % and Düsseldorf (2013) to 2 %. They all regard the growth rate as equivalent to the ability of the company to pass on price increases to their customers. The determination of the growth rate remains at the discretion of the appraiser and the judge.

The overall conclusion is that the terminal value represents a major part of the company value (Schacht & Fackler, 2009). Consequently, the evaluator has to assess whether the company faces foreseeable risks and if there are risks, these should be applied in scenarios. If there is no indication of significant threats to the continuity of the company, the terminal value should be applied. The

earnings or cashflow of the last year of the detailed planning phase are regularly used to calculate the terminal value (Schacht & Fackler, 2009; Hachmeister, Ruthardt, & Mager, 2014; Kranebitter, 2012).

One of the main tasks of the evaluator is to identify the permanent and stable earnings or cashflow. The valuer is supposed to take the stable and sustainable value due to his critical review of the business model. This does not necessarily mean the value at the end of the detailed planning phase. Schacht and Fackler (2009) propose taking a mean value of the detailed planning phase. The growth rate should not be taken according to case law and be general. On the contrary, the determination is company specific (Munkert, 2005; Seppelfricke, 2012; Stellbrink, Baetge, & Kirsch, 2005; Wollny, 2010) and a transparent justification of the individual case has to be provided by the valuer. Calculation of different growth rates show the impact on the company valuation and give guidance to a final assessment. A growth rate that is higher than the average inflation rate leads to an above-average growth that cannot be justified. Nevertheless, both PA and GR are appropriate and have to be considered in the valuation process. The evaluator should exercise a sense of proportion. Given the momentary low inflation rate and the individual assessment of the perspective of the company, a growth rate of 1 % seems to be more probable.

In summary, growth effects are difficult to quantify in principle. SMEs are not an exception and it is up to the appraiser to focus on the different influences. Ultimately, it depends on the individual object being valued and therefore a general statement cannot be made. In economic literature there are company-specific bandwidths between 0.5 and 2 % (Schacht & Fackler, 2009; Bark, 2011; Munkert, 2005) A growth discount is also accepted in juristic literature (Wilhelmi, 2015; Emmerich, 2013). Growth discounts in a bandwidth from 0 – 2 % are noted (Jaspers & Posch, 2015; Drukarczyk & Schüler, 2016), whereby most of them are at 1 % (Emmerich, 2013; Veil, 2015; Schüler & Lampenius, 2007). In most verdicts the growth discount is interpreted as pure inflation compensation (Hachmeister, Ruthardt, & Lampenius, 2011).

Recent jurisprudence also considers a growth rate under the inflation rate, as adequate, since it cannot be stated that the corporate profits always equal the inflation (OLG Frankfurt, 2014; OLG Stuttgart, 2014; OLG Frankfurt, 2015). In addition, it is crucial, that the company to be valued is able to shift the price increases sustainably on its buyers (OLG Stuttgart, 2014; OLG Frankfurt, 2014; OLG Frankfurt, 2014; OLG Karlsruhe, 2015). This refers to listed companies as well as to SMEs. Therefore, a general renouncement of the growth discount for SMEs is not legitimate.

A growth discount under the average inflation rate seems to be more appropriate, for the reasons already explained and also for lasting small inflation levels in the mid-term. The results of an empirical study carried out by Stellbrink, Baetge and Kirsch (2005) for the period from 1971 to 2001 show that the average growth rate was 1.4% compared to the inflation rate of 3.2%.

In a further study, Widmann, Schieszl and Jeromin (2003) point out that the returns could not reach the level of the inflation rate during differently examined economic cycles. The average for the period from 1971 to 2001 shows similar results to Stellbrink; at an annual inflation rate of 3.1%, the profits rose by 1.4%.

The population development can also result in sustainable consequences for companies which are active on a mass market, since declining demand reduces the potential for growth compensation (Göke & Heupel, 2013). This should be considered if the markets served expect a decrease in population or population growth.

As the calculated values are average values, the growth discount is dependent on the company. This should be rated when calculating the compensation, i.e. to what extent may the company grow in relation to amount, reinvestment and due to price factors? (see Appendix IX). These growth components have to be analysed one by one and considered, if

necessary (Ihlau, Duschka, & Gödecke, 2013). Which markets the company sells its products or offers its services to should also be considered. The inflation rate can differ such a lot also inside the euro zone (Statista, 2016). Therefore, a careful and comprehensibly justified use of growth discounts is appropriate and opportune when calculating the compensation for withdrawing shareholders of SMEs.

A higher company value would be calculated at the terminal value, if a company's higher risk of insolvency were not considered (Schütte-Biastoch, 2011). The consequences of ignoring risks of insolvency were also pointed out by Modigliani and Miller (1958), Hasler (2013) and Breuer (2008) among others. The accumulated probability of default is the main reason for considering the probability of insolvency in company valuation (see Appendix IX). Allert et al. (2011) recommend considering a probability of insolvency in valuation for companies with a rating by Moody's from Ba.

In addition, authors such as Schütte-Biastoch (2011) consider SMEs to have a higher probability of insolvency than listed companies. She emphasizes that companies with a turnover of up to 50 million Euro show an 8.8 times higher probability of insolvency than companies with a sales volume of over 50 million Euros. Seehausen (2014) and Keller (2015) also consider SMEs to have a higher probability of insolvency.

The probability and frequency of insolvency varies widely between companies and depends on different factors. Young companies (up until 4 years after their founding) have a much higher probability of insolvency than older companies which have been in the market for years (Hasler, 2013). Other reasons for a higher risk are certain industries, the legal form or the size of the company (Seehausen, 2014; Keller M. , 2015; Schütte-Biastoch, 2011).

According to Knabe (2012), incorporated companies show a higher probability of insolvency than private companies. Seehausen (2014) and Gleißner and Knoll (2011) have the same opinion concerning the higher probability of

insolvency of SMEs. Some supporters consider that SMEs have a higher risk of bankruptcy due to their specificity (Knabe, 2012; Gleißner & Ihlau, 2012). Berens (2013) argues that all companies have some probability of bankruptcy but Lobe (2010) rejects this statement as there is no empirical evidence.

There are different suggestions for how to quantify the probability of insolvency; average annual amount of SME's bankruptcy filings or default ratings can be taken as a basis (Frank, 2013; Knabe, 2012; Koziol & Triter, 2014; Gleißner & Ihlau, 2012). Because SMEs are not usually rated externally, the rating is taken from either a credit institution or a so-called 'synthetic simulation-based ratings' (Allert, et al., 2011; Metz, 2007; Gleißner & Knoll, 2011).

Since there is no appropriate procedure to determine probabilities of insolvency (Knabe, 2012; Allert, et al., 2011; Friedrich, 2015), the derivation through credit ratings is suggested as an alternative to display risks of insolvency. These procedures should be viewed critically, as the rating procedures of the credit institutions usually calculate the probability of default for the next year (Achleitner & Everling, 2005). Therefore, the principle of runtime equivalence is broken. In addition, these procedures have insufficient future orientation (Knabe, 2012) as they refer to data from the past (Gleißner & Fuser, 2014).

Nestler (2012) calls this rating-related risk surcharge to display probabilities of insolvency, 'simple heuristics'. This aims to form a theoretical basis to calculate the probability of insolvency. In addition to the criticism of the derivation procedure of the probability of insolvency based on ratings, the reflection of the company insolvencies is more useful. The following table shows the development of company insolvencies in Germany.

Year	Company insolvencies	Change
2009	32930	
2010	32060	-2.6 %
2011	30120	-6.1 %
2012	28720	-4.6 %
2013	26120	-9.1 %
2014	24030	-8.0 %
2015	23230	-3.3 %

Table 16. Development of company insolvencies (Creditreform, 2015, p. 1)

It is significant that after the financial crisis in 2008 the insolvencies declined successively. In 2015 the insolvencies came to a quota of 0.7 % (Statista, 2015). This tendency seems to continue, as in the 1st quarter of 2016 the insolvencies in Germany declined compared to the comparative quarter in 2015, with 4.3 % (Statistisches Bundesamt, 2016).

Although consideration of probabilities of insolvencies should be viewed over a larger period to include different economic cycles, the arguments for a general reduction of the company value for compensation calculation are not convincing. Lobe and Hölzl (2011) studied a database of 50,000 companies worldwide from 1986 – 2008 to determine an average rate of 0.18 % insolvencies. Even though the consequences of the worldwide financial crisis were probably not considered, the actual insolvency rates are small over longer periods. Therefore, insolvency is the exception (Lobe & Hölzl, 2011; Ballwieser, 2011).

Quantification remains difficult especially because of the variations in the past. Gleißner et. al. (2011; 2012) support the consideration of probability of insolvency of SMEs and also states that it is a second best solution to determine probabilities of insolvencies through historical financial ratios (Gleißner, 2010). Different failure rates occur depending upon the observation period (see table 17).

Rating	1920 - 2010	1970 - 2010	1983 - 2010
Aaa	1.698	1.09	0.186
Aa	5.416	2.596	2.754
A	7.139	6.019	6.641
Baa	13.275	12.411	12.72
Ba	31.282	36.867	38.372
B	48.75	62.693	65.936
Caa-C	69.911	78.993	84.472

Table 17. Average cumulative issuer-weighted global default rates (Moody's, 2011, pp. 32-33)

The probability of insolvency rises with increasing debt (Young & Coleman, 2009; Seehausen, 2014; Friedrich, 2015; Gleißner & Wolfrum, 2008) i.e. the equity ratio falls *ceteris paribus* and therefore is positively correlated to the probability of insolvency. The consideration of the equity base of SMEs is therefore appropriate.

A similar development is stated with the equity ratios. The equity ratio of German medium-sized companies has risen successively over the last years. With equity ratio of over 30 %, a solid financing situation can be considered which enables the company to compensate for weaker economic phases. This is relevant as there is no direct risk of insolvency during temporary return deficits (Drukarczyk & Schöler, 2016; Schöler A. , 2003). Provided that liquidity is sufficient, a comfortable equity base can extend the period of earnings weakness and therefore secure survival. In 2013, 46.6 % of the German companies had an equity ratio of over 30% and 58.1 % of the companies had an equity ratio of over 20 % (Creditreform, 2015).

Year	Equity-quota
2008	22.3
2009	23.0
2010	23.7
2011	24.9
2012	25.5
2013	27.0

Table 18. Equity-ratio of German companies (Creditreform, 2015, p. 4)

An analogue development is confirmed by the study of the Deutscher Sparkassen and Giroverband (2016), which confirms a further rise of the equity for 2014. The Kreditanstalt für Wiederaufbau (2015) offers a distinction of the equity development according to size classes of employment, which also confirms this trend (see table 19).

Equity-ratio in percent							
Employees	2008	2009	2010	2011	2012	2013	2014
Less than 10	19.8	20.6	21.6	23.5	18.5	22.8	22.1
10 - 49	23.9	24.8	25.5	26.6	27.9	28.9	29.8
50 and more	29.0	29.4	28.6	28.1	30.4	31.6	33.8

Table 19. Equity-development according to the number of employees (KfW Bankengruppe, 2015, p. 15)

It is not appropriate to generalise about the "clan liability" of SMEs compared to listed companies due to their higher insolvency ratios in the past. This is aggravating by the fact that the quantification of adequate values is difficult.

An analogue transfer of values from the past to the future for all SMEs is inappropriate. In a future-oriented valuation method it is also inappropriate to use probabilities determined from the past for a general transfer in probabilities of insolvencies. As stated by Gil-Lafuente (2001, p. 241), "*...the use of any law of probability in the majority of cases becomes a merely formal exercise with no contact with reality*". A consideration of the expected values is also not useful, as the date of insolvency cannot be predicted and is therefore not determinable (Knabe, 2012).

This corresponds with the predominant opinion of all interviewees and the economic literature (Ihlau, Duschka, & Gödecke, 2013; Hachmeister & Ruthardt, 2014; Ballwieser & Friedrich, 2015). Verdicts in this context could not be found as the probability of insolvency has not been considered in court decisions. In his doctoral thesis, Friedrich (2015) concludes that the probability of insolvency should only be considered when there is clear and substantial indications threatening illiquidity.

Considering the small insolvency ratio of SMEs in Germany and a rising equity development of SMEs in general, the probability of insolvency without specific indication of looming failure does not seem justifiable. Lobe (2010) points out that with insolvency ratios under 2 % the terminal value is empirically justifiable. If economic difficulties of the company can be predicted due to the business model or the financial situation, this should be considered, preferably in the counter²⁰ (Knoll & Tartler, 2011; Knabe, 2012; Ballwieser & Friedrich, 2015). Therefore, the individual case has to be considered to decide if another assumption is to be made for the PA.

In summary, with the above stated arguments must be agreed. An estimate of the timing of insolvency is not possible or appropriate. It would solely rely on the discretion of the evaluator. Furthermore, the rate of bankruptcy in Germany shows that bankruptcy of a company is quite unusual. However, this scenario can certainly be considered if a company is at risk of default or heavily indebted.

Only the PA was controversial among the professional groups. In this context, the consultants reject the PA with only one argument: it leads to unrealistic values and the market is not willing to pay. Furthermore, this statement could not be substantiated by the literature, particularly SME-related studies but also academic literature in general. On the other hand, the arguments to use PA are convincing and represent the current state of research. In addition, valuations that are performed in my business practice use PA, and these companies are sold and usually financed by loans.

4.5.3. DIVERSIFICATION OF THE SME SHAREHOLDER

4.5.3.1. Statements of the interviewees

All the interviewees were in agreement about this issue. They stated that usually the SME-shareholder has bound the majority of his wealth to the company and a non-diversification of the investor should not play a role in the valuation. Their statements are summarized as follows:

²⁰ Of the equation for valuation by using CEM or DCFM

-
- The interests of the company have to be separated from those of the shareholders. The present owner, diversified or not, cannot be the decisive factor for the determination of the value of a company.
 - A valuation under company law, which is objectified, a general (typifications are assumed) view is taken
 - The binding of wealth to a company can bring benefits.
 - The shareholder always has the option to diversify.
 - The SME-shareholder is conscious that he is investing his wealth in a medium-sized company. A concentration of wealth can also lead to a higher return.

Therefore, an individual analysis of the company is necessary whereby the whole risk situation of the enterprise is assessed for the determination of an individual discount rate. A general surcharge on the capitalisation rate or a reduction on the value is rejected by all.

“Whether it is diversified or not does not change the value of the enterprise. This should be separated strictly.” CONS

“And I think that this is common in valuation of companies, that I draw a line there (between company and shareholder)²¹.” CONS

“He has put his whole wealth including the human wealth in this company, he is not diversified.” LEC

“Take the riskless interest rate and then add an individual interest rate.” LEC

“I do not know why the company should have a lower value just because the current investor is not diversified.” AUD

“... the possibility always exists that the investor himself diversifies.” AUD

4.5.3.2. Discussion of Diversification of the SME shareholder

In general, the interviewees assume that the characteristics of SMEs should be considered, but an additional consideration in the calculation of interest should not be made. A separation of company and shareholder level is particularly requested by the consultants and auditors even though the real situation of the

²¹ Clarifying note of the author

SME-shareholder and the non-diversification is confirmed by all professional groups. This view can also be found in literature (Seehausen, 2014; Ihlau, Duschka, & Gödecke, 2013; Knabe, 2012; Nestler, 2012; Allert, et al., 2011).

The lecturers refer to the unsuitability of CAPM for consideration of the real situation. The premises of a diversification are not easy to fit with SMEs (Zieger & Schütte-Biastoch, 2008; Hachmeister & Ruthardt, 2014; Fischer-Winkelmann & Busch, 2009; Kohl T. , 2015; Knackstedt H.-W. , 2013). Therefore, suggestions are made to compensate for these unsystematic risks by adding an additional risk premium (Schütte-Biastoch, 2011; Jonas, 2011; Gleißner, 2013) in order that the overall risks of SMEs are displayed with an appropriate calculation interest rate.

Empirical studies such as Statman (1987) state that investment in some additional assets is enough to reach a significant grade of diversification. This effect is confirmed in general (Damodaran, 2012; Franken & Schulte, 2012; Wiesemann, 2011). Some SME-shareholders own real estate or other participations (Jonas, 2008). Therefore, the grade of diversification of SMEs is not known overall. Nonetheless, the typical SME-shareholder is not diversified in reality (Ihlau, Duschka, & Gödecke, 2013; Nestler, 2012; Knackstedt H.-W. , 2013; Gleißner, 2011; Kohl T. , 2015).

There are no accepted models which are proved theoretically or empirically for considering this non-diversification of the shareholder (Zwirner, 2013; Ihlau, Duschka, & Gödecke, 2013). The non-diversification of the shareholder should be considered within an adequate and appropriate discount rate (Gleißner & Ihlau, 2012; Knabe, 2012). A risk premium is required to consider the specific risks of SMEs in an appropriate way (Zwirner, 2013; Hüttche, 2014). These risks cannot be valued and considered individually (Jonas, 2008; Knackstedt, 2013). General surcharges or discounts for a single risk are rejected in literature (Schütte-Biastoch, 2011; Schulz, 2009; Kohl T. , 2015; Behringer, 2012). Therefore, a holistic approach to the total risk of the SME to be valued is necessary. A holistic risk analysis should be done prior to the

valuation and the calculation of compensation of SMEs and should be seen as a unity (Knackstedt, 2013). This risk and the required capitalization interest rate should especially be considered with compensation regulations of withdrawing shareholders through plausibility with other valuation methods (Olbrich & Frey, 2013). A systematization of the characteristics of SMEs is useful to avoid a double counting of risks (Ihlau, Duschka, & Gödecke, 2013).

In jurisdiction, risk surcharges are rejected for diversification that is not given within the scope of valuation under company law (Hüttche, 2014; Schüler, 2015; OLG Düsseldorf, 2009; OLG München, 2015; OLG Düsseldorf, 2012). This is especially due to the lack of transparency and traceability of quantification. Instead, a calculation interest rate should be estimated on the basis of the actual situation of the company to be valued (OLG München, 2009). This estimation is made according to § 287 section 2 of Civil Process Order (BGH, 1984; Hütteman, 2007; Großfeld, 2012; OLG Düsseldorf, 2015; OLG Frankfurt, 2015; OLG München, 2015). There is no clearly detectable market risk premium and calculation interest rate (OLG Karlsruhe, 2013; OLG Karlsruhe, 2015; OLG Frankfurt, 2016). The Higher Regional Court of Stuttgart (OLG Stuttgart, 2011; OLG Stuttgart, 2012) emphasizes that there should be an independent analysis of the present state of opinions to determine the market risk premium.

Concerning the compensation calculation, these shares fall de facto to the other shareholders and the existing group of partners is diversified differently. Furthermore, it is not known in advance which shareholder will exercise his right to termination. Valuation and compensation calculation takes place for persons in the company-specific group of partners. There is no place for consideration in terms of an additional surcharge to the appropriate calculation interest for the total risk situation of the SME to be valued.

4.5.4. CHARACTERISTICS OF SMES

4.5.4.1. Statements of the interviewees

In this category, the respondents were asked about typical characteristics of SMEs that are supposed to be taken into account of when determining compensation.

Among the consultants, the most frequently mentioned features are:

- The dependency on (a) person(s), particularly in cases where the entrepreneur is both investor and manager
- Dependency on family members or staff who possess the relevant know-how or the contact with customers and suppliers, i.e. the company's success depends on a small number of individuals
- Financing requires the provision of collateral from the entrepreneur and is dependent on banks
- The dependency on customers and suppliers
- The investment backlog

All the consultants agreed that these characteristic features must be taken into account when determining the compensation. Differing views were expressed with regard to the procedure. The vast majority of the respondents wish these special characteristics to be taken into account in the planning and, where appropriate, to be documented in terms of scenarios with occurrence probabilities. The respondents mentioned, for instance, the higher interest expense, that should be taken account of in the planning. One of the consultants regarded this as a feasible alternative, while the second option would be to consider these characteristics in the calculation of the adequate target rate. According to another consultant, the characteristics should be reflected in the interest rate or in the factor in the case of the MM.

“The biggest danger with SMEs is that they are dependent on the owner.”

CONS

“Yes, well, that is dependence on the client, which is very, very often.” CONS

Lecturers, too, identified person-related dependency as one of the major characteristics to be taken into account. However, suppliers and customers, provision of collateral in terms of private assets and thus appropriate conditions of the main bank should also be taken into consideration. This means that the overall risk should be taken into account and, as a consequence, the individual characteristics reflected in scenarios with occurrence probabilities. The lecturers agreed there was no reflection in the adequate target rate. The main rationale behind this unanimous opinion is the transparency and comprehensibility of the valuation. Only one lecturer thought that these characteristics should be reflected in the adequate target rate, but instead, only where a consideration in the numerator is not possible.

“Actually, that concerns all those subjects, like dependence on clients, dependence on suppliers, also innovation power of owners, who strongly function as innovator. Well, the typical personality of entrepreneurs.” LEC

“Well, top 1 would be the characterisation through the owner, a typical company led by the owner. Top 2 is the dependence on often certain clients or just certain products, which is usually also caused through the size. And top 3 would be the limitation of financing.” LEC

According to the auditors the characteristics to be considered are:

- Person-related dependency with regard to both the entrepreneur and the other people working for the company
- Personal relationships with suppliers and customers
- Expertise of owner and staff
- Organizational processes in the company due to flat organizational structure
- Dependency of funding, since it is usually the shareholder who provides assets and collateral

They emphasize that the characteristics subject to modification due to the withdrawal of the shareholder should be considered as a whole. This creates planning scenarios with corresponding occurrence probabilities. The auditors

unanimously agreed that the impacts of the individual characteristics should not be reflected in the adequate target rate, particularly in order to ensure the intersubjective comprehensibility and the transparency of the valuation.

“That SMEs are predominantly characterised by a shareholder and that the withdraw of this shareholder causes a change, which possibly has negative results on the future flow of returns.” AUD

“Often in financial not professional structures in the shareholders and the company.” AUD

4.5.4.2. Discussion of Characteristics of SMEs

There are not only quantitative differences between SMEs and large respectively listed companies. As already mentioned (in section 2.2.), the qualitative factors are the ones, which show the essential differences.

The interviewees mentioned the dependence on individuals, especially the shareholder, as an essential characteristic. Other characteristics mentioned are the dependence on customers, supplier or employees, the insufficient line between private and company assets and a limited transparency of the accounting. These statements are confirmed in dominating literature (Zwirner, 2013; Ihlau & Duschka, 2012; Matschke & Brösel, 2013; Purtscher, 2017; Keller M. , 2015; Helbling, 2015). These characteristics may influence future returns and cashflows.

Therefore, the characteristics of SMEs have to be considered when valuing and calculating the compensation of withdrawing shareholders. The interviewees unanimously agree about this and there is also predominant approval in economic literature (Muschol, 2016; Helbling, 2015; Schütte-Biastoch, 2011; Behringer, 2012; Ihlau, Duschka, & Gödecke, 2013; Keller M. , 2015). In juristic literature, which follows the findings of business management, there is also increasing acknowledgment of opinion leaders in Germany (Fleischer, 2015; Kohl T. , 2015; Münch, 2014; Ballhorn & König, 2015; Schröder S. , 2014; Hüttche, 2014).

The auditor's inclusion of the transferable earning power at dominating occasions of valuation to the ongoing discussion for decades, raised the question of how the characteristics of SMEs should be considered when valuing a company. A strict approach instead of taking characteristics, typecasting assumptions and continuation of the business model as a basis for valuation, also prevented a consideration in jurisdiction. Only the auditor's degree of discretion (see section 4.5.9.2 of the extent to which characteristics are considered, prevented a sustainable implementation of the adequate consideration of characteristics in the valuation and therefore compensation calculation.

In jurisdiction, which mostly follows the expert statements (see section 2.4.5. and 4.3.2.), it is assumed that the consideration is implicitly accepted due to the inclusion in the auditor's handbook (Institut der Wirtschaftsprüfer, 2008; Institut der Wirtschaftsprüfer, 2014; Institut der Wirtschaftsprüfer, 2014). It can be expected that jurisdiction would follow the prevailing opinion of the younger juristic literature.

There are different approaches concerning the question of how these characteristics should be considered. These include suggestions for how to consider these characteristics in general with surcharges to the adequate target rate or with discounts (see section 2.5.2.). Even though some characteristics were named predominantly, for example the dependence on certain customers and suppliers, the dominating suggestion is the consideration of all individually determined characteristics of the company to be valued, (see section 2.2.) in the returns and cashflows. This should be considered after an analysis of the valuation object, an adjustment of the past figures and in the planning of scenarios (see section 4.5.9.2.).

An additional display of the interest through surcharges is rejected. The sustainable earning power and the ability to generate cashflows have to be analysed and determined after the withdrawal of the shareholder. The consequences of ending contacts with customers or suppliers, favourable

interest rates for financing the company through giving private guarantees or salaries of family members which are not in line with the market, have to be appreciated and calculated. This point of view is predominantly favoured in juristic and economic literature (Hachmeister & Ruthardt, 2014; Peemöller V. , 2014; Buck, 2016; Ballhorn & König, 2015; Gleißner, 2015; Schütte-Biastoch, 2011; Fleischer, 2015).

Close examination of the special characteristics of SMEs shows that the measures of value applied in case of stock-listed companies cannot be transferred by analogy. The consideration of the characteristics of SMEs in compensation calculation is consistent with the results of the transferable earning power and discount rate.

4.5.5. DIRECT AND INDIRECT METHOD

4.5.5.1. Statements of the interviewees

All auditors gave identical answers for the assessment of enterprise shares. Only the indirect method is decisively for the compensation calculation, because the sum of all shares must correspond to the total enterprise value. The arguments are, primarily as follows:

- The yields or cashflows should be determined first of all together to build up an assessment which is then split then accordingly on the shares
- Premiums or discounts on the basis of majority or minority shares is arbitrary
- There is no empirical proof which admits premiums or discounts.

“There are not indications in the literature (to use the direct method)²².” AUD
“One must calculate society-juridical assessments, i.e. by compensations the whole enterprise value and then the quota portion. If the portion amounts to 15%, then the value is 15% of the whole enterprise value.” AUD

²² Clarifying note of the author

The M&A advisors agree about the consideration of influence and fungibility, i.e. what can be influenced with this portion and whether market participants are interested in this share. The assessment approach should only carry out an assessment of the whole enterprise and afterwards calculate the quota portion. The present constellation concerning marketability and control rights and on this base a surcharge or at reduction on the share can then be carried out.

“I would use the indirect method, means determination of the enterprise value as a whole and the quota.” CONS

“20% are less worth than 100 % therefore I’ll have to differentiate. No control rights, therefore they are less worth than the quota portion.” CONS

The lecturers are split regarding this question. One already sees a difference concerning the influence on the strategy and with it on the profit situation or cashflows. However, the approach is a total assessment as the suitable quota portion is determined and only then a surcharge or reduction is carried out on account of the influence. One lecturer regards the direct determination relevant when there is a divergent profit distribution, i.e. if the profit distribution does not correspond to the share. Another assumes the shares of SMEs are not so small that a direct assessment is necessary and considers the indirect assessment as proper. In the case of SMEs therefore the majority of lecturers suggest using the indirect method.

“I would always choose the indirect method. If you look at the lawyers, they always refer to the liquidation hypothesis according to Article 738 BGB. We pretend to sell the entire company and then paying the amount. This is the indirect method, to value 100% and then reducing to the quota of 24%.” LEC

“In SMEs the shares are not that small, therefore you can take the quota from the company value.” LEC

4.5.5.2. Discussion of Direct and indirect method

The main argument for using the direct method is that control rights influence the value of a company. Only a few M&A consultants mentioned this. Some authors argue that, depending on the potential influence to make decisions in the company and to generate synergies by acquiring the shares, package surcharges or minority discounts are appropriate (Cheridito & Schneller, 2008; Kranebitter, 2012). The direct method means the income and cashflows modified by the influence of the new shareholder have to be taken into account. There is no reliable method for quantification and therefore it remains a subjective calculation of surcharges or deductions based on the pro rata share value. These methods are not actually usable (Ballwieser & Hachmeister, 2016). This is the main reason why these surcharges and discounts are rejected in dominated value occasions (Wollny, 2010; Matschke & Brösel, 2013; Loßagk, 2014; LG Frankfurt, 2014; Institut der Wirtschaftsprüfer, 2014; Ruthardt F. , 2014).

On the basis of the corporate law principle of equal treatment, different sovereign rights do not justify a value surcharge or discount in a share valuation for indemnity purposes (Großfeld, 2012; Piltz & Wissmann, 1985; Koch A. , 2014). Therefore, the indirect determination of the value of a corporate share is derived from the valuation of the entire company and the multiplication of the percentage of the company shares. Consequently, the overall value of the company equals the sum of the share values (Popp, 2008; Drukarczyk & Ernst, 2010).

A closer look at legal prescriptions in the sense of Article 738 BGB suggests that it is the entire company that is the object valuation and so the share value has to be determined by quota due to the liquidations hypothesis. This view is also supported in the relevant literature (BGH, 1991; Lorz, 2014; Roth, 2014; Ihlau, Duschka, & Gödecke, 2013; Institut der Wirtschaftsprüfer, 2014; Großfeld, 2012) (Hopt, 2010; Schöne, 2012).

An interests balanced valuation, however, does not consider surcharges or deductions for minority or majority stakes. In this case, the direct valuation is not appropriate in as the dominating event has been initiated by the withdrawing shareholder and the remaining shareholders did not harbour any strategic intentions.

This would probably be different in case of the expulsion of one of the shareholders, or in the case of a strategic purchase of minority shares in order to acquire a controlling majority. Moreover, this is taken account of by considering the transferable profitability in terms of the extent to which yields or cashflows can be generated by the remaining shareholders.

Even if the interviewees are split regarding this question, the decision to favour the indirect method comes from the statutory provisions. According to article 738 BGB, first the entire company has to be valued and then the share has to be determined by quota. Therefore, to respect the legal requirements for a determination of indemnity, no other alternatives are possible.

4.5.6. FUNGIBILITY

4.5.6.1. Statements of the interviewees

The consultants assume that there is a difference in the fungibility between large companies and SMEs and this must therefore be considered in valuation. The market is the orientation criterion. The consultants consider fungibility discounts of between 15% and 25% for SMEs. The accountants and lecturers have a contrary opinion about this topic. Fungibility discounts have no relevance in dominating occasions of valuation. This is due to the missing empiricism in Germany, although there might be an acceptance in the USA. The quantification is mentioned as another problematic factor. Large listed companies are not totally fungible either, therefore fungibility that is not given for SMEs cannot be considered per se. General scales are rejected. Fungibility is also not a question in the case of a compensation regulation, since there is a legal buyer.

“Fungibility discounts are not used with objectified company valuations.”

AUD

“Yes, basically it is considered, that the shares of a listed company are fungible, fungible to a certain extent.” CONS

“But I would not just subtract generally 10 %, because it is a SME.” LEC

4.5.6.2. Discussion of Fungibility

The supporters of illiquidity discounts mainly refer to US-American studies. These suggest that there is a correlation between fungibility and company value. These high discounts should be questioned critically, if up to 40% can be derived solely for reasons of fungibility. Also, Bajaj, Denis, Ferris and Sarin (2001) point out that the data determined in the US-American IPO-studies could be distorted, since those companies were random samples, with flotation later. Those companies which intended a flotation but did not realise it until later, were not considered, maybe because of the unexpected valuation.

Damodaran (2005) also criticises the US-American restricted-stock-studies: “These studies of restricted stock have been used by practitioners to justify large marketability discounts but there are reasons to be sceptical. First, these studies are based upon small sample sizes, spread out over long time periods, and the standard errors in the estimates are substantial. Second, most firms do not make restricted stock issues and the firms that do make these issues tend to be smaller, riskier and less healthy than the typical firm. This selection bias may be skewing the observed discount. Third, the investors with whom equity is privately placed may be providing other services to the firm, for which the discount is compensation”.

The restricted-stock-studies confirm the insufficient fungibility of SMEs compared to listed companies but do not show how to derive quantifiable results (Schütte-Biastoch, 2011). Dodel (2009) considers possible effects are smaller in Germany. Most of the authors argue that these studies cannot be transferred to other regions and especially not to German SMEs (Schulz, 2009; Gampenrieder & Behrendt, 2004; Ballwieser & Hachmeister, 2016; Aschauer & Purtscher, 2011).

German studies do not deliver valuable results either (see section 2.5.2.2.). Olbrich (2000) emphasizes that the amount of the fungibility discount is subjective, arbitrary and cannot be understood rationally. Loßagk (2014), Matschke and Brösel (2013), Kuhner and Maltry (2017) and Ballwieser and Hachmeister (2016) make similar statements.

The result is that neither US-American empiricism nor the spare conclusions in Germany show any consensus. Schütte-Biastoch (2011) rejects an illiquidity discount, especially for dominating occasions since no quantifiable factor can be derived. The Institute of Public Auditors in Germany (2014; 2014) also does not consider fungibility discounts, since liquidity is not a relevant influence of values in case of compensation.

In dominating conflict situations and compensations, lawyers (Großfeld, 2012; Lauber, 2013) and jurisdiction predominantly reject a fungibility surcharge (BGH, 1979; BGH, 1986; OLG München, 2007; LG Berlin, 2010; LG Stuttgart, 2011). The Higher Regional Court of Cologne (1999) considers that the majority shareholder is privileged, one-sided and completely without justification. Fleischer (2015) emphasizes that the fungibility surcharge violates the law of complete compensation. The district LG Dortmund (2004) also argues against the consideration of insufficient fungibility and explains that the shareholders of companies not listed primarily pursue sustainable income generation rather than price gains. Against this background, insufficient fungibility has no influence on the value of the shares.

A further legal argument against a fungibility surcharge results from the indirect method of valuing shares. This is relevant for SMEs, according to Article 738 section 1 and 2, Article 734 BGB, Article 105 section 3 HGB and Article 34 GmbHG (see section 2.3.). This method derives the compensation proportionately to the total enterprise value. Therefore, it is referred to the enterprise level and not to the shareholders level, i.e. a fungibility factor cannot be justified against this background (Fleischer, 2013; Kuhner, 2007).

The statements of the interviewees and the results regarding possible discounts calculating the compensation of retiring partners of SMEs is consistent. It is also in line with the result of the calculation of the compensation to the full value (see section 4.6.1.2.). These arguments are irrelevant if a shareholder withdraws from the company. I therefore agree with the majority of interviewees that, in the case of a withdrawal where the shares are fungible, they are transferred to the company and the remaining shareholders. A lengthy search for investors and high transaction costs are neither appropriate nor proportionate in such a case. This applies if the shares are not subject to restrictions on transferability. However, this approach has not been the object of the present study.

Similar to the direct or indirect method, the question of fungibility of shares does not arise in the context of indemnity determination. This is rooted in the fact that the owner is entitled to receive a compensation for their shares that are transferred to the company based on their rights to withdraw at any time. In other words, these shares are always fungible.

4.5.7. SIZE-DEPENDENT ADJUSTMENTS

4.5.7.1. Statements of the interviewees

The lecturer and auditors agree that they reject a size-dependent discount for SMEs. They specify that size is no criterion for risk and therefore no measurement bases can be derived from that. Furthermore, they point out that it is legally problematic, since quantification is difficult and traceability is not given. In addition, empirical evidence, which could justify a size discount, is missing in Germany. Risks should be analysed regardless of the size of the company and the perspective should be considered individually as this is relevant for the valuation of the company. The consultants assume that a size-dependent discount is right, since larger companies are able to obtain a higher price for transactions. Smaller companies have a propensity towards higher risks, which the market takes into consideration. The realised prices are smaller as smaller companies are also judged to have a limited target group for potential buyers.

“Lately this size-premium sounds like a value destroyer. I just have the general problem: Why should a company, just because it is a bit smaller than the one everyone sees, be of less value?” AUD

“Because the buyers do not pay more for the smaller company.” CONS

“I believe that size in general is not inevitable a higher risk.” LEC

4.5.7.2. Discussion of Size-dependent Adjustments

Several studies were also carried out in Germany based on the knowledge gained in the USA through studies which prove a permission of size discounts. Among them are studies by Stehle (1997), Stock (2002) and Wallmeier (2007). These studies could not give a statistical relevance for a size-dependent adjustment and also cannot be theoretically justified (Jonas, 2011; Ballwieser & Hachmeister, 2016). The latest extensive study was carried out by Schulz (2009). It covers the period between 1995 and 2008 and concludes that a size premium and a discount would be more appropriate for a large company than for SMEs. As this cannot be seen as statistically sound, a size-dependent adjustment for Germany is to be rejected (Schulz, 2009).

The studies carried out in the USA are also criticized. Points of criticism are the small sample size and the age of the studies (Mercer & Harms, 2007; Schütte-Biastoch, 2011). In addition, the robustness of the size effects in the USA could not be proven, since this effect had passed temporarily (van Dijk, 2011). Overall further research is needed (van Dijk, 2011).

The consideration of size-dependent adjustments is still a controversial issue in German literature (Schmähling, 2015; Barthel, 2003; Langguth, 2008). Jonas (2008) points out that differences between SMEs and listed companies can be observed and are therefore partially empirically verifiable and theoretically justifiable. However, this is still no general and explicit statements and recommendations for the valuation of SMEs.

In the context of dominating occasions of valuation, general adjustments are predominantly rejected (Große-Frericks, 2015; Schütte-Biastoch, 2011; Hachmeister & Ruthardt, 2014; Metz, 2007). The majority of the institutional investors and financial analysts consider the use of surcharges or discounts as problematic. This was stated in a survey conducted by Beckmann, Meister and Meitner (2003) by 58 % of 203 institutional investors and analysts. Only 13 % said that surcharges and discounts at valuations are not problematic. Seppelfricke (2012) is also very critical. He points out that the premiums, which investors are willing to pay for certain characteristics of the companies, cannot be identified during a valuation with traditional methods.

The Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer, 2014) categorically rejects considering size surcharges for dominating occasions of valuation. This is justified by the empirical validation which is not given with such approaches.

Determining those surcharges by the capitalization interest rate and general discounts of the company value leave no room for considering size-dependent adjustments (Zwirner, 2013; Hachmeister & Ruthardt, 2014). Including size surcharges in the valuation would pave the way for other surcharges or discounts (Baetge, Schulz, & Klönne, 2010). Sieben (1966) already affirmed that surcharges or discounts are always popular, when the intended result is not achieved. Therefore, reasons for a correction are always found and the valuation is totally arbitrary.

There is clear preference given by almost all interviewees to representing individual and company-specific risks and impacts in the numerator, i.e. used as input value, the future cashflow respectively earnings eventually change. As documented in literature, this approach is preferred (Nestler, 2012; Gleißner & Ihlau, 2012; Drukarczyk & Ernst, 2010; Knabe, 2012; Ihlau, Duschka, & Gödecke, 2013; Keller M. , 2015). Therefore, the risk representation of SMEs should focus on the representation in the numerator that is supposed to stand up to objectification and legal examination.

Possible future income and cashflow contributions should be considered during planning in regards to scenario accounts and the probabilities of these. An adequate discounting rate should be considered in regards to the equivalence principle, which adequately takes the risks of SMEs into account. Further surcharges are not required. It becomes clear that the different effects and factors like illiquidity or the size of SMEs cannot be clearly assigned. Further surcharges or discounts would lead to a double counting or a superimposition of SME-specific characteristics, which are inappropriate.

The professional group who favour the size discount are the consultants. Their argument for considering this is that SMEs are different from listed companies and SMEs usually have higher risks than stock companies. In contrast, the auditors and the lecturers reject any general discount or premium. One of the insights of this thesis is that SMEs have specifics and these specifics are individual. Many SMEs exhibit several similarities, but it has to be stated that they are heterogeneous and these characteristics have to be addressed individually in indemnity determination. Based on this outcome, but also from the SME-related literature, the emphasis is on an individual approach to SMEs. From my practical experience, I also know many ‘Mittelstand’ companies that have less risk due to their business model than stock companies and not to mention the so called ‘hidden champions’. Therefore, there is no general SME-effect, outcomes and performance always depend on the individual context of the company. All this has led me to reject general size discount for indemnity determination in this thesis.

4.5.8. ADJUSTMENTS

4.5.8.1. Statements of the interviewees

The interviewees argued that adjustments are required in order to determine the company’s profit situation, the financial position in the long term and to create a reliable basis for company-based planning. The financial statements contain both expenses made and income received that is not associated with the corporate sphere or have not been subject to market conditions. Examples include:

-
- Spouses who are not employed in the company but receive a good salary
 - The shareholder who pays himself a salary of 1€
 - Adequate numbers of managing directors in terms of company size
 - Real estate privately owned by the entrepreneur that has been let to the company
 - Balancing of accounts for tax reasons

Therefore, all expenses and income not associated with the corporate sphere should be adjusted in accordance with market conditions. The non-operating assets must also be adjusted. The evaluator has to analyse the available annual financial statements and carry out an adjustment which must be properly documented in view of transparency and comprehensibility. Exceptions only apply in cases where these conditions are secured by long-term contracts. In such cases, these conditions should be maintained and taken into account in the detailed planning phase.

"Only an adjusted balance sheet serves as a reliable basis. Nothing else makes any sense." CONS

"Is salary of family members appropriate?" CONS

"Appropriate salary for family members, overrent, underrent, the special characteristics of SMEs, particularly in case of partnerships, must be adjusted." LEC

"Recognition of expenses in line with the market, relative to the size, the sector and the particularities of the company." LEC

"Lease for privately owned real estate, over rent, under rent?" AUD

"The expressly fiscally optimized accounting shall be adjusted." AUD

4.5.8.2. Discussion of Adjustments

It is important to consider the past development of the company in order to make reliable forecasts (Schacht & Fackler, 2009). The current situation is the starting point for the achievement of future earnings and cashflows (Zwirner, 2012). Therefore, a detailed analysis is required to determine sustainable value

drivers and factors that have been adjusted independently by special effects (Drukarczyk & Schüler, 2016). Particular attention has to be given in to products, markets, market position, service, competitive situation, strengths and weaknesses, legal relationships and dependencies. To analyse future earnings or cashflows it is important to understand the past value drivers of the company (Schacht & Fackler, 2009).

As the sustainable past earnings or cashflows deriving from the distinct business model of the company must be identified to review the forecasted development of the company. Therefore, after adjustment of special effects and factors, the figures for the generation of sustainable development have to be determined to serve as a basis for transference into the future.

Past figures have to be prepared as, in many cases, the annual financial statements of SMEs are tax-motivated (Zieger & Schütte-Biastoch, 2008; Peemöller V. , 2014; Aschauer & Purtscher, 2011; Busse von Colbe, Crasselt, & Pellens, 2011) due to the intertwining of corporate and private sphere (Keller M. , 2015). In doing so, income and expenses have to be checked with regard to marketability, i.e. tax-induced or private expenditures or revenues have to be segregated. Examples of this include a salary paid to the shareholder or family members that is too high or too low, over- or under rent of leased properties, a high number of company vehicles that proves to be disproportionate in relation to the company size or the number of employees and shareholder loans on conditions not in line with market requirements (Schröder S. , 2014; Ihlau, Duschka, & Gödecke, 2013; Schoberth & Ihlau, 2008; Matschke & Brösel, 2013).

In the case of SMEs, it is vital to be discriminating when adopting historical values from the balance sheet and the profit and loss statement (Schütte-Biastoch, 2011; Karami, 2014). The respective items must be analysed and critically scrutinised for the valuation. The review should be carried out after asking the following questions (Schröder S. , 2014; Voigt, Voigt, Voigt, & Voigt, 2005; Keller M. , 2015; Hackspiel & Fries, 2010):

-
- Does the amount stated reflect the actual situation (balance sheet recognition, expense or earnings item)?
 - Are all balance sheet, expense and earnings items contained in the figures or are there items that have been overvalued or undervalued?

Typical adjustments for SMEs mentioned in the literature are (Helbling, 2006; Muschol, 2016; Keller M. , 2015; Kappenberg, 2012; Aschauer & Purtscher, 2011):

- Depreciation should be analysed as to whether hidden reserves were consciously built up and should be eliminated where appropriate, i.e. use-related depreciation should be taken into account in order to reflect the actual value consumption.
- The employer's salary should be reviewed as to whether the amount stands market comparison. The salary of family members should be equally reviewed with regard to marketability. Moreover, unpaid labour services of family members have to be taken into account in terms of a notional payment.
- Credit terms offered in the corporate sphere only due to the provision of private securities have to be adjusted to marketable credit terms.
- Guarantees provided by the shareholders should be reflected in terms of a guarantee fee.
- Properties not used for operating purposes should be reviewed as to the marketability of the rents.
- Extra income, revenue or expenses that are not sustainably recoverable on the basis of the business model should be reviewed.
- Revenue from assets not required for operations should be eliminated, since the liquidation value of fixed assets required for operations is apportioned to the company value.
- Provisions for future expenses should be examined for their adequacy, in order to avoid a positive as well as a negative effect on the earnings situation.

Consequently, the components personnel expenditure, rents, vehicle costs, and distribution costs have to be verified. The balance sheet items such as unrecognised obligations and risks also have to be adjusted. Therefore, the adjustment of the past figures and thus the creation of a normalised reference value has to be regarded as a necessary foundation for the thorough examination of the existing planning.

In doing so, the valuation object has to be clearly defined (Zwirner, 2012; Aschauer & Purtscher, 2011) since SMEs frequently display an overlap between the private and the company sphere. Parts of the fixed assets required to generate revenues are held in private ownership. In this context it is also worth mentioning particular real estate, licenses, patents and other rights.

This necessity of analysing the past figures of SMEs and to adjust if required is unequivocally acknowledged by all interviewees and in literature (Kranebitter, 2012; Kappenberg, 2012; Schütte-Biastoch, 2011; Kuhner & Maltry, 2017; Purtscher, 2017).

4.5.9. PLANNING

4.5.9.1. Statements of the interviewees

The projection and thus the planning of future income and cashflows is very important in view of the fact that future-oriented valuation methods are preferred for assessing compensation. In this category, the interviewees addressed the questions of who has to carry out the planning, which quality requirements apply and how the planning is supposed to be designed. They also considered who and in what way this planning is supposed to be reviewed and who is responsible for information acquisition, in order to ensure that the parties' interests are taken into account.

The interviewees' statements were homogenous. They all emphasize the importance of planning in future-orientated valuation, i.e. the future earnings or cashflows are the basis. They stress that it is the duty of the valuer to check the plausibility of the planning, which should be neutral and comprehensible.

Existing conditions should be taken into account but also questioned. The company and not the outgoing owner has to provide a business plan and a professional valuer should look at the planning critically. The characteristics of SMEs should be taken into consideration and transferable earning needs to be identified. The valuer has to have sufficient experience to build up different planning scenarios.

“Especially the task of the neutral expert to intervene revisingly if necessary or even to carry out a planning on his own in case of doubt.” AUD

“Usually a neutral auditor, a neutral M&A-consultant, in case of doubt he has no conflicts of interest. And if he has, then he must not do the job.” CONS

“We have to consider the concrete planning of this concrete company and all the conditions.” LEC

4.5.9.2. Discussion of Planning

The initial basis for an application of total valuation methods is a projection. All of these approaches discount future earnings or cashflows to the present date. The value of a company depends entirely on the future development and all interviewees stress the importance of reasonable, reliable and qualitative sound financial forecasts.

However, future development is uncertain and a precise prediction is impossible. The further into the future, the more unreliable the estimates. The interviewees suggest dividing the forecast period into two phases: a detailed forecasting period that covers between 3 and 5 years and a continuing period afterwards. The detailed period is based on an integrating planning model that consists of income statement, balance sheet and cash-flow budget (Drukarczyk & Ernst, 2010; Kranebitter, 2012; Purtscher, 2017).

The period for the terminal value should consider the long-term expectations of maintainable returns for an infinite period (Ihlau, Duschka, & Gödecke, 2013; Matschke & Brösel, 2013). The determination of this amount will be critical due to the high value portion of the perpetuity. Hachmeister, Ruthard

and Mager (2014) analysed 70 valuation reports. This analysis included the procedure for determining the PA. The average value of all valuations includes about 80% of the total present value (ibid).

A study by Bassemir, Gebhardt and Leyh (2012) on publicly accessible valuation reports in cases of structuring measures under corporate law determines, inter alia, the duration of the detailed planning phase. The study was based on a random sample of 65 valuation reports. It found that in 83% of the cases, the detailed planning phase only took 3 to 5 years. The detailed planning phase stretched over a period of 10 years or more in only 17% of the cases. The period of the detailed planning phase should be according to the suggestions of the interviewees but also the prevailing opinion in literature (Drukarczyk & Schöler, 2016; Kuhner & Maltry, 2017; Loßagk, 2014; Keller M. , 2015). This is 5 years.

Planning and forecast statements are usually generated by extrapolating past figures into the future (Kuhner & Maltry, 2017; Schütte-Biastoch, 2011). Future conditions and business environment, however, may change if the performance of the company progresses or deteriorates. The projections have to be developed under conditions that match reality as closely as possible to be a reliable measure of expected development of the company (Matschke & Brösel, 2013).

This means that for estimating the cashflows for future periods, the current annual statements have to represent the actual status of the business situation. Possible adjustments may be necessary for the past figures to identify the sustainable earnings or cashflows (see section 4.5.8.2.). Historical and, if necessary, adjusted figures should be used as a starting point when predicting future maintainable earnings (Drukarczyk & Schöler, 2016).

The question of who has to provide a business plan has to be answered irrespective of the retirement of a shareholder. The interviewees emphasised that the management and in case of retirement, the remaining management, is responsible for the projections. This view is supported by literature (Zwirner &

Zimny, 2015; Ruthardt & Hachmeister, 2013; Schmeisser, Görlitz, Spree, Clausen, & Schindler, 2008; Drukarczyk & Ernst, 2010; Koelen, 2009). Even if some interest conflicts arise in the case of retirement (see section 4.6.2.2.), estimates of future development could be knowingly biased.

It is also necessary to ask for what purpose the plan was created, which people were involved in the planning or in the planning process and whether the planning was created exclusively for the valuation or perhaps created in the course of a standardized annual planning process. Several interviewees suggested including a revolving planning process for severance agreements, which is convenient for the strategical and operational needs of the company and can be used as a basis for possible exit scenarios. Many authors (Matschke & Brösel, 2013; Schacht & Fackler, 2009; Bieg, Kußmaul, & Waschbusch, 2009; Becker, Ulrich, & Bozkowski, 2015) confirm the value of a rolling planning process that can avoid influencing figures for exit purposes.

It is well known that managing directors or partner are usually quite enthusiastic when forecasting business (Kralicek, Böhmendorfer, & Kralicek, 2008; Langguth, 2008). Evaluators are also not immune to optimism. In a study regarding legally induced company valuation carried out by Schrenker (2011), the budget figures assumed by the evaluator were mainly more positive than the real figures. Thus, the evaluator has to be critical in evaluation of the projected figures to avoid over-optimism.

If budget figures from the past are available, the reliability and quality of the planning process can be estimated by a variance and deviation analysis (Aschauer & Purtscher, 2011; Karami, 2014; Ihlau & Duschka, 2013). Action must be taken by a neutral third party to resolve these insufficiencies in the case of planning deficiencies, for whatever reason (Schacht & Fackler, 2009; Schütte-Biastoch, 2011; Kranebitter, 2012; Dietrich & Dierkes, 2015; Purtscher, 2017). Overall, the correct and critical use of management-prepared figures is an important issue for any valuation.

There are no clear guidelines for how to ensure the rationality and reliability of projections. Factors like comparability to the sustainable historical results, consistency of the assumption made, based on the companies' prospects and the development of the market and expectations of the industry are commonly mentioned (Zwirner, 2012; Schrenker, 2011; Aschauer & Purtscher, 2011).

In the field of business planning in particular, SMEs may not show the necessary quality. They usually have insufficient planning skills. They either lack planning completely or it is incomplete or has corresponding deficiencies (Exler, 2013; Schoberth & Ihlau, 2008; Hackspiel & Fries, 2010; Nickert & Kühne, 2014), even though an improvement can be noted (see section 4.2.5.3.). Given the importance and the impact on the enterprise value, it may therefore be up to an expert, to create the necessary quality of business appraisal or to provide assistance in the planning process (Hackspiel & Fries, 2010; Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013). The key assumptions and their derivation must be documented and explicitly pointed out. Moreover, the business planning provided is based on recent and individual development of the company and may be influenced by the individual specifics of the company. To identify future income or cashflows that can be maintained it may be necessary to assess and adjust if necessary in analogy to the past figures (see section 4.5.8.2.).

The assessment of these factors is subjective and so it vitally important in dominated valuation occasions to commission an evaluator who does not have any business or personal relationships with the company to be valued and is not conflicted (Kranebitter, 2012; Tinz, 2010; Karami, 2014). The neutral third valuator needs to have sufficient experience in analysing business models, because s/he has a special responsibility for the details of the planning assumptions, based on a holistic understanding of the company's value driver and specifics (Zwirner, 2013; Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013). The expert charged in a dominated valuation occasion should be neutral (Kranebitter, 2012; Tinz, 2010; Karami, 2014).

In order to verify the target figures, the evaluator should be diligent with regard to the management's business planning. To assess the stability and quality of earnings it is essential to develop a basic understanding of the business model and the company's position in the market by means of analysis and research of the relevant markets and sectors (Zwirner & Zimny, 2015; Schütte-Biastoch, 2011; Schacht & Fackler, 2009).

A holistic understanding of the entire company including management quality, cyclicity of the industry, investment requirements, opportunities and risks is needed as a basis for reviewing the existing planning (Drukarczyk & Ernst, 2010; Kranebitter, 2012; Ihlau, Duschka, & Gödecke, 2013; Purtscher, 2017). Therefore, in the context of the substantive examination of corporate planning, the neutral third party should address the following elements in particular (Schacht & Fackler, 2009; Loßagk, 2014; Kuhner & Maltry, 2017; Schütte-Biastoch, 2011):

- Evaluation of the planning assumptions and testing of their conclusiveness and consistency
- Identification of value drivers, which ensure sustainable revenue and profit generation
- Plausibility and analysis of arguments and the evidence supporting the assumptions made
- Plausibility of the assumptions and test the resulting consequences, i.e. are these accounted adequately in budget figures?

If a shareholder withdraws, specific attention should be paid to the positions he held and the areas entrusted to him. The implications of the withdrawal have to be considered (see section 4.5.10.2.). For instance, personnel costs have to be adjusted if additional employees have to be recruited. Moreover, the executive staff vacancy requires an adjustment of personnel costs in the planning. Financing costs also have to be reviewed, provided that the conditions granted depend on private collateral such as, a securities deposit, unencumbered property or a guarantee by the outgoing owner of his wealthy

relatives. The consideration of the sustainable financing structure and outside capital from alternative sources has to be raised if shareholder loans have to be repaid.

Corporate success of SMEs frequently depends of a particular person (see section 2.2.). Consequently, the influence of this person has to be taken into account for the valuation, particularly in the event of his or her withdrawal. This is an aspect on which the interviewees and the IDW (Institut der Wirtschaftsprüfer, 2014) agree. Relevant literature also supports this view (Lutz, 2015; Franken & Koelen, 2015; Buck, 2016; Wegmann & Wiesenbahn, 2015; Keller M. , 2015; Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013). Accordingly, a detailed analysis of this person’s influence and the quantification by the evaluator is required.

The interviewees agreed unanimously that this influence has to be mapped in the scenarios. Relevant experience and qualification of the appraiser is necessary (see 4.5.9.2.). In this respect, Moxter (1983, p. 116) points out that: *“The less able an evaluator is, the keener he will be to issue monovalent profit forecasts: He will not confine himself to indicate a range of possible future profit forecasts; not unlike fortune tellers, he will rather feign knowledge about the future and thus arrive at monovalent profit forecasts.”*

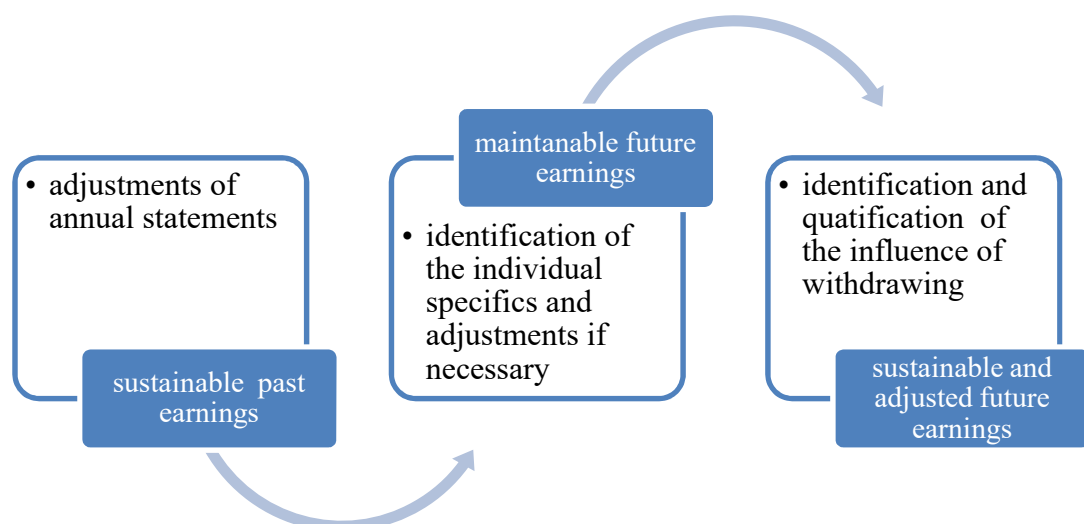


Figure 40. Determination of future sustainable earnings

It is therefore appropriate to develop a number of scenarios on the basis of corporate planning, such as a worst case, normal case and best case scenario. This procedure is revealing many interrelated factors are taken into account (Ihlau, Duschka, & Gödecke, 2013; Große-Frericks, 2015; Kuhner & Maltry, 2017; Drukarczyk & Schüler, 2016). Possible fluctuations in the individual earning and expense items as well as in the overall account can be taken into account.

By depicting two or three scenarios, the evaluator normally receives an overview of the discrepancies with regard to the company value. These scenarios can be weighted in terms of the probability of occurrence and the existing risks, so that the evaluator is in the position to develop a most likely scenario for the purposes of the company valuation (see figure 41).

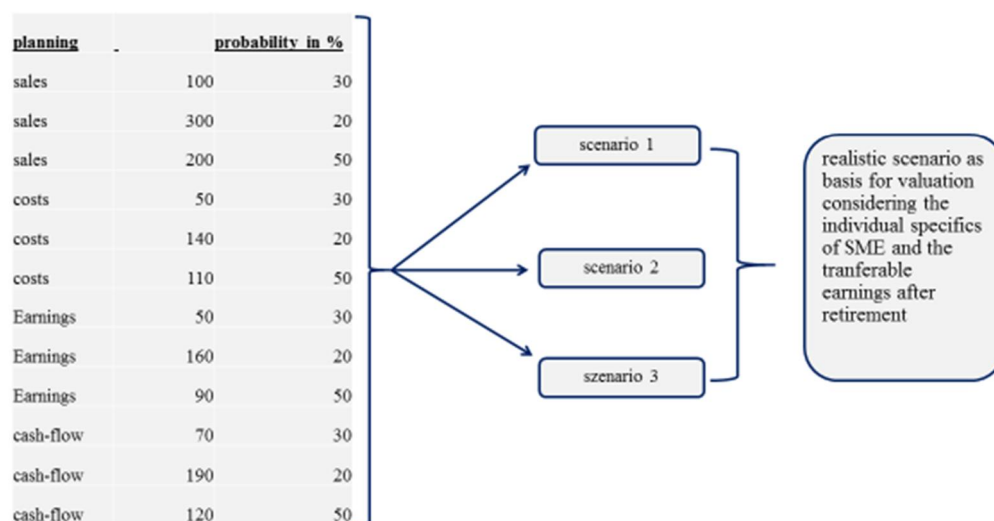


Figure 41. Scenario analysis

The interviewees confirmed that the bandwidth of variations and scenarios makes it transparent, even though it is about the determination of a monovalent severance value for the exiting shareholder as well as the company. This increased transparency is an approach to the exiting shareholder who might have an information disadvantage, as described (see section 2.3.2.). Neither the future results nor the company value will hit a

point value, due to the future uncertainty. However, as stressed by many authors such as Aschauer and Purtscher (2011), Steinbach (2015), Jonas (2009) or Schmeisser et. al. (2008), this insecurity can be reduced by using scenarios.

The common view in business management is shared by case law. Due to future-oriented elements, planning can only be reviewed as to whether it is reasonable. It is not possible to validate the accuracy of the planning, therefore the information and the underlying assumptions are only to be checked for plausibility, consistency and closeness to reality (OLG Karlsruhe, 2016; OLG Stuttgart, 2013; OLG Düsseldorf, 2015). Target figures have to be adjusted if they are contradictory or implausible (OLG Frankfurt, 2012; OLG Stuttgart, 2013; OLG München, 2012), or even replaced (OLG Düsseldorf, 2014). This anticipated development has to be taken into account in the planning (OLG Düsseldorf, 2014; OLG Stuttgart, 2013). A number of judgments explicitly refers to the derivation of the earnings base from scenarios (OLG Düsseldorf, 2013; OLG München, 2015). A valuation on the basis of the best-case-scenario has been declined (OLG München, 2014) and, normally, the court adopts the adjustments made by the expert (OLG Stuttgart, 2013) but only if the assumptions are implausible or inconsistent (LG München, 2015; OLG Karlsruhe, 2015; BVerfG, 2012).

4.5.10. TRANSFERABLE PROFITABILITY

4.5.10.1. Statements of the interviewees

Another point crystallized from the interviews was transferable profitability. Earning power is used synonymously for cashflow. This remains in the company after having transferred the shares to the remaining shareholder. If, for example, an important person retires who had suitable contacts, then the assessment can occur only on the basis of the transferred results. Hence, if a partner is eliminated you have to ask to what extent the enterprise has to expect a change in profit strength: What portion did the outgoing partner have in the success or cashflow?

This question provoked controversy in the past. The IDW still assumes some typifications when valuing a company, such as the enterprise “as is”, viz without any change in the business model. In this respect, this paradigm change with the accountants was new knowledge within the scope of the interviews. The lecturer and the M&A adviser had no doubt that the future situation of the enterprise and their future earning or cashflow base after retirement is significant for the valuation and especially for the calculation of the indemnity.

“It belongs to every assessment to think to itself from the start which changes arise after transmission. This clear sense of rigour is new with the IDW.” AUD
“The future payment stream is to be considered by the assessment which is still available after my retirement.” LEC

“The compensation must be gained from the future yields. The expected future profit strength of the enterprise is relevant for the assessment / compensation.”
CONS

The interviewees unanimously agreed that the principle of transferable profitability has to be applied rigorously. This broad agreement is reflected by the following statements:

“The future payment stream which is still available after my retirement is to be considered in the assessment. Especially with SMEs one must look at the acting people.” LEC

“If the driving actor retires, the enterprise is possibly worth nothing at all.”
CONS

“Then there is this saying ‘for the past the businessman gives nothing’. It seems almost mad, that a compensation is determined on the basis of the last three actual (year) results.” AUD

How this principle has to be effectuated by the evaluator was stated homogenously. The assessor has to look at the business model and the planning of the enterprise in more detail. On the basis of this analysis, he has

to develop different scenarios which serve as a basis of evaluation for the future profit, according to the occurrence probability. The advisor must also question the planning premises critically.

"Of course, one must estimate then, how much is transferable now, how much not? But one can illustrate this just, indeed, in scenarios or in such simulations." LEC

"The compensation must be gained from the future yields. The future profit strength of the enterprise to be expected is relevant for the compensation. This is a difficult subject, however, is to be depicted in scenarios and models."

CONS

"The profit strength would have to be illustrated in scenarios in the nominator." AUD

4.5.10.2. Discussion of Transferable profitability

The theme of transferable earning power emerged in all interviews of all professions. Some of the interviewed auditors remembered the internal discussions and implementations in the auditor's handbook (Institut der Wirtschaftsprüfer, 2014). In other professions the transferable earning power is synonymous with the consideration of individual characteristics of the SMEs, which should be valued. This became evident, especially when justifying which shareholder or person is responsible for generating sales in the company, i.e. which returns and therefore cashflows can sustainably be generated after the withdrawal.

The consideration of the transferable earning power for future-oriented company valuation was already recommended in literature before the implementation in the auditor's handbook (Institut der Wirtschaftsprüfer, 2014) and also therefore for dominating occasions of valuation (Ihlau, Duschka, & Gödecke, 2013; Schütte-Biastoch, 2011; Kranebitter, 2012; Matschke & Brösel, 2013; Wassermann, 2011). The central aspect of the practical directions published in 2014 by the expert committee for company valuation and business management of the IDW, was 'transferable earning

power' (Institut der Wirtschaftsprüfer, 2014), even though the consideration of characteristics and the transferable earning power is the personal responsibility of the valuer (Institut der Wirtschaftsprüfer, 2014). These practical directions were also published by the Federal Tax Chamber (Bundessteuerkammer, 2014).

In the meantime, the consideration of the transferable earning power was pushed through, despite the optional formulation of the auditors in literature for valuation of SMEs. This opens up the possibility that future returns can serve as a basis even of tax-induced valuations of SMEs. The SCEM based on past figures, assumes a completely transferable earning power (see section 4.2.4.2.).

In freelance partnerships, for example auditors, tax consultants or lawyers, the personalities are the reason for success and have therefore been accepted in jurisdiction for the transferable earning power for years (Schäfer, 2013; Hülsmann, 2001; Westermann, 2007; OLG Saarbrücken, 2010; Koch J. , 2015). The remaining earning power is relevant for the valuation and compensation calculation.

In newer economic literature (Lutz, 2015; Franken & Koelen, 2015; Buck, 2016; Wegmann & Wiesenhahn, 2015; Keller M. , 2015) and juristic literature (Kohl T. , 2015; Eisele, 2016; Uecker, 2015), there is agreement that in dominating occasions outside of freelance partnerships only the sustainable earning power, which can be generated through the remaining shareholder, can be the basis for a valuation. König and Möller (2014) emphasize that the returns, which are connected to the withdrawing person, should be deducted for a compensation calculation. The Higher Regional Court of Düsseldorf (2015) underlines the opinion of the court that the value of the investment depends significantly on the individual performance of the shareholder. This should therefore be considered for the compensation. Siede (2015) also emphasizes in the case of a pharmacy that the not transferable parts should be deducted from the compensation value. Pummerer (2015) points out explicitly

that a forward projection of past conditions is only useful if they are also characteristic in future periods, i.e. if worth-related factors are not available anymore or are limited in time, then this should be considered in the detailed planning phase or in the forward projection phase through melt off scenarios (see section 4.5.9.2.).

During the time I worked on this thesis, opinion solidified in the literature that the transferable earning power should be considered for the valuation of SMEs. This confirms that type-casted assumptions are not justified. An individual consideration of the valuation object is necessary. This finding has consequences for all existing characteristics of the company, which should be rated. The task of the valuer is to appreciate these characteristics accordingly and to adjust the past figures and the planning figures if necessary in order to find a basis for the compensation calculation and the sustainable flow of payments (earnings or cashflow) after the withdrawal of the shareholder.

Taking the transferable earning power as a basis for compensation calculation is the logical consequence of the individual consideration of characteristics of SMEs and is therefore an analogy to the results in section 4.5.4.2. and 5.3.

4.6. INDEMNITY RELATED THEMES

4.6.1. FULL VALUE

4.6.1.1. Statements of the interviewees

All interviewees agreed that the departing partners should receive their share of the full value if no different regulation in the article of association was implemented. However, they had varying ideas regarding the methods to determine the full value.

The interpretation of full value was defined by the consultants as the market value, viz. what a third party pay for the shares. It is preferable to determine the market value by the MM (section 2.4.4.). The auditors and the lecturers emphasize that the calculation is to be carried out by a traditional assessment method, for example, with a CEM or DCF method. They also state that

deviations from the statutory provisions are possible in the article of association, as long as this agreement does not disadvantage the outgoing shareholder. The claim of the departing partner must not be undermined. The financial feasibility was also most mentioned regarding compensation determination of SME shareholders.

“The market value or true value is the amount which is paid by someone in the market. This is also the base for a compensation.” CONS

"The compensation should be paid accordingly to the full value, to the market value using the MM." CONS

“The value is to be determined by the already mentioned methods and the specific approach implemented with this method, with all advantages and disadvantages and the final check is the financiability.” LEC

"My basic understanding is that it is the value one has to agree on and find suitable methods of finance to implement it." LEC

“As a rule, the market value is determined with the CEM.” AUD

“In other words, for a compensation regulation deviation from market value is tolerable as far as it is not immoral.” AUD

4.6.1.2. Discussion of Full Value

The interviewees from all professions agreed about this question. If no other regulation was fixed in the partnership agreement, their share of the full value belongs to the withdrawing shareholder, even if the interviewees have a different view on the valuation method to determine the full value (see section 4.2.) This mainly corresponds to the dominating opinion in literature.

The business (Knackstedt H.-W. , 2013; Koch A. , 2014; Matschke & Brösel, 2013; Jula & Silmann, 2014) and also the juristic literature (Hüttemann, 2015; Schäfer, 2013; Heidel & Hanke, 2012) point out the present legal regulation. It emphasizes that the withdrawing shareholder has the right to the most favourable use of the company assets during valuation (BGH, 1967). Furthermore, the proprietary interests of the withdrawing person should be granted (Hüttemann, 2013; Kilian, 2014).

Jurisdiction confirms this point of view without exceptions (OLG Köln, 1997; BGH, 1991; BGH, 2014; OLG Frankfurt, 2011). This digital point of view is comprehensible as another regulation can be arranged due to the existing private autonomy. If the shareholders want a different regulation, this can be arranged in the partnership agreement. There is either a compensation regulation in the partnership agreement or the legal regulations are applicable. This means that the full or the true value of the share belongs to the withdrawing shareholder. In the case of an inappropriate compensation regulation, see section 2.3.6.

Against this background, all the interviewees recommend implementing a compensation regulation in the partnership agreement. Furthermore, existing regulations are prone to be unethical, because the compensation to be determined is based on book values or the Stuttgart Method (Ballwieser & Hachmeister, 2016; Schütte-Biastoch, 2011; Fellner, 2017; Pummerer, 2017). This can disadvantage the withdrawing partner in the case of retirement. This is unfair in regard to the interests and wishes of the shareholders as they hold a risk for both and should be changed. The necessity to check existing contracts is confirmed in literature by the concerns expressed about improper regulations (Behringer, 2012; Arens & Tepper, 2013; Lorenz, 2015).

The interests of the company and the attenuation of the liquidity burden have a great importance according to the interviewees (see section 4.6.2.). If the shareholders also emphasize the long-term existence of the company, this has to be included in the partnership agreement through a compensation regulation, which differs from the legal regulation. The will of the shareholders and therefore the private autonomic implementation are of great importance.

However, there is some danger that the will of the shareholders, for example long-term livelihood, is not achieved. The difficulty to address this theme was pointed out by a group of partners.

Overall it is opportune that each partnership agreement includes a compensation regulation to minimize the risks when a shareholder withdraws. This provides security and a predefined procedure for everyone involved. If there is no regulation, then the full value belongs to the withdrawing shareholder.

The statements of the interviewees concerning the true value are consistent with the statements about the discussed discounts like fungibility or size discount. The company value and therefore the amount of compensation would not correspond to the full value when considering these discounts.

Even if full or true value is favoured by the partner, the one true or real value for the company to be valued does not exist. Due to the given discretionary powers granted to the evaluator, an exact determination of the amount payable for compensation is hardly possible (Karami, 2014). Therefore, an appropriate compensation amount has to be determined within a certain bandwidth that meets the interests of the parties involved and complies with the legal framework. Due to the aforementioned circumstances, a value within a range is accepted by case law (OLG Stuttgart, 2003; OLG München, 2006; OLG Stuttgart, 2014; OLG Karlsruhe, 2013; LG Frankfurt, 2014; OLG München, 2015; OLG Karlsruhe, 2012) and in business administration (Zwirner, 2012; Meinert, 2011; Hasler, 2013; Schacht & Fackler, 2009; Matschke & Brösel, 2014; Drukarczyk & Schüler, 2016). The bandwidth of possible values also results from the future development that is subject to uncertainty (LG München, 2002; OLG Stuttgart, 2011, BVerfG, 2012) as well as from the scientifically incorrect review of market values. It is therefore only an estimate (OLG Düsseldorf, 2013; OLG Frankfurt, 2015; OLG München, 2015). Barthel (2010) argues that the evaluator should explain the existing bandwidths to the addressees in order not to feign an accurate result.

4.6.2. INTERESTS OF THE PARTIES

4.6.2.1. Statements of the interviewees

This category lists the interests of the parties involved. One of the basic intentions was to explore the question of which interests have to be taken into account for the compensation calculation and, above all, which interests are supposed to be weighted higher, where appropriate.

The interest situation diverges between the remaining shareholder and the outgoing partner, even if unity about the enterprise continuation exists. The determination of the full value, the income or cashflow, interest rate and the terms of the indemnity payments are conflictual. Given that, one of the questions of the interviews was how the interviewees assess the different interest situations and what insights and regulations can be derived from.

All groups of interviewees attach a stronger importance to enterprise continuation. They stress that the compensation regulations which do not contain a full value or suitable methods of payment are desirable to make sure that the enterprise is not endangered on account of the compensation payment. However, the compensation regulation should be plausibly formed and the regulation verifiable for all parties. It is clear that a compensation regulation which deviates from the legal compensation to the full value is the most sensible. Implicitly simplified regulations are not recommended because these regulations tend to lead to lower values.

Planning for the assessment should be provided by the management which is to be accepted by the outgoing partner. However, the planning must still be plausible and realistic. An examination by a neutral third evaluator is recommended. This is preferably someone experienced who considers all the interests of the parties and has no relation to the company or to any shareholder. The compensation regulation should move within a range which ensures the continuation of the enterprise and also satisfies the departing partner, in order to avoid a legal dispute.

“The protection of the enterprise plays a greater role than the compensation, hence, one has agreed more on book value clauses than in the past. A regulation should be formed in such a way that it provides you no advantages upon departing.”

LEC

“The different interests and perspectives can be considered only by a neutral third.” LEC

“It must be excluded that the outgoing partner is better compensated, than the remaining shareholder. Here the continuation and the protection of the enterprise have priority.” CONS

“A reserved compensation level should occur through the application of an experienced assessor, because he can consider the individual specifics at the time of the compensation.” CONS

“Regarding the different interests of the parties in case of retiring, it is important that the transparency of the compensation level and the future development of the company have been taken into account.” AUD

“The survivability of a SME must be guaranteed best of all.” AUD

4.6.2.2. Discussion of Interests of the Parties

The interests of the withdrawing partner are generally in conflict with the interests of the company and the remaining shareholders (Matschke & Brösel, 2013; Schütte-Biastoch, 2011). The withdrawing shareholder wants to receive the full value of his share if possible and the company and the remaining shareholders want a moderate regulation concerning the compensation amount and the payment modalities. In practice, compensation regulations are usually made against this background (Koch A. , 2014). The interviewees’ opinions of whose interests should be favoured, is discussed below.

The interviewees’ priority is the continuation of the company and its opportunities. This is like a golden thread in their argument and the proposed regulations to be included in a partnership agreement. This goes from an amount which is financeable, i.e. an amount, which is smaller and deviates from the true value, to the instalment of the compensation. Avoiding possible judicial disputes also refers to the possible burdens of management capacities

and the uncertainty court case results and therefore the limitation of the operative successes of the company. It is especially important that a neutral expert is hired who has the know-how and the experience and who is able to carry out a transparent and reliable valuation.

Securing the future existence of the company and therefore especially the stakeholder's source of income is logical. The most important stakeholders are the employees, their families, the suppliers, the customers and, last but not least, the remaining shareholders. These shareholders take a business risk to get a sustainable earnings base at founding and at take-over of the shares. The existing interdependencies in the German economy also reflect the importance of the employment situation, consummation, investment behaviour and financial stability of companies.

The interest of the livelihood results from the economic importance (see section 4.6.6.2.) and also from the basic principles of the company law. It is based on the personal relationships of trust of the shareholders and on the common realisation of long-term goals (Stürner, 2014; Wangler, 2001). Therefore, the membership of the partnership includes certain fiduciary duties, which obligate to a special consideration of the interests of the company (BGH, 1985; Hohloch, 2014; Stürner, 2014). This means that the individual interests are subordinated to the interests of the company, if this does not disadvantage the individual.

The economic and juristic literature agrees on this almost unanimously (Jula & Sillmann, 2016; Wangler & Dierkes, 2006; Drygala, Staake, & Szalai, 2012; Koch A. , 2014; Matschke & Brösel, 2013; Hofmann, 2011) (Arens & Tepper, 2013; Hannes, Kuhn, & Brückmann, 2007). The interests of the company are legally recognized regarding the general anchoring in company law. This result is reflected in the discussion of compensation regulation and in financing capability (see section 4.6.4. and 4.6.8.2.).

4.6.3. ARTICLES OF ASSOCIATION

4.6.3.1. Statement of the interviewees

The following answers were given regarding the question of which assessment methods are included for the compensation regulations in the articles of association. The book value procedure is found in very old partnership agreements. The Stuttgart method is found in old but still existing agreements. In the meantime, the SCEM and the CEM can be found in newer partnership agreements. The MM can be found occasionally. In addition, there is some indication that shareholders would not like to appeal to this subject in order to avoid provoking a discussion in the group of partners, even if the contained regulation in the agreement is invalid or vulnerable to litigation.

“Book value clauses in old contracts.” LEC

“Very often the Stuttgart method.” LEC

“One finds the SCEM in newer social contracts.” CONS

“MM are also sometimes to be found.” AUD

4.6.3.2. Discussion of Articles of association

With all professional groups there are indications that existing regulations are insufficient, outdated or non-existent. This view can be extracted from the reviewed literature (Wangler & Dierkes, 2006; Piehler & Schulte, 2014; Kuhner & Maltry, 2017; Kirchdörfer & Lorz, 2012; LG Freiburg, 2014). The question arises as to why such economically important and successful companies do not find a remedy and implement a regulation.

Most founders of small and medium sized companies do not have the professional know-how to anticipate future potential conflicts and their potentially negative consequences. They also have not typically acquired the practical knowledge over a long period of time (Kranebitter, 2012), whereby these consequences could be neutralized (Felden & Hack, 2014). Furthermore, the shareholders usually do not have financial resources at the time the company is founded to obtain the necessary professional assistance of consultants (Hering & Vincenti, 2005).

Other reasons why such a regulation is not implemented are based on the idea that founders have an unrealistic optimism regarding the long-term prospects of the common business, but also regarding the willingness of all parties and the opportunistic behaviour of contractual parties in the course of legal relationships. The current situation is strengthened at the time of formation as well as in the long-term to settle potential future conflicts through the future oriented corporate purpose (Schmolke, 2014). This well-known phenomenon is derived from the known interaction of overconfidence, above average effect and self-serving bias (Haag & Roßmann, 2015).

Even with objective information on the basis of a selection of location information, this leads to a strengthening of the optimistic assumptions in the so-called confirmatory bias (Walter, 2008). Since this does not correspond to reality, the shareholders' agreements would have to be taken to prevent opportunistic behaviour of the parties (Cziupka, 2010) or to facilitate the resolution of a conflict (Wiedemann, 2013).

It is understandable that there are insufficient arrangements in the existing partnership agreement and these need to be adjusted and optimised. However, even if at foundation of the company the financial resources were limited, this could have been carried out later. This situation shows that it is still necessary to modify the existing regulations.

4.6.4. FINANCIAL FEASIBILITY AND LIQUIDITY DISCOUNTS

4.6.4.1. Statements of the interviewees

The finaciability of the compensation was one of the main arguments to safeguard the existence of the enterprise, even though the compensation should be adequate for the departing partner. No difference was made between financing by a bank, i.e. by classic borrowing or financing by the retiring partner. This point can be summarized for all groups and interviewees. The interest's priority is set in company continuation and in particular its liquidity consideration. This view also affects the payment regulations. Apart from a

company valuation, a classical cashflow planning is necessary (even with the CEM), which considers the financing or payment of the compensation.

“The financing perspective is to be considered, i.e. what are the financial capabilities of the company? You have to draw up a financing plan.” LEC

“The compensation should be able to be performed without endangering the enterprise”. CONS

“Realism should be displayed, i.e. the limit of that what an outside creditor is willing to finance must be considered.” AUD

The interviewees were also asked what would be an adequate liquidity discount in order to mitigate the liquidity burden of the company. Their opinions are given in the following statements:

“I would say that in partnership agreements, which I have already seen, there are discounts between 20% and 30 %.” AUD

“...that an external expert determines a value and that 80 % or 75 % from it are considered.” CONS

“Then I can imagine very well, to convince also the judges with 75 %.” LEC

4.6.4.2. Discussion of Financial feasibility

Financing compensations are a large problem for medium-sized companies (Kramer K.-H. , 2000) and can be a heavy burden to liquidity (Jula & Sillmann, 2016). Possible investments or even the operational performance are restricted and the existence of the company could be in danger (Piehler & Schulte, 2014).

Affordability is not mentioned explicitly in literature, but is in connection with the argumentation to agree a compensation regulation. The reduction of the compensation amount and the extension are therefore very important. It seems comprehensible that, in case of doubt, the interests of the company concerning continuation and operational ability to survive, stand above the interests of the

withdrawing shareholder (see section 4.6.2.2.). This is because the future returns and cashflows enable the payment of compensation.

Stable economic conditions are a requirement, which result in the protection of the financial resources through the implementation of the operational necessary steps, i.e. investment or growth. If the compensation of the withdrawing shareholder is maximized, the company's future could be in danger. SMEs have limited financing options and most of them depend on bank financing (see section 2.2. and 4.2.5.3.). If the liquidity effect from the compensation too big, the debt capacity of the company is burdened.

Compensation regulations mean a consistency in the group of partners and therefore a stabilised function can be achieved. The compensation regulation is also an incentive to remain in the company (Koch A. , 2014; Neuhaus, 1990). Clear regulations support the continuation of the company and can avoid long-term and controversial processes (Wangler & Dierkes, 2006; Kirchdörfer & Lorz, 2012). Therefore, the necessity of compensation regulations is emphasized in business and juristic literature (Strohn, 2014; Arens & Tepper, 2013; Matschke & Brösel, 2013; Dietrich & Dierkes, 2015; Schäfer, 2013). Jurisdiction grants private autonomous regulations for affordability (see section 2.3.).

The interviewees are clear about the amount of compensation discounts and the discounts are considered as economically useful. They consider that this should be part of compensation regulations, due to the court's acceptance. The amount of the discount varies between 15% and 30% from the true value. The reasons for these discounts are based on creating the affordability of the compensation amount through the SMEs. The interest of the livelihood of the company is valued more highly than the interest of the withdrawing shareholder, if there is no excessive disadvantage and if it was the common will of the shareholders.

There are similar statements about compensation discounts in literature. The livelihood and the protection of liquidity is viewed as one of the main reasons to implement such regulations in article of associations, in business (Wangler & Dierkes, 2006; Jula & Sillmann, 2016; Ihlau, Duschka, & Gödecke, 2013; Koelen, 2009; Kuhner & Maltry, 2017; Kirchdörfer & Lorz, 2012) and in juristic literature (Ulmer P. , 2010; Strohn, 2016; Schöne, 2012; Schäfer, 2013; Koch J. , 2015) if the border to unethicity is not crossed. This has to be agreed within the scope of private autonomy and is expressed by the will of the shareholders.

As stated by Schmidt (2002), implementing a compensation regulation implies that every shareholder recognises the future existence of the company and therefore a compensation discount. Hannes, Kuhn and Brückmann (2008) recommend including between 20 % and 30% in the partnership agreement, Mecklenbrauch (1999) and Schäfer (2013) consider at least 2/3 of the full value to be adequate and acceptable. Most of the statements refer to discounts between 20 and 33%. This value also seems to be acceptable from the juristic point of view. This is because even though the legislator did not draw a clear line, there are values which were considered unethical, for example at 50 % of the book value (BGH, 1989) or at 20 to 30 % of the market value (BGH, 1993).

On this basis, the discount mentioned by the interviewees and by general literature is under the value, which causes unethicity. At discounts of a maximum of 30 % of the true value there is a restriction on the withdrawing shareholder from carrying out his right of termination (see section 2.3.) and the absolute deviation to the true value is not given (Ulmer & Schäfer, 2013; Butz-Seidel, 2004).

The instalments and the interest have to be considered, which can lead to an inadmissibility if it takes a lot longer than 5 years and does not have an adequate interest rate (see section 2.3.). There is a buffer regarding the distance of the discount amount from the unethical values, so an instalment

can also be arranged with this discount of a maximum of 30 %. This seems to be appropriate when payment is done in one sum or in 2 rates over a short-term period of 2 years. A discount of 25 % is recommended for a run time extension of 5 years.

According to the interviewees, this is the most common value to arrange in the bandwidth and does not reach the maximum discount. A court will make a judgement about unethically in case of dispute, in combination with an instalment and its interest.

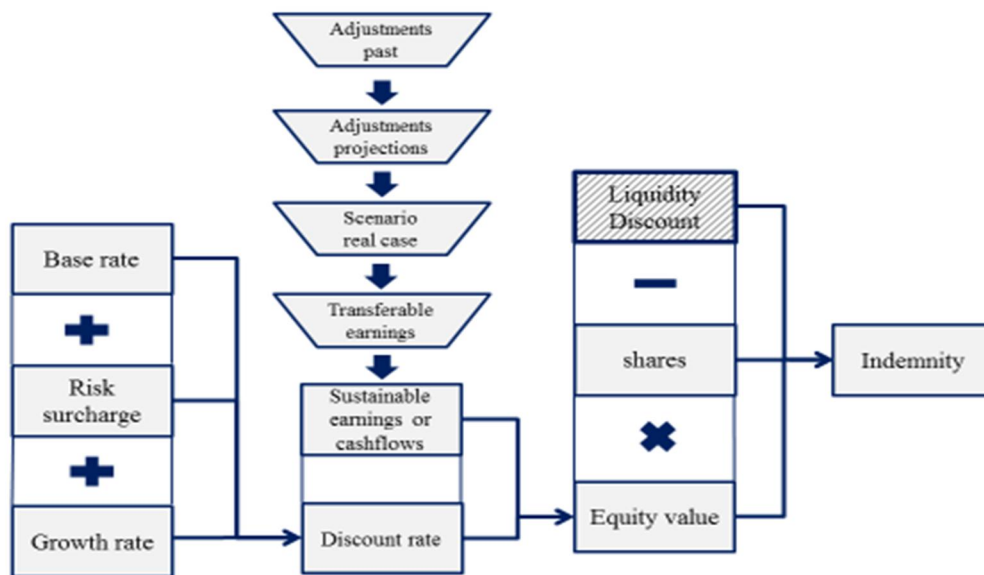


Figure 42. Indemnity calculation taking into account a compensation discount

4.6.5. TERMS FOR EXTENSIONS OF THE COMPENSATION

4.6.5.1. Statements of the interviewees

If the compensation payment is delayed the question is what is the adequate term? Here the interviewees also agreed that the term should not be too long because this leads to an unjustifiable risk situation and to a compensation limitation. The most often mentioned period was 5 years, even if one has seen longer tenors in practice. This period seems to be appropriate given the fact

that the outgoing partner may have given notice for age reasons. Proposals were made that 50% of the compensation should be due immediately and the remaining 50% be paid by instalments with a tenor of 5 years. This period also corresponds to the usual earn out-phases or the extended liability phases of outgoing partners of general partnership (OHG).

“Up to 5 years is appropriate.” LEC

“It is usual to pay the compensation over a period from 3 to 5 years.” CONS

“You have 5 years, because the society has to finance the compensation.”

AUD

4.6.5.2. Discussion of Compensation payment deferral period

If there is no compensation regulation included in the partnership agreement then the compensation payment has to be made immediately in full (see section 1.1.4.).

According to jurisdiction, agreements about deferrals or instalments can be arranged for compensation payment. Usually an interest is assumed (Hadding & Kießling, 2012; Roth, 2014). Although the Federal Court (BGH, 1989) judged a term of over 10 years as improper, the juridical literature proposes terms of 5 years to be permitted (Schäfer, 2013; Stuhlfelner, 2007; Schöne, 2012; Heidel & Hanke, 2012; Schmidt K. , 2011) even though a few assume a maximum of 10 years (Hadding & Kießling, 2012; Strohn, 2014). But the agreement can be unethical if payment of the compensation amount takes place in three rates five, eight and ten years after the termination declaration (OLG Dresden, 2000). Payment deferrals over 5 years should be considered individually concerning the interest, the amount of the compensation and the exact modalities of payment (Schmidt K. , 2002).

An apodictic determination of the maximum term of an instalment plan is possible as the inadmissibility of the compensation regulation depends on all components. Deferrals and payment regulations are less subject to risks of unethicity. If the other compensation clauses arranged are shareholder

friendly and the compensation does not comply with the highest permitted discount, then terms of over 5 years may be allowed (Hueck & Fastrich, 2013). The Higher Regional Court of Bavaria (BayOBLG, 1983) judged a regulation to be effective, which deferred a payment to six years, with a compensation of the full value. In another case The Higher Regional Court of Hamm (OLG Hamm, 2012) judged that a payment over a term of 5½ years is already an unreasonable disadvantage for the withdrawing shareholder, if the compensation is intended from the start to be reduced at a third of the proportional values of the compensation.

According to the majority of the literature, only a term of payment up to 5 years is appropriate to the interests of the shareholder who is to be compensated. The consensus view of the interviewees is confirmed predominantly in literature even though there are no clear statements about components of the compensation regulation as a whole. Wangler and Dierkes (2006) basically consider an adequacy of deferrals and payment regulations, which should not normally go beyond 5 years. This point of view, which should prevent an exhaustion of all possible borders concerning other compensation modalities, is expected to have quite a secure term of a maximum of 5 years (Butz-Seidel, 2004; Geißler, 2006; Piehler & Schulte, 2014; Schöne, 2012; Fleischer, 2015; Schäfer, 2013).

The jurisdiction does not draw a clear line of admissibility. In the opinions of the interviewees and the juristic and business literature, admissibility can be assumed concerning terms of up to 5 years. This is also the period which is viewed as appropriate and which fulfils the interests of the shareholder involved. It supposes an appropriate interest of the compensation amount. The disbursement periods above increase the risks, as the valuation of the admissibility depends on the interaction of the different compensation regulations. If there are doubts, this has to be judged by a court.

4.6.6. INTEREST PAYMENT IN CASE OF RESPITE

4.6.6.1. Statements of the interviewees

The payment of interest in case of respite of the indemnity payment was seen as legitimate by all interviewees. An interest-free extension would implicitly reduce the compensation amount. The most important question was in which dimension or which risk category such an interest rate would have to be settled. This question was answered within certain ranges homogenous. The interest rate should reflect the loss of the shareholder position and consequently the outgoing partner grants a non-secured loan which is subordinate to secured liabilities. It is therefore not an interest rate without risk. The capitalization interest rate for discounting the future earnings was mentioned as an example as well as equity-related interest rates such as interest rates for potential mezzanine investors. Ultimately, the interviewees reveal that the whereabouts of the compensation in the enterprise is a suitable risk factor which has to be paid accordingly. The enterprise can take into consideration alternative financing forms which are possibly more favourable (collateral-based, if necessary).

“This may not happen interest-free, otherwise one has a change of the compensation level.” LEC

“The interest should also offer an incentive to pay out the departing companion.” CONS

"What I believe is simply unfair that the outgoing shareholder indeed receives interest rate like he has a risk like outside creditors but takes risk like an equity provider.” AUD

4.6.6.2. Discussion of Interest payment

If there is no regulation in the article of association, the interest rate is calculated according to Article 288 BGB or 352 HGB (see section 2.3.1.). Also, there are clear indications in juristic literature and in jurisdiction that the interest yield of the compensation is appropriate in cases where indemnity regulation exists (Koch J. , 2015; Heidel & Hanke, § 738 BGB, 2012; Schöne, 2012; OLG Celle, 2014), but there is no final legally determined scale. This

might be because the existing private autonomy should not be influenced and that it is not necessary to protect the company. If this agreement crosses the shareholder's border of unethically, it does not depend on a component of the agreement, as it was already displayed (see section 2.3.5.), but on the compensation regulation in general. There are suggestions for a scale of the interest rate in economic literature.

The statements of the interviewees show that the risk is crucial for the calculation of an appropriate interest rate. It is correct that the shareholder and his claims are subordinate to the secured claims of the bank, as the bank usually binds the willingness to provide financing to the provision of collaterals and the shareholder does not get any guarantees for his claims.

Therefore, there is a similar risk to the withdrawing shareholder as to the remaining shareholder. That is why the interviewees suggested calculating these compensations with usual interest rates, like a shareholder loan or equity funds. Another suggestion was to bind the interest rate to the discount rate. The withdrawing shareholder gets the same interest, which was used for the valuation and therefore the company specific risk is compensated. At first glance this looks plausible and such an agreement could be accepted to avoid long discussions and procedures to determine the return requirement of the outgoing shareholder.

On closer inspection this procedure shows that the ranking of the funds is not identical. With equity funds the giver of funds is served for debt capital after the creditors. The withdrawing shareholder is in an in-between position as he is an investor of debt capital without guarantees and compared to guaranteed contributors of debt capital in a similar position like the equity investor and therefore in a quasi-equity investor position. He will only be considered in the frame of the legal waterfall prior to the equity donors exploitation of assets if there are any values left in an insolvency.

This slightly better position has to be considered. The interest rate also considers the status of the partner (see section 4.2.6.5.), which the withdrawing shareholder as a donor of debt capital does not have any more. An appropriate interest for the deferment of the compensation demands should be lower than the discounting interest and lower than the usual interest rate for equity funds. Against this background, any agreement should consider the interests of the parties in a balanced way.

If the discounting interest is arranged, it can be the base from which, for example, 1 – 2 %-points are subtracted. This can be similar to an agreement on the basis of the interest rate of shareholder loans. In this case, small interest discounts from 1 – 2 %-points can also be arranged. The latter agreement requires that the amount of interest for shareholder loans should be registered in the partnership agreement.

There are several suggestions for an appropriate interest in literature rate. Schmidt, Zagel, Bierly and von Holst (2010) suggest an interest rate of 4 %. Weppener (2010) and Jula and Silmann (2014) propose following the legal default interest rate according to § 288 BGB or § 352 HGB. Stuhlfelner (2007) suggests an interest rate of 8 %.

Overall, the withdrawing shareholder should get appropriate interest. This was not questioned either by the interviewees or in the literature and jurisdiction. The shareholders are free concerning the amount against the background of the existing private autonomy. Therefore, the regulations mentioned above, according to BGB or HGB can be agreed. If the basis is the discounting rate of which 1 -2 % points are subtracted, then this would be the fairest regulation for everyone involved.

Other suitable regulations for such a compensation agreement would involve an equity interest rate or the discounting interest rate. Against the background of the judgements and the economic consideration of the risk taken, an appropriate band width can be seen between the legal default interest and the

discounting interest and the interest for equity funds. Since the overall settlement of the payment modalities are closely linked economically, the individual components should always be viewed in the context of concerning a determination.

4.6.7. COLLATERALISATION

4.6.7.1. Statements of the interviewees

The answers of the interviewees were homogeneous. It is problematic to receive satisfactory collateral, because the assets of the company in general are pledged for bank financing. The retiring owner usually receives no security. Implementing collateral in a compensation agreement is regarded as inadequate due to the lack in practical relevance and restriction for the company to other business financing opportunities.

“Collateral is problematic in practice.” AUD

“In general, you do not have space for collateral, because the assets are exhausted by the bank.” LEC

“The outgoing shareholder is structural junior (subordinated) because he receives no collateral for the deferment.” CONS

4.6.7.2. Discussion of Collateralisation

There is no indication in literature that indemnity amounts for outgoing shareholders are collateralised, especially when the payment is deferred. Legal and business management literature do not suggest approaches to claim for a different perspective. This view is supported by two facts:

- i) SMEs need their assets to finance the business (Langer, Eschenburg, & Eschbach, 2013; Becker, Ulrich, & Bozkowski, 2015)
- ii) The remaining partners are liable for the indemnity if the company is not financially capable of paying the outstanding amount (see section 2.3.).

Furthermore, in the verdict from 1989 (BGH, 1989) the Federal Court of Justice expressed the view that a deferment of the payment over 10 years is ineffective. The intention was to mitigate the risk of the retiring partner and this implies that the retiring owner has no security. As stated in the paragraph on legal framework, not only the amount of the payment but also the modalities relating to the individual case are decisive for being ineffective. This means that even regulation with payment periods of 10 years might be unethical or invalid.

This is in line with other findings of this thesis. In case of deferral payments, the interest rate should reflect the risk position of the outgoing partner and the deferral period should not be too long. Overall it seems sensible that outgoing partners do not obtain collaterals, since he or she were a shareholder and has been jointly responsible for the economic situation of the company.

4.6.8. INDEMNITY REGULATIONS

4.6.8.1. Statements of the interviewees

All lecturers and M&A consultants agree on the necessity of implementing an indemnity regulation in the article of association. This ensures the following:

- The associated interest of the remaining shareholder safeguards the company, i.e. taking into account the financial feasibility.
- The compensation is calculated professionally.
- A reliable basis for all shareholders, means nobody knows who is going to retire first.
- Litigation is avoided and benefits increase mutual trust among the partners.

It is also stressed that the indemnity regulation should contain more detailed parameters. To be valuable the regulation should be clear and standardised to a certain extent. The value should be familiar with the market, neutral, experienced and able to assess business models. The following regulations are

recommended: valuation method, planning, who values, discounts, deferral, instalments and interest rate.

“No, that has to be an independent one. Well, that has to be an expert.” LEC

“I favour to determine the valuation method from the start.” LEC

“That means, already include in the partnership agreement, how the valuation should be done.” CONS

“And, I mean, okay, usually a neutral auditor, a neutral M&A-consultant, in case of doubt he does not have conflicts of interests. And if he has, he must not do the job.” CONS

Auditors stress the process of company valuation in Germany which is standardised, transparent and intersubjectively comprehensible, due to the courts. In other words, they refer primarily to the process described in the IDW S 1 and the determination is based on the objectified valuation. Nevertheless, they also favour an indemnity agreement, due to the reasons already mentioned. They stress the transferable profitability to be implemented and thus considered in the regulation. One of the main aspects is the necessary adjustments to be made before reviewing the planning due to the specifics of SMEs. Their experience as auditors emerged in this context. In addition, a neutral third has to be applied to perform the valuation and the role of the evaluator. His knowledge, experience and ability to provide reliable result that meets the requirements of the courts, business economics and the involved parties were emphasized.

“As this is about the comparison of interests - in case of withdrawal - I would put the traceability in first place of the demands of a compensation regulation and also a procedure, which displays the future development of the company.”

AUD

“It seems to be important that it is regulated from the start, who does the valuation.” AUD

4.6.8.2. Discussion of Compensation regulation

The potential for conflict in determining the correct value between departing and remaining shareholders increases if a particular valuation method, which should be taken as a basis for estimation is not prescribed by law (Fleischer, 2016; OLG Stuttgart, 2014; Piltz & Wissmann, 1985). The situation is aggravated due to the specifics of SMEs. Since this is a fictitious dispute, the determination of an exact value, i.e. compensation expressed as a sum of money, turns out to be barely achievable (Neuhaus, 1990; Richter, 2002; Karami, 2014). Even if a valuation report exists, costly litigations can result due to the inherent uncertainties in the valuation (Koch A. , 2014). This means that the shareholders should agree on a valuation method.

Both literature and case law agree that limitations of severance can be arranged by contract, as long as the contractual arrangement is appropriate in general (Bergmann, 2010; BGH, 1991; Butz-Seidel, 2004; BGH, 1984). This is also evident in other areas of law such as company law and the law of succession. Here Koch (2014) also concludes that company law should take precedence over the law of succession. This means that in case of collision, the heir is entitled to the indemnity deposit instead of the outgoing shareholder, although contrary to the statutory provisions. She clearly stands for freedom of contract, as long as it is not inappropriate. In literature, it is assumed that the legal determination of compensation is modified by compensation clauses in an overwhelming number of cases (Schöne, 2012; Hennerkes & May, 1988; Wangler & Dierkes, 2006).

Nevertheless, in corporate law the individual and minority protection of the members are a valuable asset (Wiedemann, 1996). However, the limits of private autonomy in corporate law are a perennial issue in the legal debate (Zöllner, 1992; Koppensteiner, 2009), which preoccupy traditional corporate lawyers (Raiser & Veil, 2010). It is about “*finding the right balance between respect for the private autonomous agreement of the shareholders and their right against self-incapacitation*” (Goette, 2008, p. 441). Questions in this

context are about the admissibility of compensation restrictions as well as compensation regulations of withdrawing shareholders.

A compensation restriction anchored in the partnership agreement is therefore allowed and appropriate when there is a balance between the interests of the remaining shareholders and future accomplishments, as well as continuation of the company and the interest of the withdrawing shareholder with full economic indemnity (BGH, 1991; BGH, 1993). These diverging interests of members may lead to litigation, meaning that more weight is attributed in legal disputes to one or another interest (Wangler & Dierkes, 2006; Koch A. , 2014). The relevance of particular cases of legal certainty is prejudicial and considered critical (Dauner-Lieb, 1994; Hülsmann, 2001). This means that the same effectual compensation agreement may be appropriate but need to be adapted (Büttner, 1992).

It is important to note that the effectiveness of Article 138 section 1 BGB is limited. The entire severance exclusion is considered immoral due to the adverse impacts on the personal and financial freedom of the withdrawing partner (Schäfer, 2013; Strohn, 2014). The admissibility and the extent of indemnities in family enterprises is a subject currently still being discussed (Ulmer P. , 2010; OLG Karlsruhe, 2006; Sigle, 1999; Schäfer, 2013). Severance payment limitations are regarded as immoral in principle if a considerable disparity between the settlement amount and the severance pay at full value exists at the time of their corporate agreement, in accordance with legal requirements (Strohn, 2014).

According to jurisprudence and literature, this disparity is assumed if the full investment significantly exceeds the severance pay and the discharge of the settlement amount is disproportionate to compensation limitations. This would be required to preserve or to secure the survival of the company, and therefore, its continuation and the interests of the remaining shareholders (BGH, 1991; Piehler & Schulte, 2014; Schäfer, 2013; OLG Saarbrücken, 2016; Schmidt K. , 2014; Raiser & Veil, 2010).

The precise indication of percentages with wide disparities, is mostly rejected for being too schematic as no clearly defined percentages are available (Strohn, 2016; BGH, 1993; Mecklenbrauch, 1999; Schöne, 2012; Roth, 2014; Arens & Tepper, 2013). Limiting the severance payment to 50% of the carrying amount is considered immoral both in literature and jurisprudence (Schmidt K. , 2011; Geißler, 2006; BGH, 1989; Arens & Tepper, 2013). In the course of examining the moral standards the payment modalities are particularly important. Adverse changes in the payment conditions, particularly instalment contracts over several years or the postponement of payment which results in severance limitations, should be measured against the criteria of moral standards under Article 138 BGB (Ihlau, Duschka, & Gödecke, 2013; Hülsmann, 2002; Piehler & Schulte, 2014; OLG Dresden, 2000).

All other circumstances of an individual case are taken into account and balanced between the liquidity interest of the company and the severance payment interest of the shareholders as part of the remaining contract (Sprau, 2016; Schmidt K. , 2011; Hueck & Fastrich, 2013).

Generally accepted consideration criteria have still not been formed (Henze, 2009) and therefore, the following criteria will be discussed (Richter, 2002; Mecklenbrauch, 1999): i) cause of retirement (Schmidt K. , 2011), ii) period of membership (Roth, 2014), iii) contribution of development and success of the company (BGH, 1993; Lutter & Wiedemann, 2012).

Corporate law compensation clauses aim to keep the compensation burden as low as possible and having a familiar and predictable regime for any withdrawal. The agreement for withdrawal of a partner to pay a limited indemnity or less than the whole value or corresponding compensation is regarded as an appropriate means to ensure that shareholders have a lasting interest in the longer-term existence of the company (Schmolke, 2014).

The main intention is not to disadvantage the withdrawing party but to prevent the compensation from being determined according to legal regulation and thus endangering the business (Strohn, 2014; Piehler & Schulte, 2014). Therefore, it is legitimate that the shareholders use the possibilities of non-mandatory law at their disposal (Koch A. , 2014) in order to create the legal and organisational framework of the common entrepreneurial activity (Ulmer P. , 1972).

Oppenheim (2011) established that the existing regulations are inadequate in partnership agreements and raise the possibility of legal dispute. He argues that it is necessary to talk about separation scenarios and ensure a carefully selected severance-clause both at foundation of a company and existing contracts. He recommends implementing a severance-clause that allows a later conflict resolution through negotiation. Hence, the way is predetermined and arranged when both parties are in agreement, i.e. it is difficult to implement such a negotiation once a conflict has arisen. Volkelt (2015) and Jula and Silmann (2014) also consider that procedures for the date of resignation should be regulated in the partnership agreement in advance.

The interviewees unanimously agree that an indemnity in the partnership agreement should be implemented for various reasons: longwinded court cases, battles between evaluators, paralysis of the company, charge of the management and the shareholders, risk to the company and to its existence, possibility of no adequate compensation over years so that the exiting shareholder does not receive any payment at all.

In its judgement dated 27.09.2011, The Federal Court of Justice (BGH) stated explicitly that, in case of doubt, the parties involved in the partnership agreement intended a permanent effective compensation calculation treating the partners equally. The party will should therefore be specified explicitly, making reference to the desired liquidity relief.

If the long-term security of the company is prioritised by the shareholders, the following should be included explicitly in the compensation regulation; the wish for securing liquidity and affordability and also based on that the regulation of the instalments (see section 4.6.5.2.), the interest (see section 4.6.6.2.) and possible discounts (see section 4.6.4.2.) of the full value. With these regulations a possible additional interpretation of contracts at a legal dispute is simplified, as the will is already documented in the partnership agreement. Therefore, the traceability and the interpretation of the wishes of the shareholders are assured within the scope of private autonomy. In addition to the will, the valuation method used for compensation calculation has to be named. At present this will be either the DCF-method or the CEM (see section 4.2.5.3.).

Regulation concerning the valuer is also inevitable and should be included as well as various levels of escalation in case of disagreement. An arbitration is recommended to avoid going to court (see section 5.4.3.). If there is a non-agreement it is opportune to include a regulation, which ensures that the compensation regulation refers to a liquidation value. This contains the start of the instalments and interest, the amount of interest and possible discounts of the determined value. The liquidation value is always viewed as a minimum value (see section 4.2.1.2.). Therefore, if instalments have been agreed the withdrawing shareholder receives payments on this basis. It does not matter what the results of the possible arbitrator's award or trial and he does not have to wait for his payments for years. If instalments have not been agreed, then the withdrawing shareholder receives the liquidation value at the agreed time. In return, the company does not pay more than the minimum value, apart from agreed discounts, and therefore takes no risks.

The valuer should be independent and not conflicted in any way. His relationship to the company and to the shareholders and his specific role in the process should be disclosed. As result, the compensation regulation should be included in every partnership agreement and existing regulations should be checked.

CHAPTER 5 OUTCOMES AND CONCLUSION

5.1. INTRODUCTION

The main objective of this final chapter is to present the outcomes and answer the research questions. A framework for compensation regulation is provided for knowledge generation and implementation in articles of association. The chapter also articulates the contribution to knowledge and makes suggestions for further research. The results of this thesis are interrelated (see figure 43), however presentation is framed by the research questions and objectives.

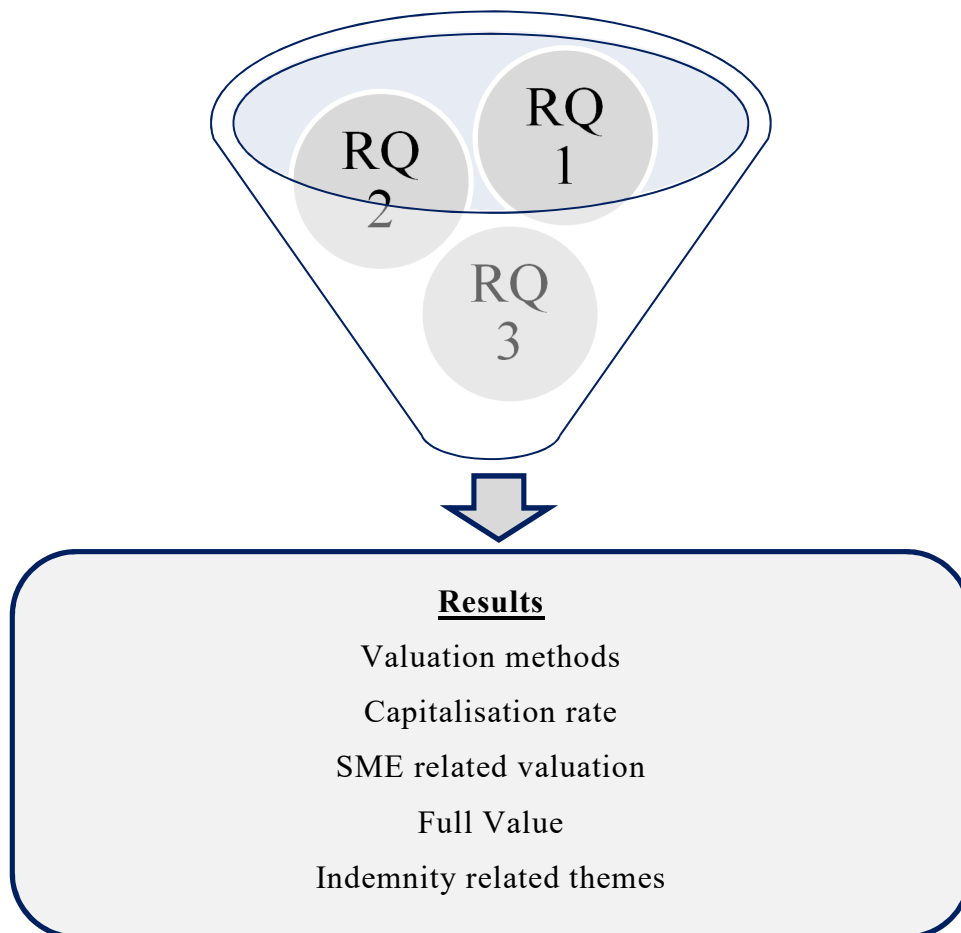


Figure 43. Interrelated research outcomes

5.2. VALUATION METHODS

The first RQ is: What valuation method should be used to determine the compensation for withdrawing shareholders of German SMEs?

There are a variety of valuation methods for different purposes. Net asset based methods, such as the liquidation value, are used to determine the minimum value of a company (Wollny, 2012; Drukarczyk & Ernst, 2010; Schröder S. , 2014; OLG Düsseldorf, 2009; OLG Frankfurt, 2015; OLG Rostock, 2016; Großfeld, 2012). The net asset value method is used to identify the value of non-operating assets (Drukarczyk & Schüler, 2016; Ihlau, Duschka, & Gödecke, 2013). Net asset methods are not appropriate as a *sole* method for business valuation in the context of indemnity determination. These methods are past-oriented, the goodwill of the company is not considered and the company's future development is not taken into account. Net asset methods ignore a number of essential factors that are crucial for generating income, such as intangible assets, management skills, market, personnel, business model, technology, brand, market share and organizational structure (Wolter, 2011; Schacht & Fackler, 2009; Seppelfricke, 2012).

The aspect of simplification, particularly for SME valuation, must be agreed. However, the disadvantage of 'incorrect' values in terms of future benefit outweighs the simplicity. Therefore net asset based methods do not meet the requirements for a dominated valuation occasion. The going concern principle and the vitally important aspect of company future value are disregarded. One rare exception is the valuation of lands based on an asset rather than income (BGH, 1998) or when the liquidation of a company provides a higher value than a value based on income or cashflows (Drukarczyk & Schüler, 2016; Ihlau, Duschka, & Gödecke, 2013).

Mixed methods such as the Stuttgart method combine the net asset and earnings method. This method was abolished by the legislator in 2009 for inheritance tax calculation (BVerfG, 2006). Even though it is included in many articles of association for indemnity calculation, it does not fulfil these

requirements either (Verspay, 2014; Jula & Silmann, 2014; Hülsmann, 2007; Butz-Seidel, 2004). The value provided is based on past figures, i.e. the potential of dividends is not considered. As with the net asset method, significant values such as customer base, quality of management, technology and human capital are often disregarded, even though these values are responsible for company income generation (Rammer, Gottschalk, Peters, Bersch, & Erdsiek, 2016; Behringer, 2012; Kunath, 2014; Schütte-Biastoch, 2011). The legislator had to eliminate this method due to these weaknesses.

The SCEM was introduced in 2009 for inheritance tax purposes. This method is criticized because it assumes a company has a stable income situation based on its past (Wollny, 2012; Wegmann & Wiesenhahn, 2015; Drukarczyk & Ernst, 2010; Schröder S. , 2014). The risk premium constitutes one of the major weaknesses, since it is assessed as a lump sum for all companies, determined by the Federal Ministry of Finance (Schulte, 2010; Lorenz, 2015; Kraft & Kraft, 2014; Schröder S. , 2014; Kappenberg, 2012). An individual assessment of the company-specific risks, the sector or the capital structure is not taken into account. Moreover, the capitalization rate for all companies is lower than the usual market risk premium (Kappenberg, 2012; Müller M. , 2016; Schulte, 2010; Ihlau, Duschka, & Gödecke, 2013; Kraft & Kraft, 2014).

Therefore, it is suspected that there is a pro-fiscal intention as this method tends to furnish results with excessive values. Even the German tax authority points out that the typifications made may lead to deviating values (Ländererlass zum Bewertungsgesetz, 2011). The SCEM is not appropriate to determine outgoing owners' indemnity for these reasons. It does not promote simplification or the avoidance of conflict.

The MM is popular in practice because of its alleged simplicity and market-relatedness. However, it does not fulfil the requirements of recognized valuation methods on its own in business management (Kranebitter, 2012; Ihlau, Duschka, & Gödecke, 2013; Loßagk, 2014; Schacht & Fackler, 2009; Kruschwitz, Löffler, & Essler, 2009; Drukarczyk & Schüler, 2016) and law

(OLG Schleswig, 2004; OLG Frankfurt, 2011; OLG Frankfurt, 2010) The main criticism is that the determination of comparable companies is problematic. For SMEs in particular, benchmark companies are usually stock-listed and comparable units only represent part of the listed business (Schütte-Biastoch, 2011; Loßagk, 2014; Behringer, 2012). SMEs are different from stock-listed companies in terms of their structure and characteristics, i.e. ownership, conditions for research and development, production, sales and life cycle. Therefore, there are few comparable benchmark listed companies in Germany. Individual and company-specific value drivers and strategic potential are not considered within average bandwidths due to the sector-specific multiples.

Furthermore, public companies are often influenced by market fluctuations and their value base is distorted (Langguth, 2008). However, the result of the multiple-based valuation can be used to validate the plausibility of company value determined by traditional valuation methods within bandwidths (Steinbach, 2015; Große-Frericks, 2015; Tinz, 2010; Kranebitter, 2012; Schacht & Fackler, 2009; Drukarczyk & Ernst, 2010), in particular with regard to their market appropriateness (Zwirner, 2012; Löhnert & Böckmann, 2015; Muschol, 2016; Aschauer & Purtscher, 2011). In this context, empirical databases such as Bloomberg, Thomson Financial SDC, Broker Reports, and Finance can be used in Germany.

The most suitable methods to determine indemnity are total valuation methods (Naumeier, 2015; Ballwieser & Hachmeister, 2016; Kranebitter, 2012; Drukarczyk & Schüler, 2016; OLG München, 2014). The tenet of future orientation is expressed by discounting potential earnings and cash flows, i.e. the future benefit of the entire company is relevant to its value (Ernst, Heyd, & Popp, 2014; Ballwieser & Hachmeister, 2016; Langguth, 2008; Drukarczyk & Schüler, 2016). The remaining shareholders have to generate income or cashflows in the future to receive a return-on-investment, namely for the indemnity paid to the outgoing shareholder.

One of the points raised by critics is uncertainty in forecasting (Hering, 2006; Aschauer & Purtscher, 2011). This is common to all future-oriented valuation procedures. Nevertheless, all interviewee groups and the business literature (Naumeier, 2015; Kranebitter, 2012; Fellner, 2017; Baetge, Niemeyer, Kümmel, & Schulz, 2015; Mandl & Rabel, 2015) and case law (BGH, 2003; OLG München, 2009; OLG Stuttgart, 2012; OLG Frankfurt, 2012; OLG Düsseldorf, 2012) see future oriented valuation methods as the most suitable.

The findings of this study reveal that in Germany, the CEM and the DCF method are seen as equivalent, both by the interviewees and in literature (Naumeier, 2015; Ballwieser & Hachmeister, 2016; Kranebitter, 2012; Drukarczyk & Schüler, 2016; OLG München, 2014). Nevertheless, it emerged in the course of this research that in cases of doubt, preference is given to the DCF method even though the CEM is also accepted. The value assessment is based on the funds received by the investor and this represents the true value from a finance theory approach (Drukarczyk & Ernst, 2010; Ihlau, Duschka, & Gödecke, 2013; Voigt, Voigt, Voigt, & Voigt, 2005; Arens & Tepper, 2013).

A valuation based on cash flows instead of earnings has certain advantages. The investment is assessed on the funds that the investor receives and yield might be affected by the divergent application of accounting provisions (Drukarczyk & Schüler, 2016; Baetge, Niemeyer, Kümmel, & Schulz, 2015). The DCF-method best reflects the value of a company if it is financially sound. As already stated, the majority of German SMEs are in a robust and solid economic position (see section 4.5.2.2.). Furthermore, the DCF-method is internationally accepted, preferred in business and the most widely applied approach in valuations (see section 4.2.5.3.). This is due, in particular, to a cash flow-focussed analysis and the current trend for globalization and internationalization prevalent in SMEs (Drukarczyk & Schüler, 2016; Ihlau, Duschka, & Gödecke, 2013; Arens & Tepper, 2013; Henselmann & Barth, 2009).

Consequently, it is also suitable for indemnity determination of an outgoing SME shareholder along with the established CEM approach (Schultze, 2003; Henselmann & Barth, 2009; Ihlau, Duschka, & Gödecke, 2013). Accounting quality and also the quality of the SME projections has improved and will be further enhanced (Ulrich, 2011; Schön, 2012) in particular due to the requirements of stakeholders (Lührs, 2010; Faulhuber & Grabow, 2009; Drees, Koch, & Nell, 2016), globalisation (PricewaterhouseCoopers, 2010; Rütz, 2012; Avela, 2013) and digitalisation (Greulich & Riepolt, 2016; Demary, Engels, Röhl, & Rusche, 2016; Kay, Schleppehorst, & Schröder, 2015). Therefore there are no likely impediments for the application of the DCF-method as the main method of valuation.

Nevertheless, different methods should be used for the determination of the full value of SMEs and indemnity, (Schwetzler, Adlers, & Adolff, 2012; Fleischer & Schneider, 2013; Hüttemann, 2015) (Zwirner, 2012) by applying the valuation concept shown in figure 44. Firstly, the minimum value and the value of the non-operating assets should be determined (Drukarczyk & Schüler, 2016; Ihlau, Duschka, & Gödecke, 2013; Institut der Wirtschaftsprüfer, 2014). Particularly for companies that have marketable assets but a poor performance or a business that only breaks even, the liquidation value might be higher than a value based on earnings or cashflows.

Net asset based methods need to be used to establish the ‘minimum’ value. However, the main valuation has to be performed by using the DCF- or CE-method (Ballwieser & Hachmeister, 2016; Kunath, 2014; Schütte-Biastoch, 2011). In addition, a market oriented plausibility check can be performed by employing the MM (Olbrich & Frey, 2013; Löhnert & Böckmann, 2015; Muschol, 2016). This can contribute multiples on the basis of transactions actually carried out using a transaction database for SMEs of different business types. This valuation concept enables the consideration of the specifics of SMEs that are presented in section 5.3.

As a result, there is now a clear realisation that a valuation concept consisting of three valuation methods should be used to consider the following:

- heterogeneity of SMEs in terms of structure, such as sector, industry, type and specifics, i.e. individual assessment
- interests of the parties, i.e. balanced value for the remaining and outgoing shareholders
- different asset classes of the companies, assets such as real estate that can have higher value than the future benefit from the entire company
- current market situation to ensure the full value is in line with market values

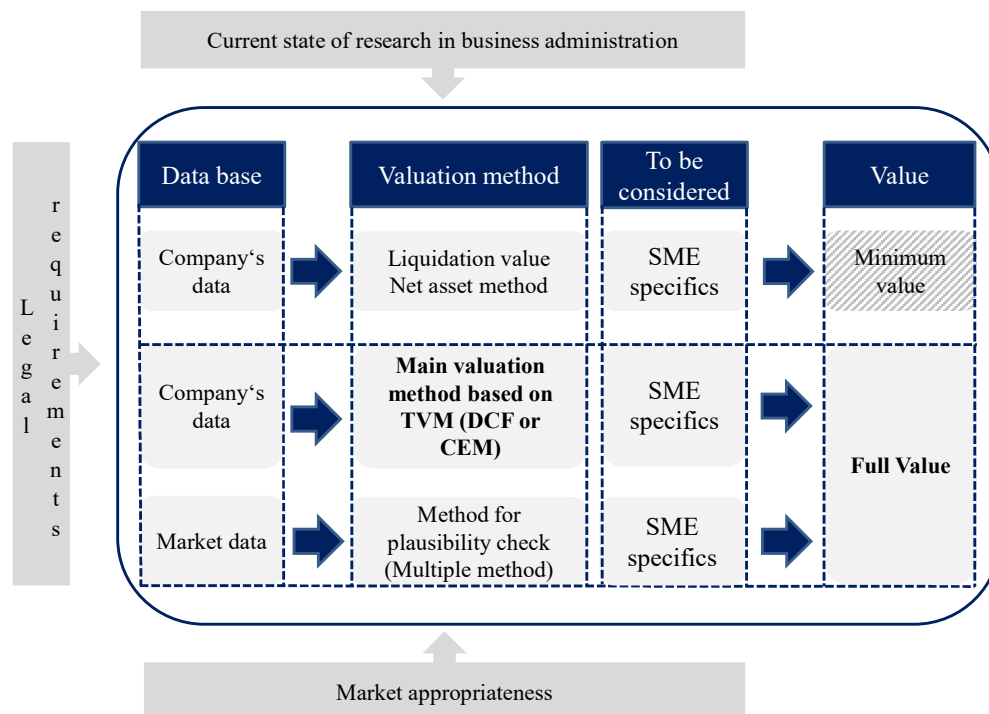


Figure 44. Valuation concept

5.2.1. CAPITALISATION RATE

A base rate that is risk-free is needed to calculate the present value of future income or cash flows and thus to determine the cost of equity. In theory, and practice, there is now general agreement that the base rate should be derived on discount-structure-curves (see section 2.4.3.1. and 4.2.6.5.). Bonds issued by the German state with an AAA rating are the basis for this estimation as repayment is safe and failure is unlikely.

Both the Deutsche Bundesbank and the European Central Bank use the Svensson-method to estimate the risk-free rate. The estimates for maturities up to 50 years are published daily. This method has gained acceptance in business administration and law (OLG Düsseldorf, 2012; OLG Frankfurt, 2013; OLG Stuttgart, 2011; Metz, 2007; Steinbach, 2015).

One interpretation of this study is that German SMEs should use estimates from the Deutsche Bundesbank based on German bonds. This procedure accords with the principles of equivalence, i.e. using future oriented data, either in the numerator or the denominator, when computing the business value with the CEM- or DCF-method.

The market-oriented approach such as CAPM/WACC and the individual approach are both used in Germany. Nevertheless, there is no agreement in case law or in the literature for how to calculate an appropriate discount rate that takes a company's individual risk situation into account. However, the individual determination of discount rate is seen as adequate, particularly for SMEs (Kappenberg, 2012; Behringer, 2012; Munkert, 2005; OLG München, 2014). SMEs and stock listed companies are not comparable and a market-oriented (CAPM/WACC) determination not seen as an appropriate alternative (Emmerich, 2013; Matschke & Brösel, 2013; Kruschwitz & Löffler, 2014; Kuhner & Maltry, 2017).

The use of the CAPM or WACC for capitalization determination interest rate is one of the most strongly criticized typifications. Besides the selection of the market index, the selection of the peer group leaves the evaluator considerable room for manoeuvre (Langguth, 2008). These typifications for the typical investor do not reflect the individual reality of SMEs and they become distorted by the extent of complexity reduction and typification.

In addition, the total capital costs for SMEs are higher than for listed companies (Hackspiel & Fries, 2010; Dreher, 2010; Kranebitter, 2012; Volkart, Vettinger, & Forrer, 2013). Furthermore, the discount rate has to

reflect the uncertainty of the expected cash flows and a certain degree of discretionary power is implied by using individual premiums.

The weighted average cost of capital consists of two components; the cost of equity and the cost of debt. The former is illustrated in Appendix II. Calculating the cost of debt for SMEs can be achieved by using two methods. Firstly, derivation from average current interest rates can be observed on recently issued bonds by comparable enterprises in terms of the likelihood of a companies' default. This cost corresponds to the weighted average interest rate for debt capital that has to be paid in the capital market (Matschke & Brösel, 2013). A second determination method is to take the effective debt cost of the company (Gleißner & Wolfrum, 2008). The current debt cost can be calculated by using existing loan agreements.

SMEs are not generally able to raise money directly in the capital markets. They usually depend on local banks to provide the required liquidity by granting overdrafts or loans (Schlitt, 2014; Söllner, 2011). Effective costs for SMEs are usually higher than in the capital markets due to the components of the banks' interest rate, such as credit risk, liquidity costs, operational costs and profit margin (Schütte-Biastoch, 2011; Seehausen, 2014; Volkart, Vettinger, & Forrer, 2013; Aschauer & Purtscher, 2011). This is rooted in the risk profile and characteristics of SMEs. The market power of banks and the lack of capital market access for SMEs lead to less comparability of interest cost for conventional bank lending. Moreover, a good and longstanding relationship with their bank is important for SMEs and a mutually beneficial relationship may secure the ability to obtain finance at suitable rates in the future. Therefore, effective debt cost of the company has to be considered and adjustments have to be made where necessary due to the implications of withdrawing. Determining costs of debt for SMEs by using publicly listed benchmark companies is hypothetical and leads to incorrect results as it does not correspond to the actual cost (see section 4.2.6.5.).

Apart from the interest rate, the capital structure of the company has to be determined by the use of WACC. Usually a target capital structure is determined. In SME indemnity determination cases, the structure of the capital (equity and debt) is determined from the existing ratio (Ballwieser & Hachmeister, 2016) since large changes are relatively seldom (Zitzelsberger, 2015; Keller & Hohmann, 2004; Helbling, 2015). The existing projection can be used and grounded in the analysis of the company. The modifications occur after withdrawing a realistic representation of the target capital structure is necessary. The WACC calculation is as follows (see figure 45).

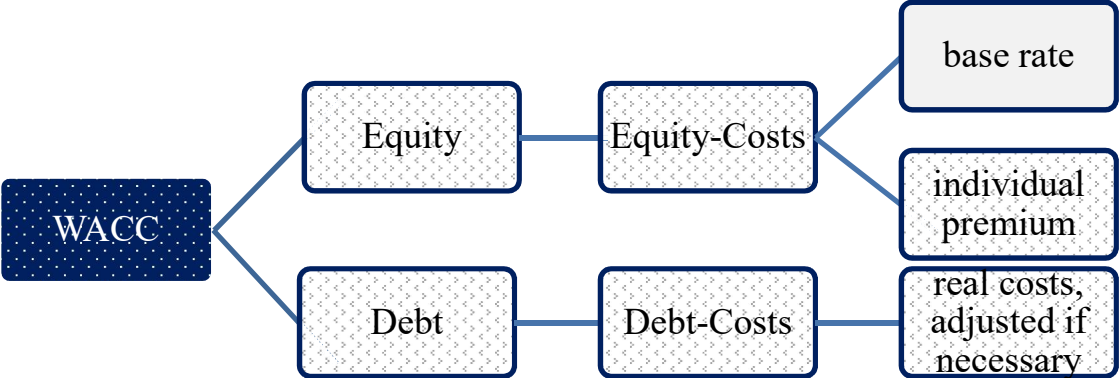


Figure 45. Adopted WACC-calculation for indemnity determination

The findings of this thesis take into consideration that the typical SME is not listed (see section 2.2.). Therefore, the valuation and the determination of indemnity are not primarily based on the assumption of a perfect capital market.

5.3. SME SPECIFICS

The second RQ is: What characteristics of German SMEs have to be considered in determining indemnity?

SMEs have specific characteristics that influence their performance (Kramer S. , 2009; Schütte-Biastoch, 2011; Hachmeister & Ruthardt, 2014; Franken & Koelen, 2015). These specific characteristics have to be taken into account in the valuation and determination of SMEs. It is not sensible to define SMEs quantitatively; size makes no difference in valuation (Schulz, 2009; Jonas, 2008). SMEs vary with qualitative characteristics. There are different suggestions for how to address these specifics in literature. This thesis analyses the consideration of characteristics by using discounts and premiums.

The special features that influence performance (see Table 2) also include the fact that business strategy is not exclusively oriented toward profit objectives. It has to be highlighted that SMEs are dominated by their owners who act as investors and often exercise management functions. They therefore play a major part in shaping the company (Zwirner, 2013; Ihlau & Duschka, 2012; Matschke & Brösel, 2013; Purtscher, 2017; Keller M. , 2015; Helbling, 2015).

5.3.1. TERMINAL VALUE, GROWTH RATE AND PROBABILITY OF INSOLVENCY

SMEs are attributed more risk than publicly traded enterprises. For this reason, literature questions whether valuation perpetual annuity and a growth rate should be applied to SMEs. Another question is whether insolvency probability should be taken into account. In general, SMEs' terminal value is appropriate within the scope of the going concern principle (Knoll & Tartler, 2011; Knabe, 2012; Ballwieser & Friedrich, 2015; Lobe, 2010). If there is no indication of significant threats to the continuity of the company, an infinite persistence of the company can be assumed as companies are usually set up for the long-term. In addition, after a detailed planning phase, the company still has a residual value. It would be contradictory not to consider this as it would lead to a reduction in the company's value.

If there is an indication that of a company' lifespan is limited beyond a certain point in time, i.e. the income situation changes significantly, then the company only has a liquidation value from this point. Consequently, the evaluator has to examine if the company faces foreseeable risks. If so, these should be applied in scenarios (Zieger & Schütte-Biastoch, 2008; Ihlau & Duschka, 2013; Hackspiel & Fries, 2010; Hachmeister & Ruthardt, 2014; Peemöller V. , 2014). The identification of a permanent and sustainable cash flow stream is crucial, instead of taking the cash flow from the last year of the detailed planning phase.

The same principle can be applied to growth rate. The appraiser has to assess the extent to which the company may grow, including price, volume and reinvestment-related growth (Ihlau, Duschka, & Gödecke, 2013). Adjusting the discount rate for inflation assumes that the company is able to raise its prices to compensate for currency devaluation. Companies that are not able to equalize inflation will inevitably decline and thus will be incapable of surviving (Keller M. , 2015; OLG Düsseldorf, 2012). The findings show that the growth rate is adequate as long as there is no indication that the company will not be able to equalize inflation (see section 4.5.2.2.).

In addition, there is no evidence that companies are able to consistently grow above the average inflation rate. However, if a probable level of real growth can be expected due to the prospect of the business model, the growth rate should be set below the average inflation rate (OLG Frankfurt, 2014; OLG Stuttgart, 2014; OLG Frankfurt, 2015; Stellbrink, Baetge, & Kirsch, 2005; Weimann, 2015). In other cases, a careful and comprehensibly justified use of growth discounts that are below the average inflation rate is appropriate and opportune when calculating the compensation for withdrawing SME shareholders.

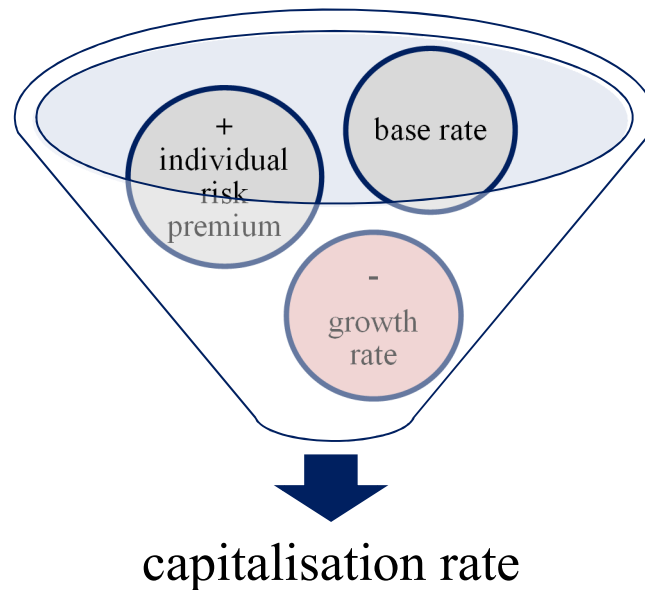


Figure 46. Determination of the capitalisation rate

Even though the aim of this thesis was not to demonstrate whether SMEs are more or less likely to file for bankruptcy, confirmation of an increased PoI could not be found. It is difficult to quantify how to apply PoI, but a general consideration of PoI will lead to a significant underestimation of company value over time, even when the company's business is fundamentally sound (Hachmeister & Ruthardt, 2014; Ballwieser & Friedrich, 2015). The probability of the insolvency of companies varies widely and its frequency depends on different factors. It is important to recognize that insolvency cannot be fully predicted and the operations of the company are not planned to stop at a certain point in time (Knabe, 2012).

If probability of insolvency can be seen, this must be taken into account. There should be consideration of the cash flow stream rather than the capitalization rate. German SMEs were able to significantly improve their situation with respect to profitability and equity-generation during the period after the financial crisis in 2008. The majority of German SMEs are therefore economically solid (see section 4.5.2.2.).

A detailed analysis of the concrete risks of the valuation object cannot be replaced by a general derivation of probabilities of default. Risk has to be assessed individually and considered in scenarios to derive an appropriate capitalization rate without surcharges. A holistic view should be made rather than the consideration of SME-specific risks alone (Knackstedt H.-W. , 2013; Behringer, 2012; Ihlau, Duschka, & Gödecke, 2013; Ballwieser & Hachmeister, 2016).

5.3.2. DISCOUNTS AND PREMIUMS

SMEs require different adjustments due to their unique characteristics. These adjustments are either implemented in the capitalization rate (premium) or as a discount deducted from the equity value of a company. If applied, it is reasonable to factor these characteristics into the capitalization rate when they are not already included in the numerator. These adjustments are suggested due to the attributed size, lack of liquidity and non-diversification of the shareholder. These findings are presented below.

There are no relevant studies in Germany to justify a size-dependent adjustment when valuing SMEs. My results support this view. Although differences between SMEs and listed companies can be observed, these do not allow general recommendations in the context of size discounts. Including size surcharges in the valuation would open the way for uncontrolled surcharges or discounts that increase the discretionary power of the appraiser. Generalised adjustments should be rejected, particularly for dominated occasions, such as indemnity calculation, (Große-Frericks, 2015; Schütte-Biastoch, 2011; Hachmeister & Ruthardt, 2014; Metz, 2007).

Applying size discounts changes the valuation principles based on benefits from the future earnings of a SME, instead of a measurement of size. Consistent with theory, the size of a business is not relevant for the value of a company (Schulz, 2009; Jonas, 2008; Baetge, Schulz, & Klönne, 2010).

A lack of share liquidity for SMEs and other private companies is attributed to private companies not being listed. A correlation between fungibility and the company value can therefore be assumed. Studies in USA allegedly support lesser values. However, these results cannot be transferred to German SMEs and in Germany there are no relevant studies to draw on (see section 4.5.7.2.). The question of whether to apply a discount for lack of fungibility is still a controversial issue in literature. Quantification of the discount remains difficult in dominated occasions and the fungibility discount is also subjective and arbitrary (Loßagk, 2014; Kuhner & Maltry, 2017). However, if a shareholder withdraws from the company, these arguments are irrelevant. In this situation, the shares are fungible and are transferred to the company and the remaining shareholders. Therefore, an illiquidity discount is not appropriate and should not be considered.

5.3.3. DIVERSIFICATION OF SME SHAREHOLDER

The evidence gathered in this research suggests that SME owners are usually not diversified in their investments (Knabe, 2012; Nestler, 2012; Allert, et al., 2011). However, a consideration of additional risk surcharges is not appropriate. The unsystematic risks of the SME-shareholder can be diversified by investing in additional assets and some partners of SMEs invest their capital in other assets (Jonas, 2008).

The degree of diversification varies among the shareholders of SMEs and when a company is set up, none of the owners knows who will retire first. Nevertheless, accepted models to calculate the diversification degree of the owner are not available (Zwirner, 2013; Ihlau, Duschka, & Gödecke, 2013). The overall risk should be applied by considering an appropriate calculations rate. This is in accordance with the principles of equivalence.

5.3.4. PAST ADJUSTMENTS

Due to SME characteristics, past figures have to be adjusted to identify a sustainable earning power based on the company's past business model (Kappenberg, 2012; Kranebitter, 2012). These adjusted figures are the basis

for the forecast and the planning review. This requires historical data such as annual financial statements or cash flows as they serve as the basis and plausibility check for forecasting income figures. The amount stated in the balance sheet should reflect the actual situation and whether expenses and earnings contained in the figures are an over- or under-estimate (Hackspiel & Fries, 2010; Schröder S. , 2014).

The annual accounts of SMEs are influenced by the private sphere and are tax motivated (Peemöller V. , 2014; Keller M. , 2015). Income and expenses have to be checked with regard to marketability. The most common of these are shareholder or family member salaries, over- or under-rent of leased own properties, number of employees and loans. It is worth mentioning that parts of SMEs’ fixed assets, such as real estate and licenses that are needed to generate cash flows are held by owner or family members. The following analysis of the annual accounts has to be made (Helbling, 2006; Muschol, 2016; Keller M. , 2015; Kappenberg, 2012; Aschauer & Purtscher, 2011).

Item	
Depreciation	Hidden reserves and charges
Salary	Shareholder and family members’ appropriate salaries at arm’s length according to their services
Credit terms	Marketable terms and conditions
Collaterals from private sphere	Implications for terms and conditions and adequate expense for guarantee fee
Non-operating assets	Cashflows are to be excluded, stream will cease as liquidation value is added to the enterprise value
Extraordinary income and expenses	Sustainability assessment
Provisions for future expenses	Adequacy check
Change in accounting policies	Effects on income
Periodization of income	Allocation of time-disproportionate income and expenses to right period

Table 20. Assessment of the annual accounts

Adjustments of the historical figures have to reasonably assure that the basis is reflective of maintainable future cash flows or earnings.

5.3.5. PROJECTIONS AND TRANSFERABLE EARNING POWER

The projected future development of the company is essential for valuation with either the CE- or the DCF-method. Projections are therefore indispensable and two distinct phases are necessary: a detailed forecast period and a following projection period. An integrated budget that consists of profit and loss statement, balance sheet, investment plan and cash flow statement is required to meet the requirements of a valuation (Drukarczyk & Ernst, 2010; Kranebitter, 2012; Purtscher, 2017).

Predicting future development is generally challenging for all companies and the further into the future, the more unreliable the projection is likely to be. According to the findings of this research, planning should usually be made for 5 years (Drukarczyk & Schöler, 2016; Kuhner & Maltry, 2017). Future cash flows cannot be predicted precisely. Nevertheless, an estimation that takes sustainable future development into consideration is crucial (Ihlau, Duschka, & Gödecke, 2013; Matschke & Brösel, 2013).

Even if the quality of planning figures has improved in SMEs and will be enhanced due to the requirements of stakeholders in particular (see 4.2.5.3.), some companies usually have projections that only partially meet these requirements. In this situation the tax consultant or the auditor of the company can provide assistance in order to improve quality. If projections of a suitable quality, are not available adjustments might have to be made (Kranebitter, 2012; Ihlau, Duschka, & Gödecke, 2013; Purtscher, 2017).

Planning has to be assessed on plausibility, consistency and whether the assumptions are realistic. The past gives some evidence for development and possible adjustments, however past company figures may not be indicative due to business cyclicity, industry transition, market fluctuation or significant changes in the company, such as management or staff.

Therefore, the identification of sustainable earnings or cash flows may require modifications and adaptations on an individual basis (Schacht & Fackler, 2009; Schütte-Biastoch, 2011; Kranebitter, 2012; Dietrich & Dierkes, 2015; Purtscher, 2017). The analysis of the procedure for the annual statements can be used analogously.

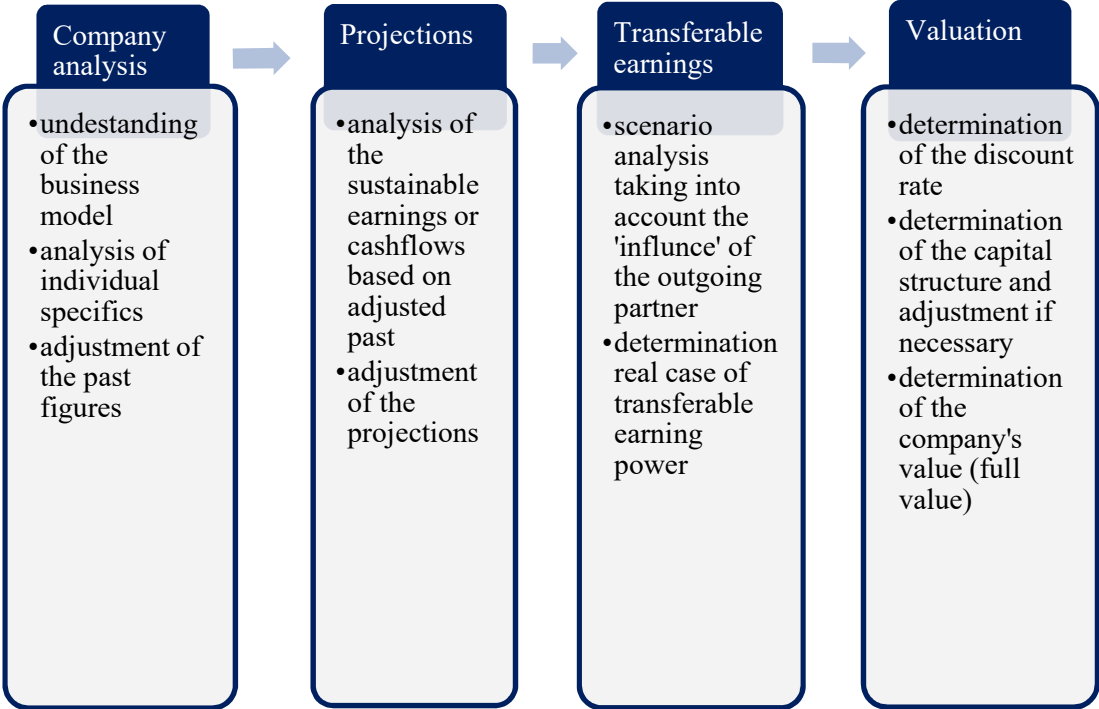


Figure 47. Process of SME valuation

In view of the typical intertwining of shareholders with a company, it is crucial to estimate to what extent cash flow generation can be expected after their withdrawal (Ihlau, Duschka, & Gödecke, 2013; Schütte-Biastoch, 2011; Kranebitter, 2012; Matschke & Brösel, 2013). The transferable profitability is a major criterion for a fair and adequate compensation calculation. Only the sustainable earnings and cash flow situation is relevant to indemnity calculation for the remaining shareholders (Lutz, 2015; Franken & Koelen, 2015; Buck, 2016; Wegmann & Wiesenhahn, 2015; Keller M. , 2015). They have to be able to repay the indemnity based on the possible future benefits of the company.

Therefore, the basis must not be distorted or influenced by SME-related specifics. In doing so, a thorough consideration of the business model and the creation of scenarios are indispensable (Große-Frericks, 2015; Kuhner & Maltry, 2017; Aschauer & Purtscher, 2011; Jonas, 2009; Schmeisser, Görlitz, Spree, Clausen, & Schindler, 2008).

5.3.6. APPRAISER'S ROLE

A reliable valuation has to be technically correct and based on consistent assumptions consider company reality and especially its future development, based on its business model (Matschke & Brösel, 2013). Detailed financial analysis of the past figures, considered understanding of the value drivers of the company and assessment of the premises of the projections are crucial (Zwirner & Zimny, 2015; Schacht & Fackler, 2009). Professional evaluators are usually charged with performing a business valuation to meet these requirements. The appraiser has to develop a full understanding of the business model and the associated opportunities and risk (Ihlau, Duschka, & Gödecke, 2013; Kranebitter, 2012).

Overall, the methodological approach for SME valuation is not substantially different from that applied for the valuation of stock-listed companies. SME valuation is just as challenging and complex. When considering SME specifics and transferable earnings power, share valuations are complex and therefore impossible to achieve without expert assistance (Schacht & Fackler, 2009; Dietrich & Dierkes, 2015).

Indemnity determination requires an appraiser not only with the mathematical capability to perform a valuation but also with judgment and experience to take the interests of different parties into consideration (Drukarczyk & Ernst, 2010; Purtscher, 2017). This is essential in view of the significance of the parties involved and the potential for conflict.

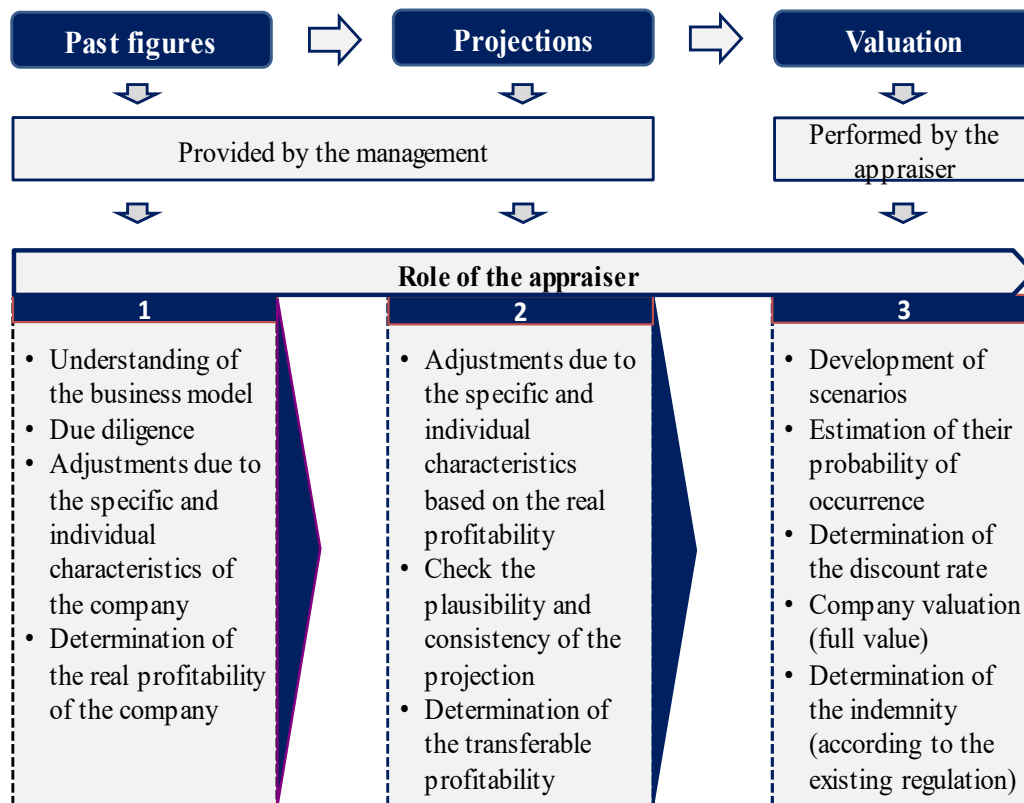


Figure 48. Appraiser's Role when determining the indemnity

The determination has to comply with the generally recognized economic criteria and the valuation has to be transparent and comprehensible, particularly with regard to discretionary powers (Tinz, 2010; Karami, 2014). Due to the individuality and heterogeneity of the SME and the discretionary power left to the evaluator, the determination of an objectively-valid company value is an impossible task. It is common knowledge that each company value is subjective and different (Jonas, 2007; Kappenberg, 2012; Metz, 2007; OLG Karlsruhe, 2012; OLG Düsseldorf, 2014). The Principles for the Performance of Business Valuation (IDW) were primarily designed for the objectified valuation of capital market-oriented companies where the investor is diversified, using CAPM and WACC (Drukarczyk & Ernst, 2010; Kuhner & Maltry, 2017; Ihlau, Duschka, & Gödecke, 2013). The professional principles of the auditors are not legally binding and the implications of the withdrawing partner are not necessarily taken into account. Therefore, when determining the compensation an objectified valuation should not be applied.

Transferring the determination of indemnity for SMEs means that the company's full value and consequently an adequate compensation should be kept within a range. The evaluator has to describe and justify the assumptions and ensure the transparency of the determination process so that the calculation remains traceable (Munkert, 2005; Seppelfricke, 2012; Wollny, 2010). A calculation of compensation is a value within a spectrum that takes into account the findings of this thesis. Due to the specifics of SMEs, the indefinable future orientation and the discretion of the valuer, there is no universally valid amount to determine the indemnity of SME shareholders. Therefore a valuation in this context cannot be like 'a fireproof diver's suit, which enables a space flight without harm'.

The qualitative specifics of SMEs are therefore addressed either in the adjustments of the past and the future or by taking into account transferable earning power. Overall, the individual risks of the company are considered in their entirety in the cash flows by applying scenarios. Adjustments in the calculation rate are not appropriate and may lead to a double counting of risks.

5.4. INDEMNITY REGULATION

The third RQ is: What specific compensation regulations should be included in the articles of partnership - taking into consideration the existing legal framework and the interests of all shareholders?

Under the applicable corporate law, any company shareholder is entitled to withdraw from the company with statutory notice at any time. Consequently, the loss of the share has to be compensated at full value. This legal provision leaves room for uncertainties for all shareholders, for example, the full value is not defined, the valuation method has not been chosen and if the transferable earning power has to be considered. According to the findings of this thesis, the full value should be determined, as illustrated in section 5.2. and 5.3.

To increase the reliability of the partners' interests, compensation regulation based on private autonomy is advisable. Contractual arrangements are usual in practice with private autonomy. This private autonomy is only restricted by the threshold of immorality, for example, when the withdrawing shareholder is unreasonably disadvantaged. Moreover, when the compensation level and modalities of payment legally or economically impede the shareholder's right to terminate the contract. In the case of immorality, the retiring owner is entitled to the full value or indemnity regulation which has to be replaced by a supplementary interpretation of the agreement. However, the legislator has not provided a precise definition of this immorality.

There are still regulations that are in danger of being unethical (Wangler & Dierkes, 2006; Piehler & Schulte, 2014; Kuhner & Maltry, 2017; Kirhdörfer & Lorz, 2012; LG Freiburg, 2014). This is due to agreements that disproportionately disadvantage the outgoing owner i.e. using valuation methods such as the book value or Stuttgart method (Ballwieser & Hachmeister, 2016; Schütte-Biastoch, 2011; Fellner, 2017; Pummerer, 2017). Review and adaptation of the regulations specified in partnership agreements where appropriate is therefore recommended. In addition, it is useful to regularly re-examine existing regulations due to changes in law and further knowledge generated in business administration regarding SME valuation methods.

One of the findings of this study is that it is useful to implement compensation regulations in the articles of partnership, for both new companies and also for existing enterprises (Oppenheim, 2011; Wangler & Dierkes, 2006; Kirhdörfer & Lorz, 2012; Butz-Seidel, 2004). This can prevent the uncertainty of all parties involved. The risk of litigation cannot be avoided completely but, due to specific regulations, this probability can be significantly reduced. The central findings of this study, given below, can be used as a framework.

5.4.1. INTERESTS OF THE PARTIES

When retiring from a company there is an implicit conflict of interests between the outgoing owner and the remaining partner/s (Matschke & Brösel, 2013; Schütte-Biastoch, 2011). From an economic perspective, the withdrawing shareholder aims to receive the full value and the remaining stakeholders prefer regulation that preserves the financial resources of the company. For many SME shareholders, the company is their provision for old age, since usually they do not have any other major assets (Nestler, 2012). The remaining shareholders may fear that future cash flows cannot ensure the maintenance of the company's operational continuity.

Refinancing indemnity payments is a challenge due to the necessary investment requirements of the company and operational performance can be influenced if there is a heavy liquidity burden (Piehler & Schulte, 2014; Jula & Sillmann, 2016). This is especially true as most SMEs depend on bank finance and the debt capacity of the company is burdened (Schlitt, 2014; Söllner, 2011).

One interpretation of the findings is that the interest of preserving the long-term existence of the company is valued more highly than the interest of the withdrawing shareholder, as long as the limit of *boni mores* is not exceeded. This is due to the economic importance of SMEs and the ability to generate sustainable cash flows to pay compensation. Furthermore, existing company law contains certain fiduciary duties, which obligate the interests of the company to special consideration (Koch A. , 2014). This obligation must be perceived as interests that go beyond those of individual members of the company (Fleischer, 2004; Wiedemann, 1980). When an owner retires the indemnity payment conditions have to be appropriate for the needs of the business, i.e. to ensure that the development of the business is not completely constrained by such an agreement (Wangler & Dierkes, 2006; Schäfer, § 738 BGB, 2013).

Reducing the financial burden of the company and avoiding possible judicial disputes are the main reasons to implement compensation regulations in the article of association (Bacher & Spieth, 2003; Strohn, 2014). Moreover, they encourage shareholders to remain in the company and to prevent spontaneous withdrawal. Apart from economic interests, SME-shareholders usually have a non-monetary interest, such as to secure the legal independence of the company (Becker & Ulrich, 2015; Schütte-Biastoch, 2011). In many cases, the enterprise has been founded by the shareholder themselves or has been taken over from family members. In addition, the long-term existence of the company is crucial for their family members and employees (Bussiek, 1996; Matschke & Brösel, 2013). They usually share a deep social relationship and are committed to the company (Meyer J.-A. , 2013). There is often also a firmly established and long-standing partnership with suppliers and customers.

5.4.2. COMPONENTS OF COMPENSATION REGULATION

In conclusion, the following points can be made regarding the design of compensation regulation (see section 4.6.).

Indemnity regulation	How to address
Will of the parties	Exact as possible
Valuation method	DCF- or CE-Method, minimum value
Planning	Frequency, quality, provided by the management
Retirement regulation	Role of management and check for update needs due to changes in case law
Appraiser	Role and determination
Specifics of SMEs	Transferable earnings
Date of valuation	At retirement date
Liquidity discount	In case will of the parties, exact percentage
Payment scheme	Instalments maximum 5 years
Interest rate	Base rate plus ...or discount rate minus x %
Existing dispute	3 step approach

Table 21. Components of indemnity regulation

The will of the parties should be documented as clearly as possible (Koch A. , 2014). The shareholders demonstrate their intentions by stating their goals, for instance to ensure the long-term existence of the company. Their real intentions have to be ascertained if there is an actual violation of moral principles, and thus of a supplementary interpretation of the contract. For this reason, the supplementary interpretation would be as close as possible to the will of the shareholders (see section 1.1.4.) and this should take priority. Furthermore, a regular check of whether the regulations comply with the most recent statutory regulations at least every 3 years, is recommended.

The valuation procedure with preference to the DCF method or to CEM has to be specified, (Naumeier, 2015; Ballwieser & Hachmeister, 2016; Kranebitter, 2012; Drukarczyk & Schüler, 2016; OLG München, 2014). Furthermore, if there are new research findings, only the valuation method acknowledged in business economics and law should be used.

The agreement may specify the modalities for appointing the appraiser. A recognized expert with the proven experience and capability should carry out the valuation (see section 4.3.2.). The valuation should not be carried out by a consultant or auditor who is conflicted; related tax-consultants, auditors, M&A consultants or management consultants are also unsuitable (Kranebitter, 2012; Tinz, 2010; Karami, 2014).

The specific characteristics of SME also have to be considered in the framework of the compensation regulation. Apart from adjustments, transferable profitability has to be mentioned and should be determined according to the influence of the outgoing partner (Ihlau, Duschka, & Gödecke, 2013; Schütte-Biastoch, 2011; Kranebitter, 2012; Matschke & Brösel, 2013; Wassermann, 2011). As it is not possible to foresee in advance which shareholder will retire, this regulation has to be applicable for each partner.

Planning quality and planning calculation are crucial factors for the valuation and the implementation of a rolling planning process has several advantages. Projections form the basis of strategic decisions can reduce litigation and serve as a basis for possible withdrawal scenarios (Matschke & Brösel, 2013; Schacht & Fackler, 2009; Bieg, Kußmaul, & Waschbusch, 2009; Becker, Ulrich, & Bozkowski, 2015). The planning calculation should be based on an integrated approach (see section 4.5.9.2.).

An agreement between the parties in the indemnity regulation depends on many factors. The calculation of the compensation amount is important but is not the only relevant element. Further modalities, such as valuation date, financing deduction, payment extension and interest rate also have to be fixed (see section 4.6.). According to my research, the following findings reflect parties' interests and are in line within the confines of the law.

Business values have to be determined at a particular point in time, especially in the case of retirement when the outgoing partner loses their shareholder position by the end of the fiscal year, according to Article 132 HGB and Article 732 BGB. Subsequent business profits should be attributed to the remaining company shareholders. The date of valuation is therefore the retirement day. Obviously, the valuation has to be carried out later if certain information needs to be generated. Past figures of the last fiscal year and projections have to be available.

The following modalities should be seen as a useful framework, since deduction, instalments and interest rates are usually jointly agreed. The limitation of the single components may be higher and a deviation may be legally permissible. However, the outcomes of this study are based on fairness, soundness and reliability and are not intended to exhaust the limits. The individual components should always be viewed in context, since they are linked economically. As far as a deduction from the full value is concerned for the indemnity determination, up to 25% (Hannes, Kuhn, & Brückmann, 2008; Mecklenbrauch, 1999; Schäfer, 2013) seems to be acceptable (see section

4.6.4.2.). The payment extension of up to 5 years implies annual payments that begin in the first year (Schäfer, 2013; Stuhlfelner, 2007; Schöne, 2012; Heidel & Hanke, 2012; Schmidt K. , 2011). If the compensation is due immediately, discounts beyond 25% from the full value may be permissible. The outcome of this thesis shows that 30% could then be seen as an adequate maximum according to existing law (Ulmer & Schäfer, 2013; Butz-Seidel, 2004; BGH, 1993).

Overall, the withdrawing shareholder should receive appropriate interest for a deferred payment (Koch J. , 2015; Heidel & Hanke, 2012; Schöne, 2012; OLG Celle, 2014). The partners are free to agree on an interest rate due to private autonomy. The legal interest rate for default is 5% (HGB) or 5% point above the base rate (BGB). Due to the risk situation of the withdrawing partner that equals a subordinated loan, a reasonable rate should reflect the risk position. This is supposed to be higher than interest rates for bank loans (see section 4.6.6.). Therefore, an interest rate between the discount rate and an appropriate interest rate for shareholder loans is sensible.

It might be the case that the partners have disputes about withdrawing. To avoid immediate litigation, a structured procedure can be implemented in the articles of association. Even if interests change along the way, lengthy legal disputes are not in the interests of shareholders. The following 3-step approach takes the interests of the parties into account and offers the opportunity to come to an agreement before initiating a long-standing court case.

Usually the amount and the terms of the compensation cause the disagreement. In this case it is appropriate to arrange that the contractual modalities are applied on the liquidation value. The preliminary compensation consists of liquidation value less financing discount, divided by the number of instalments plus interest payment. This approach is based on the insights that the liquidity value of a company is the minimum value (Wollny, 2012; Drukarczyk & Ernst, 2010; Schröder S. , 2014; OLG Düsseldorf, 2009; OLG Frankfurt, 2015; OLG Rostock, 2016; Großfeld, 2012). On the one hand, the risk of the remaining

partner paying too high an indemnity is almost zero and is therefore not disproportionate. On the other hand, the withdrawing shareholder can be guaranteed to receive payments at least from the date of withdrawal and does not have to recourse to courts and to wait for years for a court decision. Uncontested amounts can be enforced directly, regardless of the final clarification.

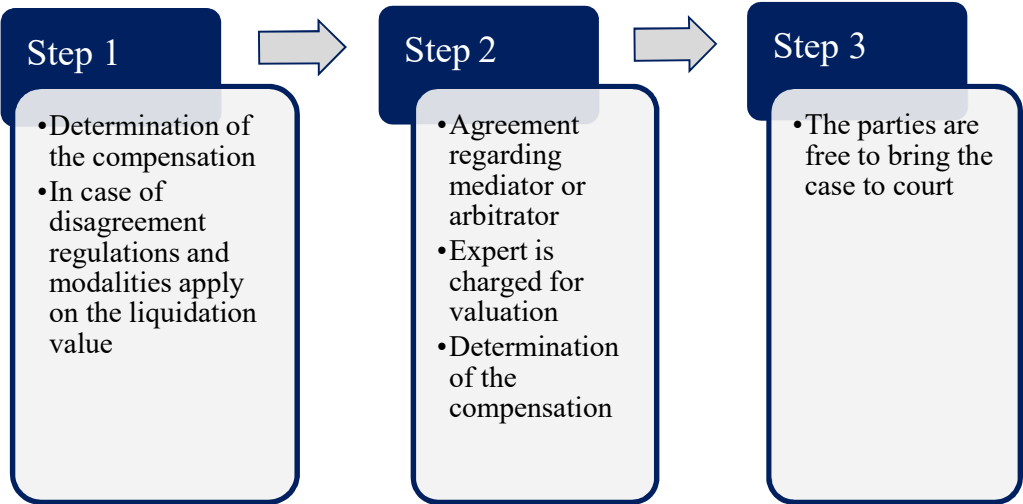


Figure 49. 3-step approach for compensation regulation

In this case, other options can be arranged, such as an intermediate stage. A mediator or an arbitrator can be charged with determining indemnity. The main advantage of this intermediate step is that it is a time and cost saving for all parties involved. The mediator or arbitrator, who has to be neutral, also charges an expert to calculate the indemnity. A qualified mediator should be a person that can assure neutrality and possesses experience and expertise to hire an expert for business valuation. Such a person could be the president of the Professional Association of Chartered Accountants, the president of the Tax Advisors or the President of the Professional Association of Consultants in Germany.

An agreement after this stage may result in the differential amount to the liquidation value being paid. If there is still disagreement, the parties are then free to negotiate or to bring the case to court. Moreover, at the time of the

foundation of the company, none of the shareholders knows who will be the first to withdraw. The overall determination process is shown in the following (see figure 50).

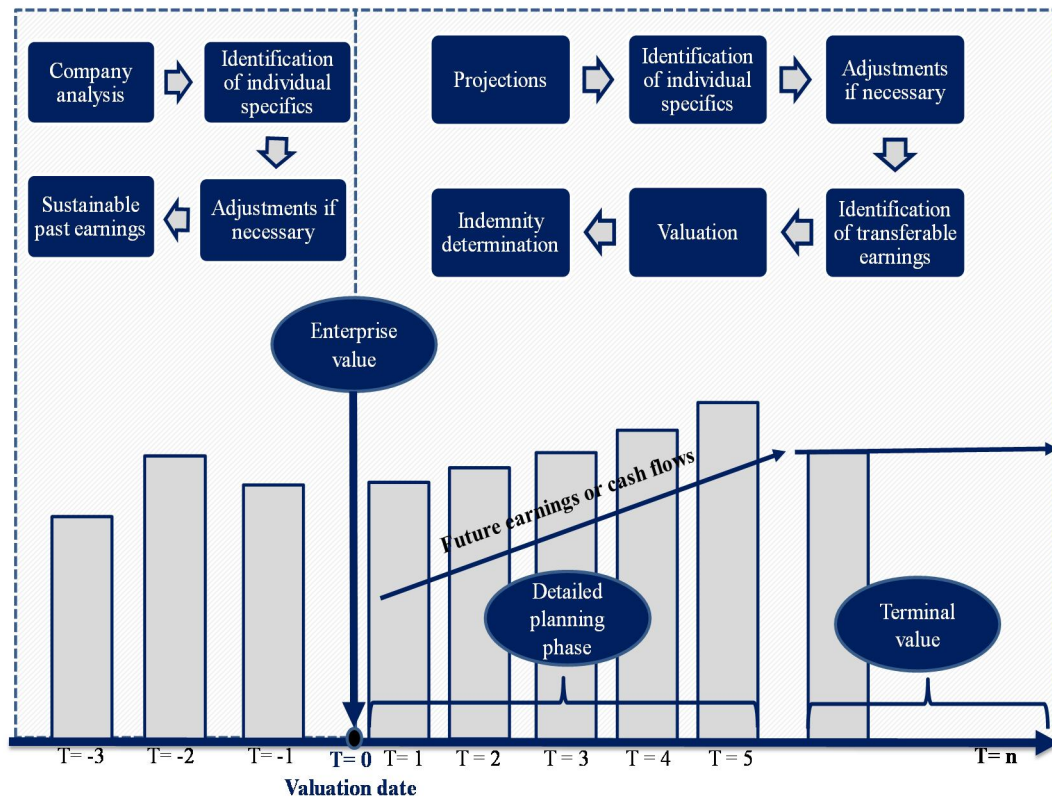


Figure 50. Indemnity determination process

An initial indemnity regulation may require an adaptation due to changes or amendments in legislation. Consequently, a regular review is sensible. This periodic monitoring should be implemented in the articles of association. The interests of the shareholders usually change at the time of retirement. A balanced regulation that takes into consideration the interests of all shareholders is best implemented when funding the company or when no shareholder intends to leave the company.

5.4.3. PRACTICAL RECOMENDATIONS

Based on the results of this thesis, the following recommendations are addressed in particular to shareholders of SMEs, M&A consultants, auditors, lawyers and other consultants for different situations.

-
- 1.) When founding a company, it is sensible to implement an indemnity regulation. Consequently, the following components (A-I) should be included.
 - 2.) In the case of existing companies, the article of association should be reviewed:
 - i) if there is a compensation regulation included and if not, the same components are recommended.
 - ii) if an indemnity regulation is included, a review for improvement potential should be carried out. Potential for optimization can be identified when parts of the following components are missing or in particular regulation are based on book value; Stuttgart method, simplified earnings method or disproportionate discounts of more than 30% and instalments over long period (more than 5 years). These regulations are bound not to be tenable from a legal point of view.

The following text may be helpful as orientation. The exact wording should be drawn up by a lawyer based on current legislation.

A) Will of the parties

Contrary to the statutory provision, the following terms regarding the indemnity shall apply to outgoing shareholders. We are aware that these terms differ from the statutory provision and within the existing framework of private autonomy but we agree with them unanimously. This is rooted in our shared desire to achieve the long-term goals and to avoid jeopardising further development of the company. A liquidity relief for the company is explicitly desired by all shareholders. Consequently, the outgoing owner does not receive the full value and the compensation is not due and payable immediately.

B) Retirement date

A shareholder is entitled to retire at any time with a period of notice of minimum 6 months by the end of the fiscal year (31.12.). This is agreed unanimously to ensure that the annual statement of the last year can be finalised at latest by the end of June of the subsequent year. The retirement date is the valuation date. The valuation and determination of the indemnity have to be completed by the end of September (or December). To make sure that these deadlines are met, the appraiser has to be appointed at the latest by the end of March (June) of the subsequent year. The first payment of the indemnity is due on the 30.12. of the subsequent year of retirement.

C) Valuation method

To determine the compensation, a valuation method that is recognised in business administration and law has to be used. At present the Discounted Cashflow method (or CEM) meets these requirements and therefore is to be used by the appraiser as the main valuation method. The results are to be checked for plausibility by a market-oriented method such as MM. To constitute the minimum value of the company the liquidation value is to be determined.

D) Financial statements

The management and the remaining shareholders of the company especially, ensure that the appraiser receives all information needed to value the company. In particular, these include: annual financial statements of the last three years and current figures. It shall also include an integrating planning that consists of profit and loss statement, Balance sheet, cashflow statement, investment planning for a period of 5 years. Additional information needed by the appraiser should be provided either. The planning is to be updated by the management each year by the end of November.

E) Appraiser

The appraiser has to be an expert in business valuation such as a tax-consultant, auditor, M&A consultant or management consultant. Neutrality of the appointed expert is crucial and s/he must not be conflicted and must not be related to the company, their shareholder or family members. The appraiser has to provide a declaration of neutrality. In this declaration, the appraiser has to state that for at least the last 10 years there was no advisory mandate for the company, their affiliate, owner or family member of the shareholder. In addition, s/he has to ensure that s/he has no conflict of interest. The company's management has to make sure that a neutral appraiser is appointed.

As an expert, the appraiser has to apply business valuation principles such as: dominated occasion as purpose of valuation, cashflow or earnings of the entire company as the basis for valuation (indirect method), identification of the valuation unit (responsible for the sustainable earnings), analysis of past figures as basis for projections, analysis of the sustainable earnings, projections as basis for enterprise value and principles of equivalence.

In case of the retirement of a shareholder, his/her influence and the future implications in sales and especially in earnings (cashflows) are to be quantified by the appraiser (transferable earnings). Due to the individual specifics of the company, it might be necessary to adjust the annual statements and the projections and the appraiser is authorised to implement these modifications from a neutral point of view. The projections have to be checked for their plausibility and consistency. Based on the projections, different scenarios shall be developed and their probability of occurrence estimated. An appropriate capitalisation rate shall be determined individually by the appraiser. Specific characteristics of the company (SME) shall be addressed, as already stated. General size discounts, fungibility discounts, discounts for non-diversification of the shareholder or risk surcharges for the probability of insolvency shall not be considered.

The overall risks of the company shall be addressed in the estimated cashflows and the capitalisation rate. The valuation process has to be transparent and comprehensible and assumptions and modifications have to be stated clearly.

F) Level of indemnity and modalities of payments

The appraiser determines the equity value of the company at retirement date. The indemnity for the outgoing owner is calculated by equity value multiplied by the shares of the retiring partner (indirect method) and a discount of 25% (x %) is subtracted due to the above-mentioned liquidity relief for the company. The amount is due and payable in 5 instalments by the end of each year, beginning on 30.12. of the subsequent year of retirement. It is agreed that interest payment on the indemnity amount is a fixed rate of 8 % from the date of retirement. The interests are due and payable on the 30.12. of each year until the indemnity is repaid, beginning with the subsequent year of retirement.

G) Disagreement

In case of disagreement regarding the appraiser or the indemnity determination, the shareholders agree concordant that it is the main intention of all shareholders to avoid a cost saving legal dispute, even though each party is entitled to appeal to court at any time, according to statutory provision. The following steps are agreed upon: In case of disagreement of the indemnity calculated by the neutral expert, all the payment modalities will apply, based on the liquidation value of the company multiplied by the shares of the outgoing partner. The parties strive to achieve an agreement on the indemnity. A mediator is asked to appoint a neutral appraiser to determine the indemnity. The mediator is the current president of the Professional Association of Chartered Accountants (or the president of the Tax Advisors or the president of the Professional Association of Consultants).

H) Periodic review

Due to possible changes in legislation or insight from research in business administration, a regular review of this compensation regulation is agreed. The management of the company has to assign a lawyer to review this regulation every 3 years, beginning with the xx.xx.xxxx.

I) Severability

If any term or provision of this indemnity regulation is found by a court to be illegal, invalid or otherwise unenforceable, this shall not affect the other terms or provisions hereof or the whole of this agreement. However, such terms or provisions shall be deemed modified to the necessary extent in the court's opinion to render such terms or provisions enforceable. Furthermore, the rights and obligations of the parties shall be construed and enforced accordingly, preserving to the fullest permissible extent the intent and agreements of the parties herein set forth.

5.5. CONTRIBUTION TO KNOWLEDGE

In this thesis I show how to determine the compensation of withdrawing shareholders of German SMEs, which valuation methods should be used and if and how the characteristics of SMEs should be considered. I also identify how a balanced reconciliation of interests at the compensation calculation can be achieved through the implementation of a compensation regulation in the partnership agreements.

As described in the literature research chapter, there are research papers for the valuation of SMEs and compensation of private companies or stock companies which only refer to partial aspects or legal forms. These partial aspects include the valuation of SMEs in general, compensation regulations of private companies, compensation at suspension of a shareholder, compensation of the heirs on the death of a shareholder or appropriate compensation of stockholders within the scope of a squeeze-out of stock corporations. SMEs have different legal forms and the retirement of a shareholder has the same

impact due to the inherent qualitative specifics of SMEs independent of whether it is a partnership or a corporation. In case of the death of a shareholder, different private autonomous regulations are allowed, i.e. to exclude any compensation for the heirs (Arens & Tepper, 2013; Jula & Sillmann, 2016).

Shareholders of a stock company who want to retire can sell their shares at stock exchange. In the case of a squeeze-out, the indemnity is determined under the German Stock Corporation Act (Matschke & Brösel, 2013). The principle of private autonomy does not apply and the shareholder is entitled to receive the full economic compensation for losing the shareholder position (Naumeier, 2015; Karami, 2014), i.e. liquidity discounts or deferral payments cannot be agreed. The stock price is also considered as a basis for the compensation (Keller M. , 2015; Langguth, 2008). In case of a suspension for serious reasons such as insolvency proceedings or criminal activities of the shareholder, lower compensations than in the case of retirement are legally permissible (Grunewald, 2008; OLG Karlsruhe, 2013; Ostermaier, Vogt, & Vogt, 2016). The legislator has not provided a clear determination but a complete exclusion of indemnity is inadmissible (BGH, 2014). In addition, most of these papers were usually characterized either juristically or economically and the interdisciplinary works only refer to partial aspects up to date. Therefore, all available works have different foci and only address the research questions of this thesis in parts.

Some aspects of this thesis have already been researched in other studies. I considered and integrated these findings by expanding existing knowledge by integrating them in the outcomes of this work and I have made an additional original contribution to knowledge, in particular regarding the determination of indemnity.

RQ	Contribution
<ul style="list-style-type: none"> • What valuation method should be used to determine the compensation for withdrawing shareholders of German SMEs? • What characteristics of German SMEs have to be considered in determining indemnity? • What specific compensation regulations should be included in the articles of partnership - taking into consideration the existing legal framework and the interests of all shareholders? 	<ul style="list-style-type: none"> • Generation of a value concept by using different valuation methods that considers the transferable profitability and the interest of the parties within German SMEs • Definition and determination of 'full' value as a basis for indemnity determination for German SMEs • Identification and definition of qualitative SME characteristics that have to be considered given their possible influence on performance • Definition of the appraiser's role and their qualification • Development of a framework for indemnity determination

Table 22. Main contribution of the thesis

One major contribution of this thesis is the generation of a value concept that is suitable for indemnity determination by using different valuation methods that takes into account the current market situation and is appropriate for SMEs and considers their specifics. Transferable earnings are crucial after the retirement of a shareholder. Therefore, asset based, or tax induced, methods have their limitations. Asset based methods can contribute the minimum value and the MM a plausibility check, based on current market data. The SCEM is not adequate because of its uniform discount rate and focus on past orientation that does not consider possible changes within SMEs in case of retirement. There are no previous studies that combine the different valuation methods and take into account the qualitative characteristics that influence the performance of SMEs when determining the indemnity of outgoing owner.

Another primary contribution is the qualitative definition of SMEs. It identifies the need for a rethinking of the standard definition of quantitative factors of SMEs. The diversity and range of SMEs due to their stakeholders requires a qualitative approach to definition in terms of characteristics that influence performance. This research recognises the inherent

interconnectedness between the shareholders of the SMEs who shape the company, and their influence on generating earnings or cashflows. The characteristics of each SME and the influence of the shareholder vary. These qualitative characteristics of SMEs that influence the performance of the company were revealed. The stability of SMEs is often dependent on people. When leaving the company their impact on earnings or cashflows, and also existing specifics, has to be taken into account for indemnity determination.

The consideration of transferable profitability in case of retirement is one main insight of this thesis. The research has also added to the long-standing debate of how to consider the specifics of SMEs by providing a definition of characteristics that influence the value of a company. In this context the fact in this thesis emerges it that the size of a company is not relevant for the value. Previous studies that define SMEs quantitatively and qualitatively are available, but not regarding the influence of qualitative characteristics on the performance and how to consider these in determining the indemnity in case of retirement.

An additional contribution is that this research also identifies the necessity to define and determine the full value as a basis for indemnity determination since the legislator has failed to do so and there is no consistent definition in literature. Although the future development is uncertain, past earnings or cashflows are not suitable for determining the indemnity. Business models in SMEs in particular are undergoing changes due to progressing globalisation and digitalisation. A value based on a linear continuation of the past disrespects an interest balanced regulation of all parties in the case of retirement.

This research clearly shows the complexity of a valuation by adopting different methods and in particular analysing and understanding the business model of the company. This complexity does not differ from valuing listed companies and for valuation, expert assistance is needed. This complexity, the existing uncertainty of future orientated valuation methods, the assessment of

financial planning and the consideration of the characteristics of SMEs demonstrates the subjectivity of the process and the existing discretionary of the valuer. To address this subjectivity and the necessary neutrality in terms of interest, the appraiser has to meet specific requirements for balanced regulation. This can be achieved by defining the appraiser's role and highlighting their required qualification, professional background and experience.

The research proves the preference of safeguarding the company over the individual interest of the outgoing shareholder as long as the outgoing owner is not unreasonably disadvantaged. However, legal boundaries restrict the existing private autonomy of the shareholders in private companies.

An additional central contribution of this study is the development of an interdisciplinary theoretical framework for the determination of indemnity, which has to analyse the existing knowledge in business administration and law but also to identify the legal constraints. This theoretical basis provides a greater insight for addressing the influence of characteristics of SMEs and the interest of the parties in the different disciplines when determining the indemnity. This interest balanced framework should be implemented in the article of association, either for new or for existing companies to increase clarity for the outgoing and remaining SME shareholders and reduce the probability of legal disputes, in particular the new generated 3-step approach. A revision of existing compensation regulation and an implementation of adequate compensation regulation are necessary due to the possible unethicity of existing regulations and the scope of the demographic trend in Germany in particular. No attempts in previous studies were made to generate a framework for implementation in the articles of association to the extent done here. Recommendations such as to implement a valuation method, to hire an expert in case of retirements, maximum liquidity discount or payment scheme could be found. A framework that considers the indemnity process and all components (see 5.4.2.) does not exist.

A research work which combines different aspects such as the qualitative characteristics of SMEs, valuation methods, indemnity determination and compensation clauses of this thesis did not previously exist. The present study attempted to create a synthesis between law (legal studies) and business administration that allows for a realistic and feasible solution for the compensation determination for SMEs and removes existing uncertainties. Scientific progress has been achieved by answering the research questions and meeting the research objectives.

The above-mentioned findings and results are newly generated by this research work. The outcome of this work contributes to scientific theory as well as for practical application and is therefore beneficial for academics and practitioners alike. The knowledge can be used in particular as a basis for jurisdiction as well as for business management, as these findings are substantiated across disciplines. Therefore the intrinsic value of this publication is to share the results of the research with everyone who is interested in this topic. Furthermore the outcomes are beneficial in order to ease the withdrawal of shareholders from many German SMEs.

5.6. LIMITATIONS

As stressed by many authors (Ghauri & Gronhaug, 2010; Saunders, Lewis, & Thornhill, 2016; Eriksson & Kovalainen, 2016), every research project – independently of how well it is conducted – has some limitations and this study is no exception. By using a qualitative approach and semi-structured interviews as the primary data collection method some inherent limitations might exist. In qualitative studies, the analysis of data is influenced by the subjectivity, values, professional background, skill and experience of the researcher, and the interpretation and results depend on them. It is difficult to repeat the semi-structured interview exactly (Morris, 2015; Zikmund, Babin, Carr, & Griffin, 2013), in particular because the questions are more focussed on the context and are usually asked slightly differently (Bogner & Menz, 2009; Gray, 2014) to capture as many facets of the specific experts' knowledge (Flick, 2015). Moreover, the decisions that the researcher must

make about the relevance of the responses of open-ended questions when analysing the interviewees' 'answers' can have an impact on the outcomes. Therefore, a different researcher using identical data may come to diverse results.

Another limitation might arise from the professional groups of the participants – even if the respondents were chosen thoughtfully to ensure that the research questions likely to be answered and the objectives of the study are met (Saunders , 2012) – as the answers provided are biased by their professional and personal views. Accounting for the research at hand, diversity was necessary, so I sought to give voice to experts from diverse professions and therefore qualifications and experiences who might have different perspectives on the research. Conducting semi-structured interviews with another mix of professions might produce different results.

Conducting this research in the specific German environment is a further limitation. Even in comparable environments, or countries such as Austria, where the jurisdiction has similarities to Germany, differences still remain. To mention one prominent example, the consideration of the probability of insolvency (POI) when valuing SME is rejected in Germany (see section 4.5.2.2.), whereas in Austria auditors are, according their guidelines²³ (Kammer der Wirtschaftstreuhänder, 2014; Rabel, 2014), free to use POI when valuing SMEs in dominated situations.

Another limitation of the study is the specific and unique situation of the valuation. The indemnity has to be determined in the case that an owner of a SME retires and has to be compensated by the company according to article 738 German Civil Code. This dominated situation requires the scrutiny of the legal factors that influence the process of indemnity determination and, in particular, the accepted valuation methods. These findings may not generalize to non-dominated situations, since the parties can negotiate the change of the

²³ Professional Guidelines of the Technical Committee for Business Economics and Organization of the Institute for Business Economics, Tax Law, and Organization of the Austrian Chamber of Public Accountants and Tax Advisers for the Valuation of Businesses

ownership and are free to use also other valuation methods. Therefore, in indemnity determination, there is a strong focus on case law. However, the developed valuation concept, that takes into account the specific characteristics of SME, can be transferred to other valuation occasions, in particular the consideration of transferable earnings that is also important in business successions.

5.7. SUGGESTIONS FOR FURTHER RESEARCH

The statements by the interviewees, the suitability of valuation procedures and the approach used to calculate compensation are related to the respective research interest. Therefore the findings and results obtained do not necessarily apply to other universal occasions, scenarios and constellations such as the valuation of SMEs in the event of a sale or as basis for the calculation of inheritance tax.

Despite the aim to develop a framework for indemnity regulation that balances the interests of all shareholders, company valuation and in particular the determination of compensation should be understood as a form of compromise within a range of values that takes account of the latest findings of business administration. However, the manifold interdependencies identified in this study cannot be resolved by means of a model approach. This is rooted in the specifics of SMEs and their heterogeneity but also in the interrelation of business management and law within the research topic.

The further development in business administration and an increasing market transparency for SMEs may bring about significant improvements with regard to the valuation of non-listed companies. It cannot be denied that due to the uncertain future development there will always be some uncertainty with the total valuation methods. In this context, there is room for further research. More market-related transparency would facilitate and be beneficial for the determination of adequate cost of capital. Furthermore, how can the findings of this thesis be applied to other valuation occasions - especially other dominated valuation situations and sales occasions? The question of

transferable earnings for SMEs is obvious when the ‘former’ shareholder is no longer in charge. There are further possibilities to assess the quantifiable implication of withdrawing.

The results of this thesis are further based on the situation in Germany with its own legislation and business management research but also professional groups that perform valuations. Although there are some commonalities regarding valuation in German-speaking countries, these results cannot be transferred to Austria or Switzerland without further research. There is further scope to research legislation abroad beyond the German-speaking countries, in particular for SMEs with similar situation in other advanced economies.

Evidence that the company is disadvantaged in the case of an owner’s retirement could not be found in literature. Further research may be necessary to investigate the consequences of indemnity regulation that disadvantages the company and endangers its continuity.

I will have the opportunity for further research. I was asked by the Berlin School of Economics and Law to participate in a three-year research project that is funded by the Federal Ministry of Economy. The goal of the project is to develop a valuation tool for SMEs.

5.8. CONCLUSION

Research in this area was justified for the following reasons:

- significance of the SMEs in Germany
- demographic development
- non-existent indemnity regulation in articles of association
- existent but unsecure regulations
- reconciliation of interests between outgoing and remaining partners
- state of the research in business administration regarding SMEs
- lack of precise definition of the legislator

This chapter answers the relevant research questions and resolves the objectives. It offers a framework for how to proceed with the determination of the indemnity if a regulation does not exist or is not likely to be valid. One of the significant results is that an indemnity regulation should be implemented and if one is outdated, it should be updated according to the findings of this thesis. The overall results show that they were valuable and that due to the given rationale of this study these results are applicable in practice. They can also be considered as recommendations i) to examine existing regulations and if necessary to adjust them ii) to implement these findings in new articles of association.

This thesis identified the following facts:

- SMEs are significant for business valuation as they are important to the German economy and due to their number, the potential of indemnity determination for outgoing owners is high.
- There is a requirement for non-discrimination for all shareholders which can be implemented with an interest-balanced regulation, i.e. each shareholder has the same rights and obligations when leaving the company.
- Impartiality is crucial; the process of indemnity determination should be transparent and performed and documented by a neutral third party.
- Even if these regulations cannot ultimately prevent a legal dispute, the fundamental right cannot be waived and it is not intended to. The 3-step-approach might prevent going to court immediately, enable an agreement and avoid long-lasting legal disputes.

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APPENDICES

APPENDIX I

The German Court System

The German court system is explained in the following in order to classify the judgements cited according to the instances²⁴.

Compensation calculations are subject to German civil law. In civil law cases, the civil jurisdiction is responsible under § 13 of the Judiciary Act (Bundesministerium für Justiz und Verbraucherschutz, 2016). It has a four-level structure, which is divided according to country and federation. The district courts, regional courts and higher regional courts are courts of the federal states and the Federal Court is the court of the Federation (Zerres, 2016), as shown below.

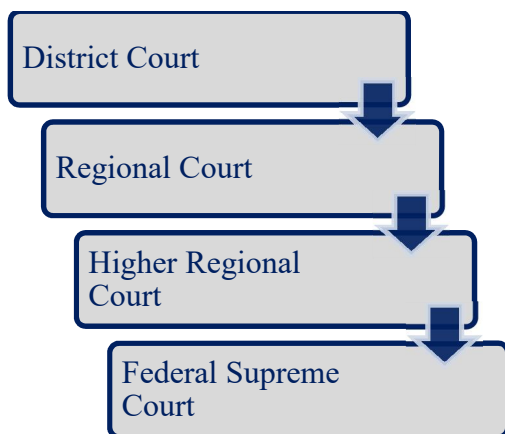


Figure 51. German Court System

District courts are basically responsible for civil cases up to a certain sum in litigation or if responsibility was especially determined § 23 (Bundesministerium für Justiz und Verbraucherschutz, 2016). A single judge heads the district Courts according to § 22 (Bundesministerium für Justiz und Verbraucherschutz, 2016).

²⁴ Different judicial authorities

The regional courts are responsible for civil cases in the first instance from a certain sum in litigation. Beyond that the regional courts decide on appeals and complaints against decisions of the district courts in civil law cases according to § 71 (Bundesministerium für Justiz und Verbraucherschutz, 2016) GVG and consist of three judges according to § 75 (Bundesministerium für Justiz und Verbraucherschutz, 2016).

The higher regional courts are responsible for appeals and complaints against decisions of the regional courts in civil law cases, according to § 119 (Bundesministerium für Justiz und Verbraucherschutz, 2016) GVG and consist of three judges according to article 122 (Bundesministerium für Justiz und Verbraucherschutz, 2016).

In civil cases, the Federal High Court decides on the appeal of revision, the leap-frog appeal, the appeal, and the legal complaint (article 133 GVG) and consists of five judges according to article 139 GVG.

Level of Compensation

Contrary to the wording of Article 738 BGB, literature (Altmeppen, 2013; Heidel & Hanke, § 738 BGB, 2012) and case law (BGH, 1984) agree that the compensation is set on the basis of a going concern value, and not on the basis of its liquidation value. The liquidation value is only relevant when the continuity value is lower than the liquidation value, thus representing the lower limit (Hopt, 2010).

These values are recognised in terms of going concern aspects, i.e. not at break-up values but at the real values an active company requires for the re-acquisition (Großfeld, 2012). This is the value the goodwill is to be added to (Schäfer, 2013). Goodwill is measured as the difference in value of a going concern beyond its net asset value (Merkt, 2010).

Knoll (2015) states that the value is estimated on the basis of a total valuation of the company even if there is no mandatory method laid down by

case law (Karami, 2014). Shares of the company are valued in two steps. Firstly, the value of the company has to be established. Secondly, the share of the withdrawing shareholder has to be derived, which complies with the so-called ‘indirect method’ (Schöne, 2012). From a legal point of view, the separate valuation of the capital share can be ruled out according to existing case law (BGH, 1991) and the dominant opinion in legal theory (Heidel & Hanke, 2012), since the value of the company's assets is assumed under the wording of Article 738 (2) BGB and not that of the individual shares (Hüttemann, 1998). Furthermore, it is clear from Article 738 (1) sentence 2 that the withdrawing shareholder has to be placed in the same position as in the event of a liquidation (Schäfer, 2013). Although the wording of the law proceeds from a liquidation, the withdrawing shareholder cannot demand liquidation and the liquidation value must be considered fictitious or as a continuation value (Schöne, 2012; Schäfer, 2009).

Procedural enforcement

The withdrawing shareholder has several legal opportunities with regard to enforcing the amount of compensation. Under Article 738 BGB, in conjunction with Articles 242, 259 BGB and following, he is entitled to request the presentation of a regarding balance sheet. The company is obliged to draw it up to carry out a valuation of the firm in order to determine the compensation entitlement (Schäfer, 2013). The financial account has to be drawn up by the managing directors of the company (Kilian, 2014). The withdrawing shareholder is entitled to be involved in the preparation of the balance sheet, and if it proves necessary, to employ the services of an expert of his choice (BGH, 1957). In the event of a failure to draw up such a financial account, the withdrawing shareholder has the right to assert these claims by taking legal action in the form of multistage proceedings (Lorz, 2014; Zöllner, 2014; Roth, 2015). Such a trial is enforced in accordance with Article 887 of the German Code of Civil Procedure (ZPO) (Schmidt K. , § 131 HGB, 2011). This means that if the obligor does not fulfil his obligation, then the creditor is entitled to employ a third party to act at the expense of the debtor.

In the event that the withdrawing shareholder considers this valuation or calculation to be totally or partially incorrect, he can take legal action to request the drawing up of a new balance sheet by an expert (BGH, 2011). In doing so, he must explicitly state the rationale or substantiate the items considered inaccurate in the compensation computation prepared by the company (BGH, 1957). As a further alternative, the withdrawing shareholder is entitled to determine the compensation amount himself, provided he is capable of doing so, and can subsequently enforce the approval of the company or of the remaining shareholders respectively (Schäfer, 2013). He is not obliged to accept a calculation basis prepared by the company and may therefore request access to the accounts of the corporation asserting his claim under Articles 242 and, 810 BGB (Graf von Westphalen, 1982; OLG Naumburg, 2013).

Limits of Private Autonomy

In principle, the freedom of contract that persists in the field of company law and case law recognises the admissibility of restrictions on compensation rights (Sutschet, 2016; BGH, 1991; Ulmer, 2010). This freedom of contract includes the freedom to choose a contractual partner as well as freedom in terms of content (Schulze, 2014). In partnership law, there is contractual freedom, particularly with regard to the contractual design of the relationship between partners (Enzinger, 2016). This pronounced private autonomy of the partners is a key feature of partnership law and is of high significance (Roth, 2014; Schäfer, 2009). In accordance with Article 109 of the German Commercial Code (HGB), the legal relations between the partners and towards the company expressly adhere to the articles of association (Raiser & Veil, 2010), unless the protection of an individual or crucial general interest objectives require otherwise (Psaroudakis, 2015). This is in line with the statutory model of the interaction of the partners in a partnership being characterised by trust and these partners normally having personal relationships they regulate

autonomously by means of contractual arrangements. Since such persons are versed in business, there is good reason for this competence assumption.

Prohibited Restriction on Termination

In accordance with Article 723 (1) sentence 1 of the German Civil Code (BGB), a partner is entitled to terminate his partnership with statutory notice at any time (Bergmann, 2010). The right to terminate the partnership belongs to the fundamental principles of corporate law and represents a mandatory rule which is not negotiable (Schäfer, 2013). Compensation clauses that include the complete exclusion of compensation or clauses that are virtually equivalent to such an exclusion in terms of their arrangement or restrict termination contrary to the above provisions, cannot be effectively agreed (Gregoritza, 2011; Hopt, 2010). The decision of a partner who wishes to terminate his partnership must not be adversely affected due to the disadvantageous economic effects set out in the articles of partnership (BGH, 1994). The same applies in the event that there has been no intention to circumvent this right (Schäfer, 2013), or if the withdrawing partner has not actually been independent in making his decision (Kilian, 2014). Thereby, this agreement is typically suited to induce the shareholder willing to withdraw to waive his right to terminate the partnership (BGH, 1989).

Grounds of compensation clause

When setting up a company, the partners agree on the objective the company intends to pursue. As a rule, the company is established for an unlimited duration as a basis for the permanent generation of income for the shareholders (Arens & Tepper, 2013; Matschke & Brösel, 2013). After all, they have normally invested capital and labour and therefore bear an entrepreneurial risk. The investment usually pays off within specific periods of time and the withdrawal of a shareholder alters the basic conditions for the remaining shareholders (Wangler & Dierkes, 2006). Therefore, the compensation clause serves, *inter alia*, to ensure planning security and the longer-term continued existence of the company.

The withdrawal of a partner can take place at any time and is therefore not foreseeable. Legal regulations require that the compensation entitlement is calculated based on the full value of the company. The consequences resulting from the payment of the compensation, represent an unscheduled financial burden, particularly for medium-sized enterprises (SME). Usually such funds are tied up in the company (Schütte-Biastoch, 2011), thus, the latter does not have the necessary liquidity. As a result, the company may dispose of its assets or raise credit funds. The company's room for strategic manoeuvre is thus restricted and the remaining partners are put under pressure to act. Consequently, it is precisely in the interest of the remaining partners to spare the hidden reserves of the company's assets (Strohn, 2014) and additional debt should be incurred only for investments that are conducive to the company's purpose. The company should, as far as possible, avoid compromising or burdening its assets, since it is paramount to ensure the long-term existence of the company (Piehler & Schulte, 2014; Großfeld, 2012). Therefore, the function of such agreements is to safeguard the company capital and liquidity (Schäfer, § 738 BGB, 2013).

The statutory entitlement to compensation at full value provides a large incentive for withdrawal (Koch A. , 2014; Neuhaus, 1990). Therefore, restrictions on compensation may function as an appropriate tool to encourage shareholders to remain in the company and to prevent irresponsible spontaneous withdrawal (Reuter, 1973; Sieben & Sanfleber, 1989; Kindl, 2011). The fact that the withdrawing partner is forced to sacrifice part of his assets may promote a deliberate withdrawal. If necessary, the original interests of the company and the achievement of these objectives can thereby be secured (Lorz, 2014). In this respect, restrictions on compensation also have a disciplinary function (Wangler, 2001; Kort, 1995).

In particular, these stipulations include agreements on the due date, the calculation of the compensation and the terms of payment. For this reason, articles of association frequently include compensation clauses that deviate

from the legal regulations that have a conflict-reducing effect as well as a mediation and simplification function (Bacher & Spieth, 2003; Strohn, 2014).

In accordance with Article 271 BGB, the compensation amount is due in full immediately upon the shareholder's withdrawal from the company. In practice, agreements can be deferred over a few years or payment made by instalments over a period of several years (Piehler & Schulte, 2014). According to case law, such agreements are effective if they take adequate account of the interests of the company as well as of the interests of the withdrawing shareholder (Koch J. , 2015). In this regard, the legislator also provides for limitations, depending on maturity, similar to those on the level of compensation of the withdrawing shareholder. This means, a balance of interests is required, especially if the compensation to be paid provides for the old age of the withdrawing partner and the termination has not been put beyond his financial reach. Provision for old age is particularly important in the case of SMEs as these partners are normally not diversified in terms of assets (Nestler, 2012). Furthermore, the withdrawing shareholder could be incumbent for taxes payable in the short term (Drukarczyk & Ernst, 2010). If applicable, the prohibition on assignment of compensation claims according to Article 399 of the German Civil Code (BGB) in the partnership agreement, constitutes a major additional difficulty. If the withdrawing shareholder's compensation claim does not serve as collateral for potential lenders and he does not hold alternative assets acceptable as collateral, the refinancing from other sources intended to improve his liquidity is even more difficult.

There are only sporadic references in case law to this question and they reveal no clear line or rationale for their ineffectiveness with regard to maturity. Deferring the first payment until sometime in the distant future e.g. 15 years (BGH, 1989), making payment in three instalments after five, eight and ten years (OLG Dresden, 2000) or the imposition of the risk of the company's insolvency on the withdrawing partner (Schäfer, 2013;

Mecklenbrauch, 1999), indicate whether the legislator considers the respective regulation inadmissible. This extended withholding of the compensation is tantamount to a ‘forced loan’ and places the withdrawing partner at an immoral disadvantage (Piehler & Schulte, 2014; OLG Frankfurt, 2011).

Default interest rate

The legal default interest rate according to § 288 BGB is at present 5 percentage points above the base rate. The base rate is published by the Deutsche Bundesbank according to § 247 BGB. The development of the base rate can be seen in the following overview. This refers to outstanding debts.

Base rate in %	Valid since:
- 0.83	01.01.2015
- 0.73	01.07.2014
- 0.63	01.01.2014
- 0.38	01.07.2013
- 0.13	01.01.2013
0.12	01.01.2012
0.37	01.07.2011
0.12	01.07.2009
1.62	01.01.2009
3.19	01.07.2008
3.32	01.01.2008
3.19	01.07.2007
2.70	01.01.2007
1.95	01.07.2006
1.37	01.01.2006
1.17	01.07.2005
1.21	01.01.2005

Table 23. Base rate according to Article 247 BGB (Deutsche Bundesbank, 2016)

The HGB predefines a default interest rate for companies of 5 % according to article 352 HGB

APPENDIX II

Literature Review

Conducting a literature review (LR) is essential for every research project (Hall, 2008). A researcher has to become familiar with existing knowledge otherwise s/he will not be able to make a critical evaluation of the results of the existing studies (Boote & Beile, 2005), which is a necessary prerequisite for any research (Hart C. , 2001). LR can be conducted with a systematic or narrative approach (Kiteley & Stogdon, 2014).

Systematic LRs are regarded as methodical, transparent, reproducible, comprehensive and able to minimize bias (Tranfield, Denyer, & Smart, 2003; Buchanan & Bryman, 2007; Corcoran & Roberts, 2015). Boland, Cherry and Dickson (2014) point out that to ensure quality systematic LRs are usually undertaken by a team. This can be time consuming and expensive. Equally, systematic reviews are often more related to quantitative studies and positivist philosophies (Togerson, 2003; Smailes & Street, 2011; Bryman, 2016). This is not pursued in this research.

Narrative review also offer more in-depth insight of the economic importance of the affected companies, namely SME, especially given their qualitative characteristics, as shown in section 2.2. Furthermore, LRs are usually critical in order to analyse and assess the results of existing research and to show both important contributions and existing gaps or contradictions (Jesson, Matheson, & Lacey, 2011; Thomas, 2009). Additionally, LRs should offer clear implications for further research (Baumeister & Leary, 1997) and enable conclusions to be drawn for further research, e.g. how to shape research design to avoid the identified weaknesses and address the identified problems, gaps and contradictions.

Some have argued that narrative reviews are not standardised, transparent or sufficiently rigorous (Carey, 2012) and may produce a subjective view or biased conclusion (Mallet, Hagen-Zanker, Slater, & Duvendack, 2012; Schmidt & Brown, 2015; Bowling & Ebrahim, 2005; Card, 2012).

Nevertheless, despite this criticism NR have other advantages. As Rousseau (2012) emphasizes, they offer an insight into the available evidence and can be beneficial for generating and sharing different proposals, ideas and perspectives. The problem in question requires different perspectives with regard to different disciplines but also in connection with the specific characteristics of the particular SME.

This LR had to provide insight into different topic areas, but also disciplines, that are interconnected. The present study covers different subjects such as accounting, finance, economics and law. Given the difficulties in delimiting and defining the disciplinary boundaries of the research, research knowledge on this topic can be best generated through an interdisciplinary approach. As Hunt and Colander (2016, p. 3) appositely state, “*all knowledge is interrelated*”. As such interrelations and the approaches and paradigms used within business management and social science might be different, carrying out a systematic review would prove difficult (Jesson, Matheson, & Lacey, 2011). Therefore, in qualitative studies, particularly in business and management, reviews are usually narrative (Symon & Casell, 2012).

I am aware of possible bias and so have attempted to reduce subjectivity through a critical research stance. This means not using studies to make my arguments more credible but looking at whether the studies have provided evidence, or at least how conclusions were generated. Adopting a paradigm that is qualitative and more interpretative is usual when doing research, especially with people (social interaction). This requires qualitative data collection methods like semi-structured interviews. As stated by Rubin and Babbie (2010), qualitative research is effective for studying nuances in relation, behaviour and specifically in social research processes. This is the case in the present study. Narrative LR can be expedient to increase the perception of subtleties that were not revealed in prior studies (Corbin & Strauss, 2008). The traditional literature review approach is therefore more appropriate to this research.

Based on the RQ, the LR focuses on three main issues; the legal framework, the specifics of SME and the valuation methods. The research specific literature was reviewed in different subject areas, i.e. legislative texts, law journals and books, legal commentaries, verdicts and finance and business management literature. The LR in this thesis has the following aims:

- To identify conflicts, gaps or lack of consistency in the relevant research topic.
- To formulate and justify the research questions and objectives of the study.
- To offer and stress the significance and the purpose of the study.
- To explain the topic, especially the existing interrelations of the different areas.
- To provide a complete understanding of the topic and to state the existing knowledge in business valuation regarding SMEs from different point of views, both business administrations and law.
- To demonstrate the existing guidelines regarding indemnity calculation of outgoing shareholder and to distinguish whether they are sufficient or need improvement.
- To justify and validate the findings from the conducted interviews.

Summary Literature review

The literature research has been a continuous process that has served several purposes. In the first instance, it was meant to provide an overview of the current state of research on valuations of SMEs, particularly with regard to the regulation of compensation for withdrawing shareholders. As a lecturer in business valuation, I was already interested in the pertinent literature available, prior to working on this thesis. During the research phase, I researched the relevant literature at regular intervals and became familiar with the current literature. However, from my perspective, it was imperative for this thesis to systematize the procedure. This is also the only way to ensure new publications that might be relevant are not missed. I therefore researched on different days respectively, especially using the search options

already mentioned, provided by German university libraries and based on the categorisation outlined in section 2.1. In this way, a considerable number of search results could be ruled out on the basis of the title. I then read the abstracts of the remaining articles, monographs, books, reports and working papers to select those most relevant to the topic. This material was either downloaded or obtained by library loan. I thus reviewed the selected publications critically with regard to new findings. Proceeding from a continuous literature review the relevant information was not truly novel as it had been available before. However, there was emerging evidence and some partly new articles that confirmed the findings already recorded.

To collect data, it is necessary for sufficient or adequate literature to be available on the specific topic (Xu, 2008) The literature research shows that there is already comprehensive literature on the issues touched upon in the present study, such as, for instance, research papers, books, monographs and articles. There is a vast amount of pertinent literature on business valuation as well as on the valuation and the special characteristics of SMEs. Moreover, there are research papers on the determination of compensation for withdrawing shareholders from both a business management and a legal point of view and occasionally also from an interdisciplinary perspective. These studies are related to partnerships or corporations, but also to stock companies. Apart from the voluntary withdrawal from a partnership or GmbH (private limited company), the focus is also on the expulsion of a shareholder as the so-called squeeze out in case of stock companies.

Although departures due to expulsion or death both entail a compensation determination, these situations are not identical and the compensation regulations differ accordingly. Some research papers cover parts of the research questions, however, an identical study or one that differs only with regard to the research design could not be identified. There is no specific research on the compensation determination in the case of termination which simultaneously considers the special characteristics of SMEs, the identification of the current most suitable methods and which takes

appropriate account of the interests of the parties involved, in both the legal and business-related context.

The literature researched covers a period of 15 years, from 2000 to 2015/2016. The LR provided me with an insight into the existent body of knowledge and a justification for the research questions.

Small and medium sized enterprises

It is often observed that SMEs have found a niche that is not viable for companies, due to their scale. This position is endorsed by technical know-how that has been refined and preserved in medium-sized companies through generations. According to a study by Deutsche Akademie der Technikwissenschaften e.V. & Bundesverband der deutschen Industrie e.V. (2015), nearly 50% of all hidden champions come from Germany. Simon (2007) defines a hidden champion as: a market leader or at least no. 2 or 3 in the respective market segment whose public perception is rather poor. Nevertheless, SMEs usually feature limited service and product diversification and operate predominantly in local markets (Zeidler G. , 2006; Helbling, 2015; Castedello, et al., 2006), even if an increase in the export share of SMEs can be observed. The business model is manageable and depends on a limited number of customers and suppliers. On the other hand, they display a great customer proximity and flexibility with respect to customer needs (Rohlfing & Funck, 2002), i.e. given the size of the business, they are often able to respond flexibly to individual wishes (Mugler, 2008).

This flexibility is associated with a low degree of organisational formalisation (Mugler, 2008). SMEs benefit from facilitations due to the size of the accountancy i.e. the usual audit and publication requirements as stipulated by commercial law do not apply for SMEs (Ihlau, Duschka, & Gödecke, 2013) and are tax-oriented instead (Busse von Colbe, Crasselt, & Pellens, 2011). The documentation of business processes and business planning is underrepresented with regard to both quantity and quality (Exler,

2013; Schoberth & Ihlau, 2008; Hackspiel & Fries, 2010; Nickert & Kühne, 2014; Knackstedt H. , 2009). The preparation of annual financial statements often only meets the legal minimum requirements. In this respect SMEs feature a limited reporting system (Janssen, 2009) that is not sufficient as an internal source of information, although controlling has gained importance (Kadner, 2013). The monitoring of processes, costs and liquidity is conducted in a rather unstructured way. Due to the training of the employees there is only specialist knowledge of the technical sector and administrative tasks are likely to be managed by generalists in personal union since, as a rule, no staff departments are maintained (Pfohl, 2006).

It should be noted that not all of the specified characteristics have to be fulfilled to qualify as an SME (Wegemann, 2006). However, transition to classification as a large company is fluid in correlation with a decreasing compliance rate because a clear delineation of the qualitative elements is not possible.

Irrespective of their economic importance, it is only in recent years that the significance of SMEs has started to be recognised by business management or their valuation considered in more detail (Ihlau, Duschka, & Gödecke, 2013). SMEs constitute the bulk of corporate valuations due to their number (Helbling, 2006) and the upcoming follow-up regulation (Behringer, 2012).

Valuation Methods

Total Valuation Methods

Principles of Equivalence

Currency

Cash inflows and the investment alternative have to be denominated in the same currency. If there are different currencies, a currency risk would arise which might distort the comparison and thus the valuation. The necessity for a reasonable equivalence is obvious and generally acknowledged (Ballwieser & Hachmeister, 2016).

Duration

The cashflows of the valuation object and the investment alternative must be comparable in their maturity and the periods have to correspond. Wollny (2010) stresses that it is only by using the maturity equivalence principle that the recognition of changes in market interest rate of the valuation object and the internal rate of discount can be ensured. The going-concern principle in accordance with Section 252 of the German Commercial Code (HGB) applies for company valuations and thus, as a rule, the unlimited life of the company is assumed (Ballwieser & Hachmeister, 2016). Against this backdrop, the capitalisation interest rate is also required to have the same maturity. In reality, however, this is impossible. In valuation practice, the base interest rate is determined using the Svensson method which can be extended to unlimited periods by means of various procedures (Dörschell, Franken, & Schulte, 2012) and therefore the principal of equivalence is fulfilled (Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013).

Capital Expenditure

The possible alternative return is normally generated by means of a financial asset on the capital market. This is not with labour input but by means of capital investment (Ballwieser & Hachmeister, 2016). Therefore, in particular in the case of companies with the legal form of partnerships, the work input of the entrepreneur has to be factored in the numerator as an imputed employer's salary (Schmeisser, Görlitz, Spree, Clausen, & Schindler, 2008).

Cash Value

In reality, changes in general purchasing power must be assumed due to inflation and deflation (Baetge, Niemeyer, Kümmel, & Schulz, 2015). The revenue surpluses and the alternative investment should be consistent with regard to purchasing power (Wollny, 2010). This can be achieved by calculating with nominal or real values in the numerator and the denominator. Nominal and real values yield, *ceteris paribus*, lead to identical company values (Moxter, 1983; Ballwieser, 1988). In business valuation

practice, nominal values are assumed for the numerator and the denominator, since business planning includes nominal values (Ihlau, Duschka, & Gödecke, 2013). An inflationary adjustment can be factored in by means of a growth discount (section 4.5.2.2.).

Risk

Company earnings or cashflows expected to be generated in the future are uncertain (Hering, 2006). In this respect, the adequate target rate also exhibits the same risk profile. This can either be achieved by changing the numerator or the denominator (Wollny, 2010). In the case of a consideration in the denominator, the risk-free basic interest rate is adjusted by means of a risk add-on (risk mark-up method). In the case of a consideration in the numerator, uncertain cashflows are translated into certain cashflows and discounted using a risk-free interest rate in accordance with the certainty equivalent method (see section capitalisation rate). Alternatively, the internal rate of discount may be determined individually, however, it is required to reflect the same risk.

Availability

In order to provide comparability with regard to the available earnings, the income or cashflows for the valuation object as well as for the alternative investment have to be considered with regard to burdens (Mandl & Rabel, 1997), which means personal taxes will be deducted. Wollny (2010) points out that the alternative investment and the company being valued are not necessarily subject to the same taxation. This is impossible in the case of stock-listed companies. Therefore for simplification it is assumed that the subject of the valuation displays the same tax situation as the average investor on the capital market (Ihlau, Duschka, & Gödecke, 2013).

Capitalisation Earnings Method

The Capitalisation Earnings Method is one of the so-called ‘total valuation’ methods. These methods are based on future profits and cashflows. The CEM and the DCF-method, in particular, fall into this category (Matschke &

Brösel, 2013). The value of the company's results so far, its ability to generate future income and cashflow and the consideration of the company is carried out in its entirety as a continuing unit (Ernst, Heyd, & Popp, 2014).

One of the most important principles is the consideration of future earnings and the liquidation proceeds of non-essential assets (Seppelfricke, 2012). The equity shareholders are invested in the company's future and not the past, i.e. the time within which the capital invested flows back plus a risk-adjusted return. Future returns are thereby discounted to the valuation date and consequently the present value of future achievable income and the value of non-operating assets are the company's value (Exler, 2013). For future attainable incomes, an infinite company lifetime is assumed (Drukarczyk & Ernst, 2010). The following formula is used to determine the income-value:

$$EV_{equity} = \sum_{t=1}^n \frac{NP}{(r+1)^t} + \frac{NP_l}{r(1+r)^n} + V_{noa}$$

NP= Net Profit; NP_l = expected Net Profit in last projected year; V_{noa}= Value non-operating assets

Equation 1. Income value

The market value of equity is determined with the classic CEM (Langguth, 2008). The expected future and sustainably achievable and distributable net income is used in the numerator of the formula shown above. In other words, the payment flows from the company to the owners. In summary, the business value results primarily from future annual surpluses accruing to the shareholders (Ballwieser, 2011; Ernst, Schneider, & Thielen, 2012). The following income is used to calculate the classic CEM:

Profit and Loss Account	
	Sales
+/-	Changes in stocks of finished goods and work in progress
+	Own work capitalized
+	Other operating income
-	Cost of materials and services
-	Personnel expenses
-	Amortization of intangible assets and depreciation of fixed assets
-	Other operating expenses
=	Earnings before interest and tax (EBIT)
+/-	Investments income / expense
+/-	Interest income / expense
+/-	Other financial income / expense
=	Earnings before tax (EBT)
-	Taxes on income
-	Other taxes
=	Annual net profit/loss

Table 24. Profit and loss statement according to Article 275 HGB

For the determination of the future distributable and thus valuation-related surpluses that are available to investors, it makes sense that the budgeting is made on the income statement (Ihlau & Duschka, 2013). Besides the income statement, this planning should include finance planning since it can be referred to determine distributable income under preliminary consideration of investment, borrowing and repayment of loans. The value obtained is then discounted at a capitalization rate. In this respect, the earnings value and thus shareholder value is not derived primarily from the balance sheet sizes, but from payment flows.

In order to assess the future economic benefit of the company, a standard of comparison is required, specifically as an alternative investment. One of the most quoted statements of business appraisal is: “*to value means to compare*” A discount rate can be used to determined how much capital the investor has

to invest in a comparable opportunity (see equivalence principles) to generate the same amount.

The discounted cashflow method

The DCF-method is an evaluation method that emerged from the Anglo-American region and has now established itself in Germany (Obermeier & Gasper, 2008). As with the income-approach-method, in the discounted cashflow method the company value is determined by present values, which means future cashflows are discounted to the valuation date. The maintenance of operating assets and the continuation of the company is assumed (Hasler, 2013). In contrast to the income-approach-method, in the DCF-method, cashflows are discounted and are not the surplus income (Ernst, Heyd, & Popp, 2014), i.e. the numerator values are sustainable for long-term future cashflows. Cashflows are cash payment-based performance factors which can be determined independently of accounting policies (Baetge, Niemeyer, Kümmel, & Schulz, 2015). The cashflows are relevant for the assessment and are available for pay-out to the shareholders, even if they are not necessarily distributed (Schultze, 2003).

There are different methods within the discounted cashflow method (see Figure 52). In essence there are two different methods to determine the value of the company; either the net or gross capitalization (Seppelfricke, 2012). In both methods, the output range is separated from the financing activities (Ernst, Heyd, & Popp, 2014). These financing activities include the cashflows to which the investors (shareholders and lenders) are entitled (Baetge, Niemeyer, Kümmel, & Schulz, 2015). With all methods the company value is calculated from two main components; the cashflows displayed in the numerator and the capitalization rate in the denominator. Furthermore, in all methods analogous to the discounted cashflow method, the non-operating assets minus non-operating liabilities are added (Langguth, 2008). In summary, the DCF-method shows conceptual closeness to the income-approach that has been recognized in the jurisprudence as well. The Federal Constitutional Court of Germany has already decided (2006) that the DCF

method and the income-approach-method are equal. The different methods and calculation methodologies are discussed below.

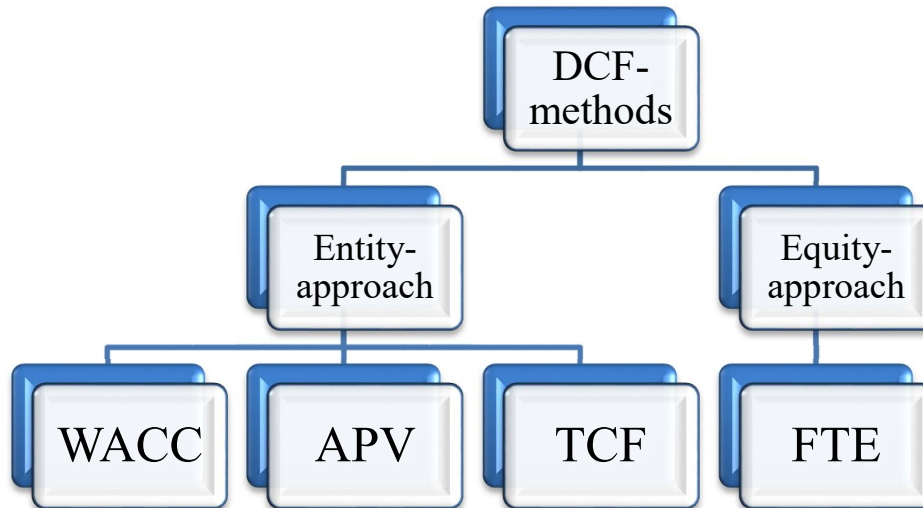


Figure 52. DCF-methods

Flow to equity approach

One form can be found in the equity approach of the discounted cashflow method, (Drukarczyk & Schöler, 2016). The equity approach, which is basically the net capitalization, aims to determine directly the value of equity (Ernst, Heyd, & Popp, 2014).

In this respect, it corresponds conceptually to the classic CEM. In this method, only cashflows that are available to the equity investors are determined (Ihlau, Duschka, & Gödecke, 2013). This procedure assumes that the cashflows can be fully distributed (Hasler, 2013). In addition, payments from investments, interest, repayments and corporate taxes have already been taken into account. The cashflow available for the equity investors is determined as follows:

	EBIT
-	Corporate taxes
+/-	Interest result
=	PAT
+/-	Depreciation
+/-	Investments/ disinvestments
+/-	Changes in Working Capital
+/-	Changes in provisions
+/-	Changes in debt capital
=	Flow to Equity

Table 25. Determination of flow to equity

The cashflows available for owners are discounted at a risk-adjusted rate of return. The capitalization rate can be determined analogous to the CEM; either the discount rate is determined individually or it is resorted to capital market based models such as CAPM (Kuhner & Maltry, 2017). Further remarks on CAPM have already been shown in section 2.4.3. The determination of the company value with the FTE-approach can be calculated with the following formula, whereby the phase model (detailed planning phase and continuation phase) was assumed.

$$V_{equity} = \sum_{t=1}^T \frac{E(FTE)}{(1+r)^t} + \frac{E(FTE)_{T+1}}{r * (1+r)^T} + V_{noa}$$

$equity$ = Equity Value; E (FTE) = Expected Flow to Equity; $E(FTE)_{T+1}$ = Expected Flow to Equity at the beginning of the perpetual annuity; r = discount rate; V_{noa} = Value of non-operating assets

Equation 2. Determination equity value by FTE-approach

An advantage of this method appears in the direct determination of the company value. For simplicity of the assessment in practice, an unchanging capital structure is assumed. This falsifies the result, since a change in the capital structure implies that the return expectations of equity investors also

changes. It can also be observed that the cashflows available for the equity investors result from both operational and financial value drivers. This means that the FTE approach is less suitable for companies with high debt components, as is common in SMEs (Achleitner & Nathusius, 2004). There are several forms of the Entity approaches. The APV, TCF and WACC approach are presented in the following paragraph.

Adjusted-present-value approach (APV)

The adjusted present value was first introduced by Myers (1974) in the literature. It is one of the entity methods and so the total capital value is determined. In the APV method, cashflows are separated and evaluated in isolation (Langguth, 2008). The determination of the company value is carried out in three steps.

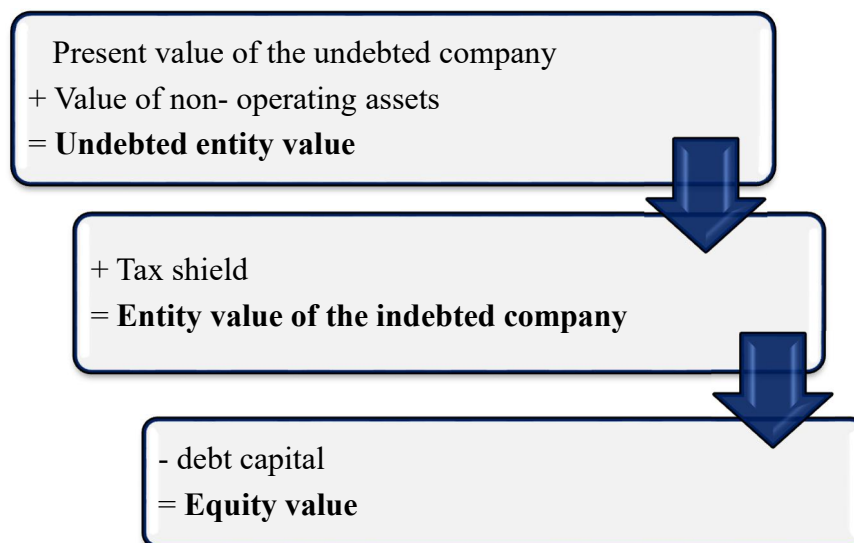


Figure 53. Process of APV-approach

For now, it is assumed that the entire company is undebted (Seppelfricke, 2012), i.e. equity finances the operational business. In this respect, the actual capital structure is disregarded. The free cashflow is discounted with a capitalization rate expected by equity investors of a fictitious and unlevered company and results in a leverage adjusted company value (Enzinger &

Kofler, 2010). This is carried out with the following formula based on a two-phase model.

$$EV_{unlevered} = \sum_{t=1}^T \frac{E(FCF)}{(1+r)^t} + \frac{E(FVF)_{T+1}}{r * (1+r)^T} + V_{noa}$$

$EV_{unlevered}$ = undebted Entity Value; E (FCF) = Expected Free Cashflows; $E(FCF)_{T+1}$ = Expected Free Cashflows at the beginning of the perpetual annuity; r= discount rate; V_{noa} = Value of non-operating assets

Equation 3. Determination undebted Entity Value

The debts are considered in the second step i.e. the addition of the value contribution of the indebtedness. This is due to tax benefits (tax-shield) arising from the tax deductibility of the actual capital structure. The determination of the positive effect of the tax-shield uses the following formula:

$$TS = \sum_{t=1}^T \frac{(x * r_d * D)_{t-1}}{(1+r_d)^t} + \frac{x * r_d * D_T}{r_d * (1+r_d)^T}$$

TS = Tax shield; x= company related tax rate; r_d = costs of debt; D= debt capital

Equation 4. Determination tax shield

The total company value results from step 1 plus the value contribution from the tax-shield. In the last step, the equity value of the company is calculated from the subtraction of the market value of the debt from the total company value.

$$V_{equity} = EV_{unlevered} + TS - D$$

V_{equity} = Equity Value; $EV_{unlevered}$ = undebted Entity Value; TS= Tax Shield; D = debt capital

Equation 5. Determination equity value by APV-approach

An essential feature of the APV-approach is that when using the value-influencing factors of the company, these can be detected separately from each other. This is particularly the case in the operating results or the results from the Tax shield benefits (Drukarczyk & Schüler, 2016). In spite of these advantages, this method is rarely used in practice (Schacht & Fackler, 2009; Hasler, 2013). Seppelfricke (2012) supposes that the determination of the return requirement for unindebted companies is impractical and the users are not familiar with it. Furthermore, Ballwieser and Hachmeister (2016) and Matschke and Brösel (2013) see the main problem of the APV-approach as determining the cost of equity of an unindebted company. Hasler (2013) considers this method suitable for companies at the risk of illiquidity.

Entity-Approach

The entity approach, however, which is basically the gross capitalization, uses the cashflows of all investors to calculate a gross company value (Seppelfricke, 2012; Spremann & Ernst, 2011), i.e. the calculated cashflow is due to the equity investors as well as external providers of debt capital. In contrast to the APV-method, the total capital value is not determined by adding the individual value components but by discounting the free cashflows (Schultze, 2003). This financing structure is initially faded out so that the operational performance of the company can be considered. This cashflow can be determined as follows:

	EBIT
-	Notional corporate taxes
=	NOPLAT
+/-	Depreciation
+/-	Investments/ disinvestments
+/-	Changes in Working Capital
+/-	Changes in provisions
=	Free Cashflow

Table 26. Determination of free cash-flow

The market value of debt has to be determined in a further step. To do this it is necessary to define the future financing structure of the company. This is apparent with the WACC- formula.

One of the most widespread methods of entity approach is the FCF-method (Seppelfricke, 2012). The WACC Weighted Average Cost of Capital reflects the weighted average costs of a company for the capital employed by stakeholders, namely shareholders and debt holders (Drukarczyk & Ernst, 2010). The cost of capital expresses the expected rate of return for the various capital (equity and debt) according to their proportion and the risk exposure taken by the investor (Matschke & Brösel, 2013). WACC is a mixed interest rate, because the free cashflow is available to the equity and debt capital providers.

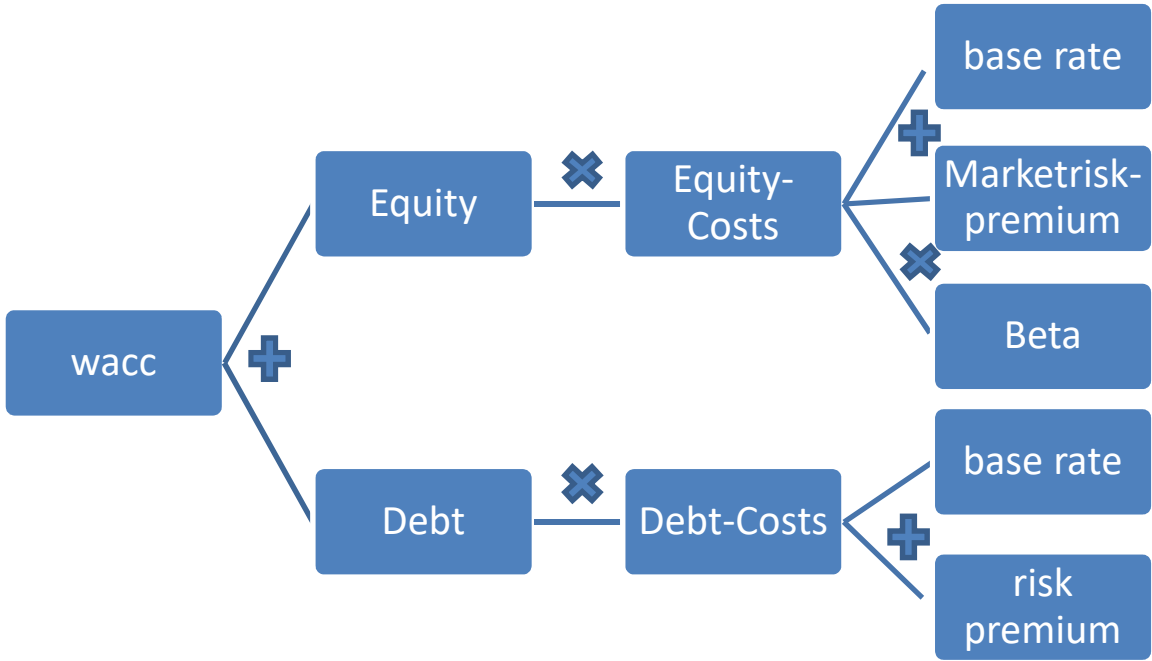


Figure 54. WACC determination

The determination using the WACC-method remains the same, i.e. for future consideration the determined interest rate is used to discount the cashflows to the valuation date. The WACC is determined as follows:

$$WACC = \frac{Equity}{Equity + Debt} * r_{equity} + \frac{Debt}{Equity + Debt} * r_{debt} * (1 - x)$$

WACC= Weighted Average Cost of Capital; Equity = market value of the company's equity; Debt= market value of the company's debt; Debt+Equity= total market value of the company; r_{equity} = cost of equity; r_{debt} = cost of debt; x = tax rate

Equation 6. Determination weighted average cost of capital

Having defined the long-term capital structure and determined the weight-average discount rate expected by the different capital providers, the free cashflows are discounted by using the following formula.

$$EV = \sum_{t=1}^T \frac{E(FCF)_t}{(1 + WACC)^t} + \frac{E(FCF)_{T+1}}{(1 + WACC)^T} + V_{noa}$$

EV= Entity Value; E(FCF) = Expected Free Cashflows; $E(FCF)_{T+1}$ = Expected Free Cashflows at the beginning of the perpetual annuity; WACC= weighted average cost of Capital; V_{noa} = Value of non-operating assets

Equation 7. Determination of entity value by FCF-approach

The company value (market value of equity) is therefore calculated as follows:

$$V_{equity} = EV - Debt$$

V_{equity} = Equity Value; EV= Entity Value; Debt = market value of company's debt

Equation 8. Determination of equity value by FCF-approach

The TCF-approach is hardly different from the FCF approach, as can be seen in the overview (see table 27).

	TCF-Approach	FCF-Approach
Numerator	TCF	FCF
Denominator	WACC (excl. TS)	WACC (incl. TS)
=	Enterprise Value	Enterprise-Value
-	Debt	Debt
=	Equity-Value	Equity-Value

Table 27. Difference between TCF- and FCF-approach

This method is also a gross method; cashflows are also discounted which are available to investors all together. Only the consideration of tax-shields, i.e. the tax benefit from debt financing is not considered in discount rates, but has already been taken into account in the cashflows (Ihlau, Duschka, & Gödecke, 2013). This is the following difference in the cashflow.

	Free Cash-Flow
+	Tax savings from interest on borrowings (TS)
=	Total cashflow TCF

Table 28. Determination total cash-flow

The tax shield is determined as follows (Matschke & Brösel, 2013).

$$TCF = FCF + TS = FCF + (x * r * D)$$

TCF= Total Cash-Flow; FCF= Free Cash-Flow; TS= Tax Shield; x = tax rate;
r= interest rate; D= debt capital

Equation 9. Determination total cash-flow including tax shield

Ballwieser and Hachmeister (2016) point out that the tax advantage is recognized correctly. This is because the TS is calculated on the basis of the existing debts of the companies being valued and not on the basis of an optimal equity/debt ratio, as with the FCF method. With this approach, the tax benefits are already considered a consideration in weighted average cost so capital is no longer necessary. Consequently, following cost of capital results (Seppelfricke, 2012):

$$r_{equity/debt} = r_{equity} * \frac{equity}{equity + debt} + r_{debt} * \frac{debt}{equity + debt}$$

$r_{equity/debt}$ = cost of capital; r_{equity} = cost of equity; r_{debt} = cost of debt

Equation 10. Determination cost of capital for TCF-approach

This method is rarely used in practice and is not very practical (Matschke & Brösel, 2013; Baetge, Niemeyer, Kümmel, & Schulz, 2015). Therefore, this research does not include detailed discussion of this method.

The capital market-oriented approach uses a fictitious interest rate determination. It is based on the solvency (this is usually determined by the rating) compared to costs of borrowed capital of listed corporate bonds (Langguth, 2008; Hasler, 2013). There is substantial criticism of this approach because SMEs do not usually issue corporate bonds and this comparison is beyond reality. Moreover, SMEs pay higher interest rates at comparable solvency than large and listed companies (Schütte-Biastoch, 2011).

Multiple Method

The MM is a market oriented comparable method (Ballwieser & Hachmeister, 2016). One feature common to all comparable methods is that, on the basis of comparability, there is a linear relationship with regard to the company being valued (Zwirner, 2012; Drukarczyk & Schüler, 2016). For this, the basic assumption is that equal prerequisites of the companies being valued imply the transferability of market related data, in the sense that “*similar assets should sell at similar prices*”. Three approaches are used for the derivation of reference prices.

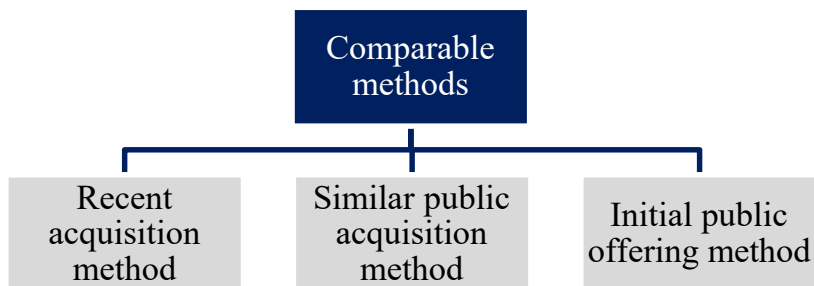


Figure 55. Comparable methods following (Mandl & Rabel, 2015, p.56)

The IPO approach derives the potential market prices of the company being valued based on issue prices for newly listed benchmark companies (Mandl & Rabel, 2015). As the database is not or not sufficiently available, this valuation method is not relevant in Germany (Ihlau, Duschka, & Gödecke, 2013). Applying the Similar Public Company Method, benchmark companies listed on the stock exchange are selected for comparison. In this process, market capitalisations or certain key figures serve as a yardstick.

The Recent Acquisition Method resorts to comparable benchmark companies that have been sold recently. In doing so, unlike the SCEM, recourse is taken to transactions that were actually carried out by companies with similar features and not stock market prices (Busch, 2008).

Both methods use particular values (multiples) as a yardstick for the valuation, whereby flow and stock magnitudes of comparable companies based on stock market values or transactions carried out serve as benchmark (Ballwieser & Hachmeister, 2016; Ruthardt & Hachmeister, 2015). The following may serve as reference parameters: revenue, income, quotation, profit, cashflow, and equity. Therefore, the company value is determined not by the adequate target rate, as is the case with the total valuation methods, but by the product of a

calculated ratio index of the benchmark company with the corporate key figure.

$$\frac{MV_r}{VI} = RI \qquad VI_o * RI = MV_o$$

MV_r =Market value of the reference company (MV_r), VI = value indicator, o= Object to be valued, RI = ratio index, MV_o = Market value of the object

Equation 11. Calculation market value through comparison

Based on the benchmark companies, a distinction is made between trading and transaction multiples. For the transaction multiples, the multiples are derived from recent transactions and for the trading multiples, the multiples are derived from listed benchmark companies. The following overview contains a systematization of the common value indicators.

Equity-Multiples	Entity-Multiples
Price/Earnings-Ratio	EV/EBITDA
Price/cashflow-Ratio	EV/EBIT
Price/book-ratio	EV/turnover
	EV/Capital employed

Table 29. Common value indicators (Krolle & Schmitt, 2005)

Depending on the key ratios that are used as the standard of comparison, the company value can be determined as equity value and enterprise value. The enterprise value represents the total capital value, while the equity value represents the value the owners are entitled to.

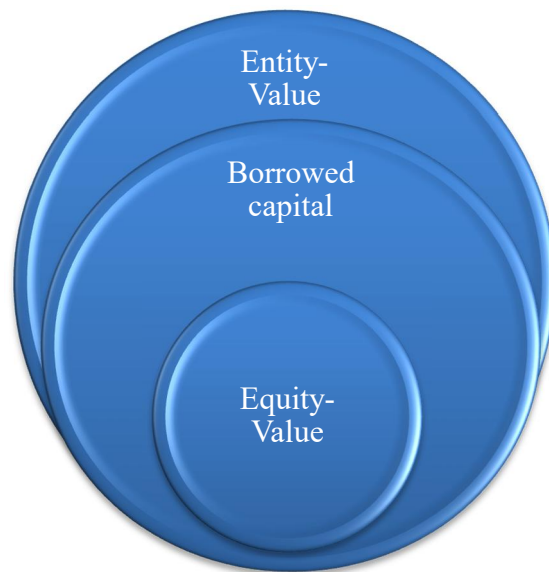


Figure 56. Composition of entity-value

Using the multiples method, possible reference values are calculated by means of the abovementioned key ratios on the basis of transactions actually carried out. The following shows the determination of EBITDA and EBIT according to commercial law:

	Turnover
+/-	Changes in inventories
=	Total output
-	Material costs
-	Personnel costs
-	Other operating expenses
+	Other operating income
=	EBITDA
-	depreciation
=	EBIT

Table 30. Determination of EBITDA/EBIT (Wöltje, 2011, p. 204)

Due to its simple application, the price-earnings ratio (P/E ratio) is one of the most popular forms of equity multiples (Krolle & Schmitt, 2005). It is calculated by dividing the market capitalization by the dividend (Eilenberger, Ernst, & Toebe, 2013).

The price-cashflow ratio (P/CF-ratio) is one of the preferred equity multiples in addition to the price to earnings ratio (P/E ratio) (Krolle & Schmitt, 2005). The price-cashflow ratio is calculated by dividing the cashflow available to the equity capital providers by the number of dividend-bearing shares (Eilenberger, Ernst, & Toebe, 2013). One of the advantages of the price-cashflow ratio compared to the P/E ratio is that accounting flexibility can be partially eliminated due to the focus on cashflow. Assuming that these accounting options cannot be fully excluded, Drukarczyk and Ernst (2010) suggest a comparison and analysis of the accounting policy.

Another commonly used multiple on the basis of stock sizes is the price-to-book ratio (P/B ratio), which specifies the relationship between the market value of the equity capital to the book value of the equity capital (Schacht & Fackler, 2009). Analysts use this ratio for industries that feature high net asset values (Langguth, 2008). This ratio is past-oriented, i.e. the profitability is not taken into account and it involves a margin of discretion with regard to accounting policy (Schacht & Fackler, 2009; Hasler, 2013; Krolle & Schmitt, 2005). It is therefore not suitable for business valuation purposes.

Multiple =	$\frac{\text{Company Price}}{\text{Earnings}}$
Multiple =	$\frac{\text{Market Capitalisation}}{\text{Earnings}}$
Multiple =	$\frac{\text{Market Capitalisation}}{\text{Equity (book value)}}$
Multiple =	$\frac{\text{Enterprise Value}}{\text{EBITDA}}$
Multiple =	$\frac{\text{Share Price}}{\text{Earnings}}$

Table 31. Different multiple calculation

Entity multiples are comparable with the DCF entity method in as much as they aim at the determination of the total enterprise value. This is made up of the market value of the equity and the market value of the borrowed capital.

The MM has the same disadvantages when valuing SMEs and is similar to finding comparable companies for Beta determination. To make close comparisons a detailed research of the similar companies is essential, i.e. to find companies that are sufficiently similar and have an almost identical risk structure to the company to be valued (Gröger, 2009; Voigt, Voigt, Voigt, & Voigt, 2005; Ballwieser & Hachmeister, 2016). This means that a number of stand-alone companies that are located in the same region operate in the same market or industry and have similar clients and supplier, value chains, capital structure and profitability (Löhnert & Böckmann, 2015; Schütte-Biastoch, 2011; Ballwieser & Hachmeister, 2016; Langguth, 2008; Hachmeister & Ruthardt, 2015).

Underlying assumptions have to be identified and this is quite challenging and difficult due to the lack of access to essential data (Ihlau, Duschka, & Gödecke, 2013; Schütte-Biastoch, 2011). To reach a comparable basis, significant time is necessary and a huge amount of information has to be processed and interpreted (Kranebitter, 2012; Aschauer & Purtscher, 2011; Langguth, 2008). However, some assumptions for the transaction price are not available (Drukarczyk & Ernst, 2010; Ballwieser & Hachmeister, 2016), such as the expected growth in sales, cashflows or margin. Ancillary agreements in transactions are also not known (Schacht & Fackler, 2009).

SMEs usually operate in a niche that listed companies or companies that have just been sold only partly covers (Ihlau, Duschka, & Gödecke, 2013). They are diversified differently (Schütte-Biastoch, 2011) and their figures or financial ratios are based on overall risk. Financial ratios based on segment data are rarely available (Drukarczyk & Ernst, 2010). If no comparable companies with a similar structure can be found it is recommended to expand the search to other industries or countries (Steinbach, 2015; Schütte-Biastoch, 2011; Naumeier, 2015). Different cross-border accounting standards hamper the comparability. This search expansion leads to an increase of the subjectivity in valuation. This is rooted in the fact that identical companies rarely exist (Metz, 2007; Hasler, 2013; Jonas, 2009; Matschke & Brösel, 2013).

Stock listed companies are usually governed by accounting standards. However existing and applied accounting and valuation options increase the difficulty of comparing the financial ratios (Schacht & Fackler, 2009; Dietrich & Dierkes, 2015). Possible adjustments are needed to make this comparable to the subject of valuation (Drukarczyk & Ernst, 2010) but these adjustments are difficult for external parties. However, SMEs make use of their simplified accounting standard, according to article 267 und 326 HGB (Bundesministerium für Justiz und Verbraucherschutz, 2015) and in addition it is tax oriented (Busse von Colbe, Crasselt, & Pellens, 2011), i.e. to minimize their tax burden is paramount (Bucher & Schwendener, 2007). Therefore, there may be differences regarding how items of private and listed companies are accounted. In addition, overlapping private and business expenses and earnings in SMEs (Ihlau & Duschka, 2012; Keller M. , 2015) make it more difficult to make comparisons. This may be aggravated by the heterogeneity of SMEs and their specifics (see section 2.2.).

The amount of listed companies in Germany is limited in comparison with other countries (Hasler, 2013; Langguth, 2008; Schütte-Biastoch, 2011; Deutsche Börse, 2017). Transactions are seldom published and limited data is published (Ihlau, Duschka, & Gödecke, 2013). The individual characteristics of SMEs in particular are disregarded or at least only partially considered, especially those that are responsible for enabling a company to generate cashflows.

Net asset method

To assess which business valuation method suits indemnity-determination, it is necessary to examine and define the individual methods. This method is required because there are different approaches between continuation and liquidation of the company. In principle, the company value of the sum of the components of an entity is determined in the asset based method. It is distinguished between the net asset value and the liquidation value. These two values are particularly relevant for the individual assessment (Ahrens, 2013).

In the traditional net asset value, all values are measured individually. This is also why it is called an ‘individual assessment procedure’. To ensure that all expenses are considered to represent a fully functioning company, the intangible assets also need to be included (Seppelfricke, 2012; Sieben & Maltry, 2015). Replacement costs are based on the condition and age of the respective assets (Langguth, 2008). Outworn or assets already used therefore have a lower value than new standing on the cutting edge of technology assets and ultimately a lower reproductive value and company value.

Replacement costs are valued at market prices on the valuation date (Matschke & Brösel, 2013). If these values cannot be determined, they will be estimated (Obermeier & Gasper, 2008). In addition to the assets, the liabilities of the company are to be determined and are deducted from this. Only the operating assets and liabilities are included for the calculation of the company value, in so far as the non-operating assets are as liquidation value with the non-operating liabilities to the respective fee amounts for paying back before maturity are charged (Ernst, Heyd, & Popp, 2014). Operating assets are stated by the going-concern principle but the unnecessary assets are stated at liquidation values (Sieben & Maltry, 2015). The final company value is thus the sum of the operationally necessary, tangible and intangible assets, minus the operating liabilities. Mandl and Rabel (2015) emphasize that the viewing of the net asset value is therefore based on the past respectively on the balance sheet date. Therefore, in this method the already brought in is in the foreground rather than the future generated income or cashflow (Schütte-Biastoch, 2011).

The net asset value is calculated as follows:

$$NAV = V_{oa} - L_o + LV_{noa}$$

NAV=Net asset value; Voa= Value operating assets; Lo= operating liabilities;
LVnoa= Liquidation Value non-operating assets

Equation 12. Net asset value

Stuttgart Method

The Stuttgart Method is an excess profit model in as much as it takes into account an asset as well as the yield (Mandl & Rabel, 2015). The identification of assets is based on the balance sheet values determined on the reporting date of the last financial year (Bundesministerium für Finanzen, 2003). Against the backdrop that the date of death of the testator and thus the taxation moment differs from the balance sheet date, the preparation of interim financial statements based on the values of the last balance sheet date is required. The calculation is based on the book values; in deviation thereof, only the properties and participations are shown at their real value (Bundesministerium für Finanzen, 2003). Intangible assets are not recognized. The financial asset is considered in relation to the nominal capital (equity) and is calculated as follows:

$$Financial\ asset = \frac{assets * 100}{nominal\ capital}$$

Equation 13. Calculation financial assets

Once the asset value has been established, the company's prospects of profitability must be estimated. These are derived from the actual operating results of the last years. This means that here too, a retrograde consideration is carried out analogous to the assets (Müller J. , 2007). In order to obtain the sustainable yield, certain corrections are required to exclude one-off effects or unusual items. In doing so, for instance, special depreciation allowances or losses on disposals have to be added while one-off disposal gains have to be

deducted, in accordance with inheritance tax directive no. 99 (Bundesministerium für Finanzen, 2003). The adjusted results of the last three years are weighted differently. This means that the terminal year is multiplied by factor three and the previous year by factor two so that the more current values are weighted more strongly (Hülsmann, 2007). This results in the following weighting:

- The operating result of the last year prior to the taxation moment is multiplied by factor three
- The operating result of the year before last is multiplied by factor two, and
- The operating result of the antepenultimate year is multiplied by factor one.

The total sum is then divided by the number six (sum of the factors). Here too, the average yield is set in relation to the par value.

$$Yield\ percentage = \frac{annual\ yield * 100}{nominal\ capital}$$

Equation 14. Calculation yield percentage

The following formula is used to determine the company value, in accordance with inheritance tax directive no. 100 (Bundesministerium für Finanzen, Erbschaftssteuer Richtlinien, 2003):

$$Value = 0.68(financial\ assets + 5 * yield\ percentage)$$

Equation 15. Calculation company value

It should be noted that the inheritance tax directives lay down additional specific provisions that have to be observed in the framework of tax assessment according to the Stuttgart Method. As these directives are no longer relevant, they shall not be elaborated upon at this point.

This method was introduced some 50 years ago exclusively for tax assessment purposes; the determination of compensation was not intended. It was implemented in the articles of partnership as a valuation method for companies or corporate shares in the event of a shareholder's withdrawal because auditors and accountants in their capacity as advisors of these companies were familiar with this approach for professional reasons. Thus, the Stuttgart Method was introduced into many partnership agreements. The potential negative effects that may result from these regulations might be little known to most entrepreneurs. Nevertheless, this method is still implemented in article of association and problems could arise in the case of retirement. Therefore, this method should be substituted by a method that is accepted by law and is in line with the current state of research in business administration.

Simplified Capitalised Earnings Method

Following the reform of the Inheritance Tax Law and of the Valuation Law, this evaluation is implemented on the basis of an overall assessment of the valuation unit using the valuation methods recognized in the normal course of business in accordance with Article 11 (2) Valuation act (Bundesministerium der Justiz und Verbraucherschutz, 2016). In the course of the substitution of the Stuttgart Method, the Simplified Capitalised Earnings Method (SCEM) was introduced for the valuation of non-listed companies (Preißer, Hegemann, & Seltenreich, 2009). This means it is applicable in the case of non-listed companies as well as for sole proprietorships and partnerships (Dorfleitner, Ilmberger, & Meyer-Scharenberg, 2010). Thereby the legislator's aim was to keep the costs for the determination of the company value for inheritance tax reasons as low as possible (Mannek, 2012). This could be the main reason for implementing this method for indemnity determination in the article of association.

Another reason is that the Stuttgart method was substituted by the simplified method and this could be implemented in new indemnity regulations or existing regulations could be modified for the same reasons as the Stuttgart

method was implemented. It is therefore to be expected that the SCEM could replace the Stuttgart method in compensation regulation. It is therefore crucial to understand how the SCEM works and if the weaknesses of the Stuttgart method that led to its abolition have been eliminated and also whether the SCEM is an adequate valuation method for indemnity determination.

Valuation by using the SCEM is performed as follows. Firstly, a check is performed to ascertain if a market price can be determined, i.e. whether the sales price was arrived at by unrelated third parties within one year before the valuation date (Dorfleitner, Ilmberger, & Meyer-Scharenberg, 2010). If a valuation on the basis of sales between outside third parties is not possible, unlisted companies can implement it by using the simplified capitalised earnings method, provided it does not bring about manifestly incorrect results (Fischer, Jüptner, Pahlke, & Wachter, 2014). This reveals the legislator's preference for fair values. However, the legislator failed to substantiate what is to be understood by this term (Hinz, 2011). When exercising his right to vote, the taxpayer has to demonstrate that the results are incorrect, thus giving rise to challenges for tax authorities and case law (Matschke & Brösel, 2013).

In accordance with articles 200, 201, 202 and 203 of the Valuation Law, valuation using the simplified method will be performed as follows.

	Operational results of the last three financial years
+	Addbacks of the respective years
-	Deductions of the respective years
=	Sustainably achievable annual yield
x	Capitalisation factor
=	Earnings value
+	Fair market value of the assets not required for operations
+	Fair market value of holdings in other companies
+	Fair market value of economic assets deposited two years prior to the valuation date
=	Fair market value of the company

Table 32. Valuation procedure simplified capitalised earnings method

Under this method, the basis for the company valuation is the sustainable average annual yield derived from the operational results of the last three financial years (Dorfleitner, Ilmberger, & Meyer-Scharenberg, 2010). The operating profit has to be adjusted to exclude unusual, one-off and non-recurring items or items not considered. For instance, one-off disposal losses or unusual expenses are to be added while one-off disposal gains, unusual proceeds or an appropriate employer's salary are to be deducted in accordance with Article 202 Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016). The effective corporate tax is eliminated applying a standardised deduction of 30% in accordance with Article 202 Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016).

The arithmetic mean of the total sum of the adjusted operating profit equals the sustainable average annual yield (Dorfleitner, Ilmberger, & Meyer-Scharenberg, 2010). The sustainable annual yield is to be multiplied by the capitalisation factor which is the reciprocal of the capitalisation interest rate. The capitalisation interest rate is calculated by adding the base interest rate

and the risk premium (see Table 33). The base interest rate is determined by the Federal Ministry of Finance at the beginning of each year and is aligned to the long-term returns obtainable from public bonds in accordance with Article 203 Valuation Law. The development between 2009 and 2016 is presented in the table below (Bundesministerium für Finanzen, Basiszinssatz, 2016). The risk premium is standardised and has been fixed as 4.5 % p.a. in accordance with Article 203 Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016). In addition to the entrepreneurial risk, owner-related determinants, growth and fungibility deduction are taken into account on a lump sum basis with the risk premium (Bericht des Finanzausschusses, 2008).

Year	Base Interest Rate	Risk Premium	Capitalisation Rate	Capitalisation Factor
2009	3.61	4.50	8.11	12.33
2010	3.98	4.50	8.48	11.79
2011	3.43	4.50	7.93	12.61
2012	2.44	4.50	6.94	14.41
2013	2.04	4.50	6.54	15.29
2014	2.59	4.50	7.09	14.10
2015	0.99	4.50	5.49	18.21
2016	1.10	4.50	5.60	17.86

Table 33. Development of the capitalisation factor

As shown in the above figure, in addition to the earnings value, the assets not required for operations or participations and business assets deposited within two years are to be assessed separately at the fair market value in accordance with Article 200 Valuation Law. Assets not required for operations are, in terms of the Valuation Law, business assets that can be released from the company without compromising the actual operational corporate activity in accordance with the Inheritance Tax Directives R B 200 (Bundesministerium für Finanzen, 2011). Depending on the purpose of the corporation, these may

include art objects, residential properties for letting, buildings, participations, or securities (ibid). The valuation of these assets is not based on the liquidation value, but on the Fair market value, i.e. the price obtainable upon sale in line with the ordinary course of business in accordance with Article 9 (2) Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016). In accordance with Article 11 (1) Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016), investments in enterprises listed on the stock market are valued at the lowest price quoted in the regulated market at the reporting date. Investments are also to be assessed independently. Provided that they are listed on the stock exchange, they are valued at the lowest price quoted in the regulated market at the reporting date in accordance with Article 11 (1) Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016).

The equity holdings in other companies that form part of the assets necessary for the operational business activity, also have to be assessed at the fair market value, that is to be determined independently in addition to the earnings value in accordance with Article 200 Valuation Law. Investments can, but need not necessarily be valued according to the simplified capitalised earnings method (Ländererlass zum Bewertungsgesetz, 2011). If the returns are negative or if the earnings value is less than the net asset value, the minimum value, i.e. the net asset value is to be applied in accordance with Article 11 Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016).

Business assets that have only recently been deposited with the company, i.e. within the last two years, shall be given special attention. These are to be assessed with an independently determined fair market value in accordance with Article 200 Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016). The determination of the fair market value of these assets is carried out analogous to the procedure set forth above, in accordance with Article 9 Valuation Law (Bundesministerium der Justiz und Verbraucherschutz, 2016).

The fair market value of the company determined in this way serves as a basis for the calculation and assessment of the inheritance or gift tax.

Averaging method

The mean or mixing processes are generally combinations of total and individual assessment procedures (Thommen, 2011) and thus link the past-focused analysis of the company with the prospects for the future. A simple embodiment of the method which is thus referred to as a practitioner method is the arithmetic mean of partial reproduction value and earnings value (Obermeier & Gasper, 2008). Different weightings of asset value and earnings value are possible. The company value can therefore be determined (Moxter, 1983) as follows.

$$V_{equity} = NAV + w(EV - NAV)$$

V_{equity} = Equity value; NAV= Net asset value; w = weighting factor; EV= Earning value

Equation 16. Determination of equity value by averaging method

There are neither transparent justifications nor convincing arguments for the different weighting (Mandl & Rabel, 2015), therefore, the weighting is arbitrary. At this point, reference is made to the statements in the sections on capitalised earnings method and net asset value method.

Institute of Public Auditors in Germany (IDW)

The profession of auditing is also focussed on company valuation. In the current auditors' handbook, The Institute of German Auditors (Institut der Wirtschaftsprüfer, 2014) describes the function of a neutral expert, advisor or arbitrator. The standard of the neutral expert develops an independent evaluation function, which determines the so called 'objectified company value' (Karami, 2014). In this objectified business appraisal, the value of the company is the intersubjectively verifiable future performance value, depending on the basis of an unchanged concept with continuation of the

company considering all realistic future scenarios (Institut der Wirtschaftsprüfer, 2014). Therefore, the objectified company value is incompatible with subjective value influences, meaning there are no individual characteristics or existing features used (Dörschell, Franken, Schulte, & Brütting, *Ableitung CAPM-basierter Risikozuschläge bei der Unternehmensbewertung*, 2008).

These principles for conducting company valuations were first issued in 1983 by the main committee of the Institute of Auditors (Institut der Wirtschaftsprüfer, 1983). Supplements were made in 1990, 1995 and 1998 and were followed in 2000, 2005 and 2008 by new versions bearing the reference IDW S1 (Steinbach, 2015). These principles are not legal standards, but professional principles (OLG Stuttgart, 2009).

IDW S 1 assumes a connection between the purpose of the valuation and the company value in line with functional valuation theory (Kappenberg, 2012). The IDW rejects the argumentative function as incompatible with the auditing profession (Peemöller V. , 2015; Rabel, 2014). In addition to the main functions of the functional valuation, the IDW introduced the function of the neutral expert, *“who determines on the basis of a comprehensible methodology a company value which is independent of the individual value concepts of the parties involved, the objectified company value”* (Institut der Wirtschaftsprüfer, 2008, p. marginal no. 12). The objectified company value represents an intersubjective, verifiable future performance indicator from the point of view of the shareholders (Institut der Wirtschaftsprüfer, 2014). If a company continues, it is determined on the basis of the business concept along with all realistic future expectations in the context of the market opportunities, risks and the financial means of the company as well as other influencing factors (Institut der Wirtschaftsprüfer, 2014). This means that the valuation is verifiable by the addressees, such as withdrawing and remaining shareholders as well as judges, where appropriate.

The objectified company value is supposed to limit discretion by abstracting from the subjective value concepts of the parties involved such as buyer, seller, withdrawing shareholders, or remaining shareholders (Gröger, 2009; Schütte-Biastoch, 2011). The term ‘objectified’ refers to the process of determining the company value, i.e. the intersubjective verifiability of the methodology and also with regard to the use of necessary impartial discretionary powers, which is of primary importance (Institut der Wirtschaftsprüfer, 2014). Strategies planned, which can only be realised by particular potential partners, are not taken into account to the effect that the valuation is conducted under stand-alone and status-quo-premises (Langguth, 2008). The fundamental principles for valuation are (Institut der Wirtschaftsprüfer, 2008):

Principles	Explanation
Relevance of the valuation purpose	The purpose of the valuation determines the procedure, i.e. whether a subjective or an objective value shall be assessed. In the function of the neutral expert, it is always the ‘objectified’ value that is assessed (Schacht & Fackler, 2009).
Valuation of the economic business unit	A separation between the operational and private sphere shall be made, while the interaction between all the operationally required areas is taken into account in the valuation. This is essential above all for small and midsize businesses in as much as the legal distinction between company and private property is not clear-cut (Ihlau, Duschka, & Gödecke, 2013).
Unmodified business concept	There is an underlying assumption that the company is continued 'as is' and thus measures that have not yet been initiated or not adequately specified shall not be taken into account for the future earnings; for instance, expansion investments. (Wollny, 2012).
True synergy effects are not	The additional surplus revenues resulting from transfers of shares or mergers are not taken into account (Matschke &

taken into account	Brösel, 2013).
Standardised Management Factors	It is assumed that the management quality remains the same in future (Schütte-Biastoch, 2011).
Relevance of the valuation date	The information available at the respective date or which could have been obtained when applying reasonable diligence feeds into the valuation (Drukarczyk & Ernst, 2010).
Distributions	Distributions are assumed in as much as they are available on the basis of the business concept recorded at the valuation date as well as due to potential legal restrictions (Kranebitter, 2007).
Standardised Tax Load	According to the 2005 revision of IDW S, a standardised tax of 35% is advisable in principle. According to the current version of 2008, it is necessary to perform, particularly for the determination of entitlement claims, an analysis of the standardised tax impacts with the actual tax burden and to make an adjustment if there is a difference (Bark, 2011).
Relevance of the Residence State	The determination shall be made under the assumption that the shareholders of the company are established in that state and the conditions assumed are those applying in the residence state, such as tax load as well as risk, growth or equity market (Kranebitter, 2007).
Determination of the Capitalization Interest	As regards the determination of the capitalization interest rate, reference is made to the capital asset pricing model (CAPM) (Steinbach, 2015).

Table 34. Synoptic explanation of fundamental principles of valuation

In the framework of the company valuation, the assets not required for operational purposes and the corresponding liabilities shall be assessed separately. The assets not required for operational purposes are defined functionally. This means the asset portions that do not affect the original

corporate task are treated as non-essential (Institut der Wirtschaftsprüfer, 2008). They are valued at the liquidation price minus the costs of liquidation (Schütte-Biastoch, 2011). It is necessary to take account of potential liabilities that are not attributable to the assets not required for operational purposes (Schacht & Fackler, 2009). Thus the total company value is calculated as follows:

	Present value of the discounted earnings of cashflows
+	liquidation proceeds (liquidation price – liquidation costs – debt repayment) of the assets not required for operational purposes
=	company value

Table 35. Calculation of the company value considering liquidation of not required assets

The objectified valuation can be conducted by means of the capitalized earnings method or using the DCF method since both procedures are based on the same conceptual foundation and thus produce identical assumptions for the same corporate values (Institut der Wirtschaftsprüfer, 2008). In 2000, the DCF method was included by the German Institute of Auditors (IDW) as an equivalent method (Institut der Wirtschaftsprüfer, 2008), due to the fact that the relevant literature, as well as practical experience, suggested the legitimacy of the procedure (Baetge, Niemeyer, Kümmel, & Schulz, 2015).

APPENDIX III

Restricted stock studies

Restricted stocks are privately placed shares of a company which may not be traded with directly, i.e. they are shares with a trade restriction (Pratt S. , 2009). These shares may not be sold during the holding period of a year (Römhild, 2009) and therefore they are infungible. Restricted-stock-studies are based on a comparison of the issue prices between the trade restricted shares and the unlimited sellable shares (Pratt S. , 2009). The fungibility surcharges are calculated from the difference in value between the traded ordinary shares and the so called restricted stocks, i.e. shares from the same company which are not traded for a certain time. The quantification of the price differences and therefore of the fungibility discounts is calculated with multi-variant analysis methods (Pratt S. , 2002). To name a few studies, in 1991 Silber (1991) based his on data from 1981 – 1988. In this study, he calculated a price discount of 33.75 %. They should be considered as very high as the highest price discount was 84 % and the lowest 12.7 % (Silber, 1991). Another study was carried out in 1999 which was based on the shares between 1991 and 1995. In this study Johnson (1999) calculated a smaller discount of 20 %.

IPO-studies

As an alternative to the restricted-stock-studies the so-called ‘IPO-studies’ are discussed in valuation practice. The calculation of the fungibility discount is made on the basis of a price comparison prior to the initial public offering and the share value while going public (Hood & Lee, 2011). The liquidity of the shares shows a difference which should be an indicator for the missing fungibility. Most of the studies were carried out by Emory et al. (2002) between 1980 and 2000; their results were summed up by Pratt (2009). An average price discount of 44 % for shares, which were traded five months prior to IPO, can be noticed. If the price discount only refers to the illiquidity of the shares, then Damodaran (2005) and Bajaj et al. (2001) justifiably wonder why the investor accepts such a high price discount shortly before an

IPO. They consider it probable that the random samples are distorted and other factors are the reason for this discount.

Addressing the experts

Dear

Before I put my request to you, I would like to introduce myself. My name is Angelo Stilla, I am 48 years old and married with two children. I have been working as a manager in corporate finance at a savings bank in Cologne for many years. My responsibilities include, among other things, corporate acquisitions and succession finance. Besides this activity I am a lecturer at the Berlin School of Economics and Law in business-start-up and company succession.

My doctoral research focusses on business valuation for SME and indemnity determination for outgoing shareholders. My attention has been brought to you in the course of my preliminary research and due to the contact with some of my potential interview partners. My research is based on interviews with experts and is therefore empirical. Bearing this in mind, I would like to ask if you would be so kind as to allow me to conduct a personal interview with you (length approximately 1 hr.). The primary goal is to interview recognised experts in this field in order to ensure the quality of the results.

To conduct the interview, I would be glad to meet you in

I am looking forward to hearing from you.

Best regards

Angelo Stilla

Second mail to experts

Dear

In view of the upcoming meeting I would like to inform you of the thematic focus of the interview. I presume that these topics are very familiar to you.

The topic of the doctoral thesis is: Determination of the indemnity of retiring owners of German SME taking into account their specific characteristics (only commercial companies, no freelancer. Withdrawal due to termination, not expulsion or death). The value occasion is dominated.

In the interview I would like to address the following topics:

- Methods of valuation, strengths and weaknesses, suitability for SME, capitalisation rate, CAPM, WACC, Beta, Peer group, comparability with public companies, etc.
- For determination of indemnity/valuation how can specifics of SME be considered? (lower degree of diversification, limited product and service range, dependence on supplier, customer, few employees, unity of ownership and management, i.e. property, licences and patents, lack of diversification of the owner, risk of insolvency, fungibility of shares, size-discount, etc.)
- What regulation should be implemented in the articles of association in order to consider the interests of the parties (the Federal Court of Justice has not specified yet)? These regulations have to meet the requirements of a court decision (full value can be restricted, but no considerable disparity otherwise it is immoral, ensuring liquidity of the company, what regulation is appropriate and permissible? More specifically this means modalities, valuation methods, discounts, interest rates, payment period, and simplification.

For queries and further information, please do not hesitate to contact me.

Best regards

Angelo Stilla

APPENDIX V

Informed Consent Form for research participants



Informed Consent Form for research participants

Title of Study:	Indemnity determination for retiring German SMEs owners.
Person(s) conducting the research:	Angelo Stilla
Programme of study:	Doctoral research
Address of the researcher for correspondence:	University of Gloucestershire School of Business & Management The Park Cheltenham Gloucestershire GL 50 2RH
Telephone:	
E-mail:	
Description of the broad nature of research:	The purpose of this study is to find an effective response for how to determine the indemnity of an outgoing owner of a German SME by using the most suitable valuation method, taking into account the particular qualitative characteristics of SMEs. Moreover, establishing a framework for indemnity determination that considers the interests of the shareholders increases clarity for all shareholders and reduces the probability of legal disputes.
Description of the involvement expected of participants including the broad nature of questions to be answered or events to be observed or activities to be undertaken, and the expected time commitment:	The interview will be arranged at a mutually agreed time and place. The interview will last approximately 1 hour. Further details will be provided prior to the interview. The interview will be semi-structured and based upon the views and experiences of company valuation/indemnity determination for German companies by the participants. The interview questions will be exploratory in nature. All the interviews will be recorded with a digital voice recorder (with the participant's consent) and transcribed.

	<p>Interview transcripts will be emailed to the participants. They are free to make any amendments, deletions or additions to the transcripts.</p> <p>All information in this study will be anonymized, with the names of participants, institutions and organizations changed. Organizations and participants that are named during the interview process and any other unsolicited confidential data will be changed or deleted. The researcher wishes to explicitly state that he is not seeking to investigate or document any confidential or sensitive information as part of this research.</p> <p>Confidentiality will be maintained in terms of storing data securely on a computer and ensuring hard copies of transcripts are stored securely. As part of the doctoral supervision process, hard copies of anonymized transcript may be shown to the supervision team, but will be returned to the researcher for safe keeping.</p> <p>Data obtained through this research may be reproduced and published in a variety of forms and for a variety of audiences related to the nature of the research (i.e. doctoral publication, conferences, peer reviewed journals, articles, etc.). However, any forms of information that could lead to the identification of the organization or participants will not be disseminated in any way.</p>
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Information obtained in this study, including this consent form, will be kept strictly confidential (i.e. will not be passed to others) and anonymous (i.e. individuals and organizations will not be identified unless this is expressly excluded in the details given above).

Data obtained through this research may be reproduced and published in a variety of forms and for a variety of audiences related to the broad nature of the research detailed above. It will not be used for purposes other than those outlined above without your permission.

Participation is entirely voluntary and participants may withdraw at any time without consequence. No compensation will be given for your participation.

By signing this consent form, you are indicating that you fully understand the above information and agree to participate in this study on the basis of the above information.

Date:

Participant's signature:

Date: 14.04.2014

Student's signature:

Please keep one copy of this form for your own records.

Interview I

Person 1: Good afternoon Mr. X, thanks for your willingness to do the interview with me. I would like to start directly. #00:00:11-1#

Person 2: I'd be glad to! #00:00:12-4#

Person 1: How would you determine the compensation for SME? #00:00:16-8#

Person 2: You mean by which method? #00:00:20-5#

Person 1: By which method. #00:00:21-8#

Person 2: As a rule, I would suggest IDW S 1. By the way, this is the procedure which we recommend most often in the course of legal advice. #00:00:37-0#

Person 1: Of course, there are also other methods by which you could determine a compensation for SME. In your view, are these inappropriate, like for example the multiples method, a mixed procedure or perhaps the asset value method? Do they play a role? #00:00:57-7#

Person 2: In my experience tax valuation methods are usually still mentioned in older company contracts, such as the Stuttgart method. The methods you mentioned are rather rare in my experience. #00:01:15-7#

Person 1: And if you did come across such a method, for example a multiple method probably based on EBIT or EBITDA, such as when you might act before court or as an appraiser, would you say that it is not suitable because this method was applied at the time of the foundation of the company as well as by the severance compensation which does not meet legislative standards, or would you argue that it simple does without the basis of business administration and therefore represents an accepted evaluation method? #00:02:02-1#

Person 2: In the first instance, I would say that such a statutory standard does not exist. So as far as I know, there is no known evaluation method outside the tax law in commercial or civil law. In tax law, valuation law and in the inheritance tax law, the simplified capitalized earnings method is

mentioned, otherwise there is no legally codified evaluation method. When I am appointed as an appraiser, I would always say that the IDW S 1 is to be applied and would refer back to the position, that the multiples method, for example, is not an evaluation method as such but rather a plausibility method. Ultimately, the multiples which are available that are published, are attributed to a capitalization rate. In this respect, this is just the reverse of a capitalization rate and in our valuation reports, we usually apply several methods, whether we are acting on behalf of a client or as an arbitrator. This means we usually do a capitalized earnings based method by the discounting of future income and check the plausibility of these results with a multiples method. This is the usual procedure and thus the severance agreement written in the company contract states that a multiple method needs to be applied, which should not deviate completely from the capitalized earnings based methods. This means both needs to be transferrable to one another. #00:03:59-8#

Person 1: You mentioned the IDW, so in the IDW it is laid down that the capitalized earnings method and the DCF method are to be applied in such cases. Bearing this in mind, can you then say that in Germany, both methods are being applied equally? Or are there certain preferences? #00:04:26-7#

Person 2: Well I can only speak from personal experience and I would say that in Germany, the capitalized earnings method is clearly the method which is most commonly applied. Although you read in the relevant literature again and again that the DCF methods find increasing use, the capitalized earnings method is used almost exclusively, particularly in the area of legal disputes. And in company contracts, I would emphasize this, the capitalized earnings method is often applied, particularly in new company contracts. #00:05:10-1#

Person 1: O.K. When determining the compensation, we are usually talking about parts of the company and not the entire company. There are different points of view in the relevant literature as to whether an evaluation should consider the whole company or whether a partial value could be possible in a severance agreement? This means a direct or an indirect method. How would you suggest proceeding in such cases? #00:05:41-0#

Person 2: I would always prefer the overall evaluation and derive the pro rata share from the determined enterprise value. The arguments against this can also be reversed very quickly. A package surcharge can also be changed quickly in a package discount. In this respect, the reasoning is not clear-cut and the discounts and surcharges which are cited as arguments, are not convincing in my opinion. #00:06:19-7#

Person 1: If we stay with the topic of the capitalized earnings method and the DCF method it is often crucial and controversial to discuss how the discount rate, especially for SME is to be determined. In order to determine the base rate, is the government bond better in comparison or the Svensson method, what would you prefer in this case or what would you recommend? #00:06:49-8#

Person 2: Previously, the base rate was derived from the average from the last five or ten years and then usually longer running government bonds, which has the historical background, that in the past, the market environment for fifteen- to thirty-year government bonds did not exist. This market volume only increased sharply in the late nineties, so in this respect, you can call it a functioning market in this environment, and therefore it does make sense to derive the basic interest rate from long running government bonds and the Svensson method as a yield curve has the advantage, that it does not derive the interest rate in retrospect, but while considering the future. Although this only runs maximum until the 30. year, it is still better to use the data for the thirty-year period than to use it retrospectively. Ultimately, you have taken into account the equivalence principle. So, when the numerator contains a figure which looks ahead, you should also have forward-looking data in the denominator #00:08:09-0#

Person 1: The following topic is currently discussed very controversially in literature, at the moment particularly for SMEs and especially in regard to the determination of the risk interest and CAPM. Often, the question is asked, whether CAPM is actually adequate for SME when using capital market data for small and medium-sized companies? #00:08:40-8#

Person 2: Well you could probably say CAPM is only the second-best solution but the best one is unfortunately unknown to me and at least CAPM

has won a Nobel Prize. So ultimately, it cannot be that bad. What did people do in the past? If you compare to the past, the risk premium was determined heuristically, and the evaluator implicitly did his own internal risk evaluation by ascribing certain factors, which he had not determine closer to a certain risk-profile. From this risk profile, he derived a risk premium. But this was in no way comprehensible. You might possibly transfer it, but it was mainly withdrawn from an intersubjective traceability. With the CAPM, the findings of the capital market theory are transmitted to the evaluation of a company. So, if I evaluate the laundry service “Edelweiß”, with € 500.000 turnover, it does not make much sense to account the risk premium of a publicly traded company that is diversified and whose equity securities are listed on the stock-market. I would, however, say that even if it is an auxiliary structure, it is still superior to that heuristic determination. It is not the perfect world as encountered in the capital market theory, but at least it is a method by which a knowledgeable party could understand the derivation of the risk premium and especially if you think about the severance of shareholders. So, if a potential constellation which is disputed, then this procedure is more objective than an evaluator determining a risk premium on the basis of his own intuitive perception. #00:10:50-5#

Person 1: The compensation is a dominated valuation scenario. This is what it’s called in technical jargon, which means that de facto not only one value is behind it, but it really should be a price for the settlement, or for the disposal of shares. In particular, there is the question –I understand your arguments regarding the risk rate - when using peer-groups. There is the question which Beta should I take for this and if I cannot find a Beta, I should distance myself from it. Nevertheless, as an auditor, I need to explain comprehensibly how I did it. But the more I distance myself from this, the more individual I become as an evaluator. And whether in the end it is transparent enough, is questionable. Critics say then I can deduct a discount directly and I can save myself all the trouble. How would you assess this argumentation? #00:12:06-2#

Person 2: Well, I can describe how we handle this in practice. Of course, the best is when you can refer to the original Beta factor. With mid-sized

companies, this usually is not the case. And in a multistage-process you can apply the derivation of the Beta factor. I do not want to explain these steps in detail but all these steps still allow accountability, where it is important, that besides the assessment report, you also outline how you exercised this expert discretion in each case. That there is discretion, I would not want to deny, but it is important that this expert discretion is outlined in a comprehensible way and then I stick to my statement that there is still an intuitive determination prominent when applying a standardized procedure, which might suffer from some shortcomings, because I do not have a listed rating object with an original Beta factor. But I might get some data from listed companies which perhaps are somehow comparable to the business risk in the end. #00:13:26-6#

Person 1: We have just talked about CAPM, would you argue the same for WACC? #00:13:38-4#

Person 2: Well, the WACC is ultimately derived from CAPM, meaning that the main features of the risk derivation of the systematic business risk are also incorporated in the WACC. So here, I could see no obvious difference. #00:14:02-7#

Person 1: What is often discussed with regard to SME is the question as to whether premiums or discounts should be implemented for the lack of marketability. So, after determining the fair market value or already in advance the risk interest rate, there are several methods to do this. With SME, the shareholders often cannot sell their shares freely, as they are either subject to transfer restrictions or certain agreements to sell only to certain persons or a specific group of people. Would you include this in your evaluation if in the company contract there are such restrictions, regardless of the fact that SMEs of listed companies show a lower liquidity anyway? Maybe we do this in two stages, once when it is regulated in the article of association and once when it is not laid down in the article of association. #00:15:08-5#

Person 2: With regarding the systematics, we also take deductions into account when evaluating small and medium sized companies. But we would want to specify this in the treaty and discuss it in advance with the client. I

personally would never consider this deduction in the interest rate but determine an objectified enterprise value according to the established practice by the pure CAPM and from this company value, I would then make the deduction. This makes it transparent and the client can comprehend how high the deduction is. The alternative that you have mentioned briefly, to consider a premium to the capitalisation rate, leads to a substantial lack of transparency, as the normal client has no sense of how the surcharge of 1 percent on the capitalisation rate affects the company value. This one percent point looks relatively small but it has a significant leverage effect on the result. To get back to your question as to whether we would consider the deduction of the company value for a limited fungibility, I need to differentiate. If I'm appointed as a court expert, I wouldn't take this deduction into account, as I could not prove it objectively enough. In Germany, there is no reliable data for this deduction, so that you can fall back on a sufficient empirical basis from which you derive the deduction. My own subjective observations in a number of cases are unfortunately not sufficient and do not particularly convince a judge in the context of a dispute before court, whether I am working as a dependent auditor or as a neutral arbitrator. You can derive the deduction partially in so far, as when you say that in the context of the sale of the shares of medium-sized companies, there are higher transaction costs than with the sale of stocks through a regular trading platform. You have due diligence costs, costs for the search of a buyer, costs for contractual agreements and it all extends over a considerable period of time. From this, you can derive costs which can be taken into account as decreasing the enterprise value. I may even go a step further by saying that, medium-sized companies are often highly personal or shaped a lot by individuals. In the case of a resignation by the main shareholder, consequently a slump on the future income stream might occur. However, it is a state of affairs, which you basically do not need to take into account as a fungibility deduction, but rather the future profits are being considered, that are discounted in the first instance being considered as a decline of future profits. In the process of determining the objectified value,

the discount is difficult and the evidence will not necessarily succeed.
#00:18:55-5#

Person 1: The same is being discussed for SMEs with regard to the company size. There are suggestions of taking a small-company discount because you determine a fair market value and because, compared to larger companies, they are significantly smaller and only have a discount of 20 or even 30 %. In the US, it is a common method, in Germany, it does not prevail, particularly among auditors. The question would be, if a severance agreement at SME would be possible from your point of view? #00:19:41-8#

Person 2: I would say that this small-company discount is still not justiciable because, when you put yourself into the situation, we conclude a company contract and the company or the association is established for an indefinite period. Then you don't know at the time of dispute which is sometime in the future, whether the company is actually regarded as being too small. So now it could have grown significantly and here, boundaries are fluid. So, when looking at the definition of SME, they are very diverse. So, if you ask someone on the street, he would say that companies with a 1 billion turnover are not SME anymore, while in our definition they might still be SME. #00:20:40-9#

Person 1: Because it is a family business, probably? #00:20:42-4#

Person 2: Exactly. And there are very successful family businesses in Germany which account for more than €1 billion in sales. So as far as that is concerned, we can see that it is extremely difficult to anticipate these future developments and I would say I would actually want to include the small-company-discount least of all.

The argument of fungibility convinces me much more; that you can only sell to a limited circle of potential buyers because of the regulations in the article of association, which can have a value decreasing effect on the share.
#00:21:25-3#

Person 1: There is also the topic of the opportunity to diversify the investor. We just talked about the risks, they are taken into account, but the unsystematic risks are not taken into account. At SME, the investor most of

the time invests his entire capital or large parts of it into this company. This and the other factors that play a role for small companies such as the organization has a different depth and, there is a dependence on a few people, this show that there are less possibilities. Would you consider this in your evaluation and, if so, how? #00:22:18-4#

Person 2: Basically, we have again reached the point that SME is influenced by one single shareholder and that their resignation might negatively affect the profit flows. For the profit flows I would say: Yes, here it should be taken into account in the sense of a best-anticipated estimate of how big the impact is, when a shareholder with his good relations and important clients leaves. But I would not, however, want to see it taken into account in the interest rate. #00:23:07-9#

Person 1: This means you would consider it de facto in the planning stage, so that in the numerator the profit share is slightly smaller? #00:23:14-1#

Person 2: Exactly. To me, this would seem systematically cleaner than considering this limited diversification in the interest rate. I am well aware of the fact that it does not fully coincide with the assumptions of CAPM, but also here, the arguments can be reversed to some extent, as the missing diversification typically found in the SME sector may indeed be quite positive for such a company. Also, the consultants sell something different every year and these diversified companies have also endured times of criticism, which is not salutary for the business model and we should rather focus on its core areas #00:24:09-5#

Person 1: Also controversial is the existing probability of insolvency between diversified companies or large, listed companies, in contrast to SMEs, which have a limited service or business model. The question is, whether this probability of insolvency is to be considered and especially in the perpetuity? #00:24:44-1#

Person 2: So far, this has not been the case. It seems to me appropriate, however, simply because of the empirical observation, that we consider a discount for this probability of insolvency. The problem, however, that we have here at the moment is to find a reliable database for it, because this topic can also be broadened. There are certain industries, for example, which

are subject to an increased probability of insolvency, and there are companies of a certain scale which have a stronger tendency. Perhaps, the part of the life cycle of a company is vital for the insolvency rate, so we're opening up a whole range of issues that cannot be answered easily. Intuitively, it seems appropriate to consider this probability of insolvency, the problem is only here again how can you derive this objective?
#00:25:45-1#

Person 1: A proposal which is strongly supported is the use of recognized credit rating procedures, in order to take into account the probability of insolvency. This is also the subject of controversial discussion because the procedures generally only reflect the probability of default for the next year and we are talking about the perpetuity, meaning that the duration is different. This is the first point and the second one is that it is precisely SMEs which usually do not have an external rating but are generally only rated by their bank. Also, here, across institutions, there are different rating procedures which are comparable or similar in their failure probability, but which are not immediately obvious. If it goes in this direction, would you consider a rating procedure to be a suitable means for showing the probability of ruin in perpetuity or would you say that we need more reliable data, representing a longer duration in order to take it into account?
#00:27:04-8#

Person 2: I wouldn't regard it as a primary issue that you derive it from the one-year period alone, but rather the traceability of these rating methods and whether they are now transferable to medium-sized businesses. My experiences even with rating procedures created by banks are not very positive which is why I would have some doubts that you can easily apply these findings to the probability of insolvency. I would prefer statistical ratios. #00:27:41-1#

Person 1: This is supposed to be precisely the advantage of these banking groups, especially when looking at the three pillars, the cooperative banks which have an abundance of medium-sized enterprises and particularly small and medium-sized companies which they have rated. To this extent, they may present probabilities of default over the years and also the "Sparkassen"

(savings banks) have a very wide pool of small and medium enterprises among their customers. Insofar, one would have the appropriate population to represent it. But you see it sceptically as you don't know exactly how such companies are being rated? #00:28:28-2#

Person 2: The process itself is not always very transparent to me considering how the data came about. If the data base is the way you describe, which is comprehensible to some extent, because the "Mittelstand" is typically financed by the credit institutions referred to, it would certainly not be a bad option, if it is made accessible anonymously but understandably. An alternative that I could imagine is the data status of the DATEV, which certainly is also very extensive and in certain sectors, DATEV today already provides us with revealing data in regard to industry comparisons. #00:29:16-3#

Person 1: So now perpetuity. There is an argument that is as follows: I presume that the company exists forever, but this does not necessarily correspond to reality, especially for small and medium-sized enterprises. We can observe that because of this business model or because of the dependence on certain individuals, they have to be liquidated at some point and that these companies are finite, because they cannot necessarily be continued. Then to determine an indemnity or a review of these SMEs with the perpetuity would be unrealistic. In this respect the question is: Does it make sense to apply the perpetuity and if so, does it still make sense to take a deduction for growth, so this effect is somewhat mitigated or limited? #00:30:23-1#

Person 2: I have just recently evaluated a company from the fertilizer industry which was mining mineral resources to produce its products. Looking at these mineral resources it was obvious, that they only have a finite lifetime. So, there were reports that have shown us that in today's mining volume range with a normal increase in these resources, only X years could be done and then it's over. In this case, there was no perpetuity. We took a comparison, we used this limited duration once, and then calculated everything again using a perpetual annuity. The period was still so long, over 30 years that the difference between the restricted model and

the perpetuity was only relatively small. Because you have to be clear about the fact that, if returns accrue at 30-40 years in the distant future, they get lower and lower due to the effect of discounting to the valuation date. So, that's why to some extent, this might be a phantom debate, when I say, at least: "I have a company's continued existence, which is more than 10 years." Then, I do in fact get close to the perpetuity. Of course, the 11th to 20th years are still significant, but at least when I say "more than 30 years, then I'm almost in infinity." In general, I would say that a perpetual annuity is appropriate and always - I'm back to what I replied to other questions - first derive this objectified enterprise value and then you can talk about discounts, then you have a better sense of what reductions we are speaking about. To cut planning after a certain number of years, you won't really feel that you have actually lost. I think that it is difficult to estimate otherwise the growth discount is nothing less in regard to the perpetuity. If I understand the question correctly, it is about the growth discount in the capitalisation interest rate - it is nothing less than a transformation of the growth from the numerator in the denominator, meaning, because I have a perpetual annuity, I no longer have to represent all those years in the future in columns to still be able to assume earnings growth. This growth must be transferred to a reduction in the denominator. This is mathematically nothing other than the growth discount. In this respect, I would say, "if I assume no growth, then I have a real shrinkage", because the interest rates indeed include an inflation rate, so to me it seems quite appropriate to take into account a deduction for growth in the capitalization rate. #00:33:38-6#

Person 1: Well, I would like to come to the specifics of SMEs, namely in determining the compensation. When determining the indemnity, how can the unique features of SME be reflected properly? That means, how can you address these particularities in the assessment? I am speaking in particular of the typical value-influencing characteristics of SMEs. We just had the example of them having a low product and service diversification, another issue is customer dependence, which is quite different from the case of listed companies, the supplier dependency and so on. There are a few. So, the

fundamental question is; "How can you consider these features in an evaluation?" #00:34:39-9#

Person 2: At the moment, I don't know of any formal representation of how you want to consider it in a company contract, so as to say; "we must now formulate a severance arrangement here that can meet these requirements." Because with this, you have already set a precedent for the later time of withdrawal. One does not know at the time of establishing a company - it does not necessarily need to be a foundation - but at the time of conclusion of the contract, it is already known what kind of influence the individual shareholder exerts in the company. There are shareholders who just regard this as a financial investment and do not have operational activities, and other shareholders, who stamp their personalities on the entire structure. If the former resigns, business can continue as usual, but when the latter withdraws, there might be a loss of 50% in sales. To convert that into a formulation for the company contract, I think is almost impossible. #00:36:03-6#

Person 1: But in the event that exactly one of these shareholders withdraws, who was perhaps responsible for sales in the past or who had contacts with the customers. You just said in another example, you would then consider this accordingly in the earnings situation, so in the counter by saying; "because of this, the company is very likely to generate less turnover", although auditors, in particular, always assume a typified continuation. You said deliberately, if this is the case, then I have to consider it and this is about a similar case. Since I do not know who has what role and who drops out at some point, in the event that exactly one of these shareholders resigns who has these contacts and is really important for the company, I must find a solution. I am aware of this and I can understand it when you say; "There is no formula for such a situation." I also can't think of any. But how could you address something like this that it is taken into account, at least in some way, in such a case? #00:37:09-2#

Person 2: What has been discussed in recent months more and more, even at the IDW, is the so-called 'transferable profitability'. The problem has also been recognized at the IDW that there is a difference between whether a

shareholder of a listed company ceases to be a shareholder who has zero impact on the development of the company or the shareholder of the SMEs resigns, who worked in sales. Within the IDW, it has initially been agreed that "relevance for assessment can only be the so-called transferable earning power". So, what can be continued by the new person? If the shareholder who is retiring takes all the contacts with him, and also cannot transfer these to a transferee, then he also has created no shareholder value. Because the value of the company is ultimately, what can be transferred independently of a specific person? In this respect, and I am developing this now from our conversation, I would say in the compensation formula it needs to be formulated that the future returns are only allowed to consider the so-called transferable earning power and what has happened in the past –assisted by this retiring shareholder- may not be relevant. #00:38:41-6#

Person 1: This would then also relate to other matters, such as the performance relations between the company and the owner or related persons if they resign together with the shareholder. I am thinking about a wife, for example, who works in the company and receives wages which are far too low. If that person leaves the company, then I would have to plan a salary which stands up to third-party comparison. In addition, if that person was very innovative, it would need to be taken into account. Here, we are again at the numerator. De facto this means I can apply this to the whole value-influencing characteristics; whether I have suppliers' dependencies or client dependencies, dependencies on a few employees, etc. All these factors are typical of SMEs. Would you want to represent them in the nominator? #00:39:43-3#

Person 2: Yes #00:39:43-9#

Person 1: But you would address these all individually, meaning you would look at all the points and if this separation happens when the shareholder leaves, what would be the situation of the company afterwards? #00:39:55-5

Person 2: Well, the IDW S1 talks about – this is to be regarded as synonymous - the management factors that are relevant here. The example that you have just mentioned is very aptly; the wife works for the company and receives no arm's length eligible salary because the entrepreneurial

family lives on the profit. Then, if she holds a full-time job there, instead of zero, an appropriate level needs to be set, because otherwise it does not withstand any third-party comparison. Without this work, the company might not exist to the same extent. Another example, which can be found in the SME sector more commonly is: safety orders for loans, properties not rented at arm's length prices, discounted loan assignments, so all the issues that we correct in the counter are part of the determination of an objectified business value. But this is regardless of whether it is mentioned in the partnership agreement in the severance clause. When one says: "We determine an objectified value by IDW S1", then I have considered virtually everything already implicitly, without the need to explicitly mention it in the formulation of the article of association again. #00:41:34-7#

Person 1: Now I have looked at the value-influencing factors and characteristics, which are dependent on people. Who drops out and what influence does it have on valuation, or which revenues are no longer available or are lower as a result? But what about the typical qualitative characteristics of an SME? How, for example, are there simple accounting and higher interest expense because there is no access to capital markets, limited information science, flatter structures, let alone the planning that you might not even have or only rudimentary in order to make an assessment at all? Do you think that you should take into account these qualitative factors in a business valuation or indemnity determination? #00:42:28-4#

Person 2: Well, some of the factors that have been mentioned by you are considered in the numerator, for example, flat hierarchies and limited reporting. Then it is expressed in lower personnel expenses. So, we have it in the numerator again. From this I would not necessarily derive another systematic risk for the business model, by coming back to the interest rate in this roundabout way. Also, I cannot imagine from my hands-on experience, saying, "because flat hierarchies exist, because some typically encountered risk reduction measures do not exist in the company, I would therefore apply a different discount rate." But now we are at the point, that certain arguments can actually be reversed. We have a bad reporting system and someone who wants to sell the company well, who says: "Yes, I have a bad

reporting system, but I also have lower personnel costs and that's why I'm profitable". So the arguments can also be turned around. #00:43:50-0#

Person 1: This means that we stick to these factors, whether they are people dependent or classic or other qualitative factors, which are displayed in the numerator? #00:43:58-5#

Person 2: I would say, they should be included in the numerator. In order to maybe do the arm's length principle, you might say: "For an objectified enterprise value, the personnel structure may have to be adjusted, I need more employees, I might need instead of one managing directors two". Then I have an influence on the planning, but because of this I will not come to a different assessment of the systematic risk. In deriving the capitalization rate, I compare the systematic risk and not the unsystematic risk. The factors we have just mentioned, I believe, typically are unsystematic risks. #00:44:46-7#

Person 1: If you look at the SME and we have just talked about value-influencing characteristics and factors that typically occur. Do you think that there are certain factors that very strongly influence the value and, if so, what would be your top three from your practice? What are the key ones?

Person 2: Well first and foremost, in my observation, it's the contacts of a partner-manager, who typically set up the company and in this respect are very characteristic for the business success of a company. Now to make a classification for other factors I find extremely difficult. So you can say: "Second place is" Unfortunately, it is a fact that many SMEs are somewhat capital-weak, so for these companies then it is also important that the shareholder is liable with private assets. That would be difficult if this liability volume is extracted from the company. That would certainly have a very negative impact on the financing structure and in third place the personal commitment of the shareholder which is simply often not comparable to an employed managing director. #00:46:45-2#

Person 1: These are examples in a positive sense, meaning positive values. #00:46:52-7#

Person 2: Yes, if I take out this managing partner and replace him with an employed managing director, the question would be whether this is

sufficient or whether I might need to employ two managing directors or one and a half, which again impacts the annual results in the future. #00:47:10-6#

Person 1: I understood it differently; that the shortcomings in management cannot be eliminated because they usually are also the owner. One assumes that he is not as well trained as an employed managing director, whom one would employ with the appropriate qualifications. That he might even generate higher yields but.... # 00: 47: 33-3 #

Person 2: That's certainly possible, you can play it in both directions. #00:47:40-0#

Person 1: O.K. Yes, now we come to the question of how you can include such an evaluation in an article of association. How can the determination of the severance pay for SMEs be included in the company contract, while taking into account the interests of all the stakeholders? Because the legislature says that the interests of all stakeholders should be taken into account. A definition of how it can be done does not, unfortunately, exist. As such, the question is asking about your practical experience and how you would implement such a provision in the contract? #00:48:32-2#

Person 2: Well, the regulation should be first of all that the compensation claim of a shareholder, which is always present, is not just eroded. So, he should get a compensation for the resignation which – according to the Bundesverfassungsgericht (Federal Constitutional Court) - ensures him the full value. Certainly, there is a need to separate between pure financial investments and a stake, where the shareholder actively works in the company; that there is a certain distinction which again is not easily justiciable. You could hardly concede the operative shareholder a surcharge of X per cent, or conversely for the one who holds a pure financial investment, a discount of X percent. I would not know how this should be implemented. This differentiation is not observed in practice. As it is about the balance of interests -in the case of retirement- as a requirement for severance agreements, I would define the traceability as a first priority and also a process that maps the future development of the company. The regulation you can find in older company contracts that the Stuttgart method

applies considering the last three fiscal years, to me, does not seem appropriate in the fluctuations, which we can observe today. Because there is this sentence; "the businessman gives nothing for the past", it seems almost crazy to find a settlement on the basis of the last three actual results. If the business model changes significantly and the revenues break away, it would be really wrong, in my sense of justice, to calculate the severance on the basis of the past three financial years. In this respect, within the framework of partnership agreements almost exclusively, we recommend determining the compensation based on the IDW S1 in the current version. #00:50:59-3#

Person 1: So, a forward-looking process, meaning the capitalised earnings method or discounted cashflow method. Ok, exactly what you just said; that at the present time, the range of variation is relatively high. Because of this, past values would not be adequately taken into account, but that makes it more difficult, of course, to forecast the future values or the future profitability. How would you address these, particularly among SMEs which have a limited reporting system and perhaps no plan? If they have one, if the one resigns, who's going to create the planning? #00:51:40-6#

Person 2: Well an independent expert may also assist with the planning or in the planning preparation, so that's not an issue that could subject the expert to bias. The variations we observe in certain industries. So, when I only think of the mechanical engineering industry, we take it into account by creating a past analysis in order to see if cycles exist and to carry these over. So, if we are in a recovery phase, as has typically been the case since 2010, we do not deny that a cyclical business model existed in the past and extrapolate the currently encountered high level without consideration into the future. This then needs to be taken into account in the context of the derivation of the perpetuity that you cannot refer back from the last good year to the infinite future. But at least the past performance gives here some indications for this. So, we have -to come back to the example- recently rated a mechanical engineer company where we have gone back to the seventies just to work out these cycles and in this case, there were significant reductions in perpetuity, so that we set the revenues of perpetuity

much lower than in the last year of the detailed planning phase. #00:53:28-4#

Person 1: I would like to come back to this planning. So de facto, regulations needs to be made—in case there is any planning- they must satisfy the interests of all parties. Would you recommend that the shareholders' agreement should include a neutral expert –whoever this might be- who checks the planning and if there is no planning, that this expert provides assistance in the preparation? #00:53:57-2

Person 2: Yes, I would absolutely welcome this. That one finds no planning is rarely the case today. A few numbers generally exist in the SME sector, if only because the financing credit institutions alone request this. I already said that the neutral expert plays a supporting role, which does not represent a partiality issue. Also, the neutral expert opinion may be accompanied by supportive measures. #00:54:39-5#

Person 1: We have just talked about the full value or market value or true value. If one takes into account the interests of the particular company, the company naturally has an interest in the shares being returned to the company, that the liquidity burdens do not hit immediately and that they are as low as possible. If one considers that the shareholders when founding the company all more or less had the same interest, namely the interest in ensuring that this company exists for as long as possible and is successful for as long as possible. At the time of founding, all agree, but when one then resigns, it could well be very different. Nevertheless, there is the interest of the company to say: yes, indeed to the full value, there could well be a discount of X per cent of the true value or of the full value. Do you have any experience how much this discount might be? #00:55:53-5#

Person 2: Yes indeed, it is exactly like this, that these severance arrangements should give the retiring shareholders an incentive at an opportune time to consider this option that one says: "Now the business is going well, now I am getting out". But the severance scheme should indeed be an incentive to remain in the business. In this respect, without being empirically robust, I would say that in the company contracts I've seen so

far, reductions of between 20% and 30% can be found from the value, which is determined in accordance with IDW S1. #00:56:33-6#

Person 1: So, from the objectified value. #00:56:36-2#

Person 2: Exactly. #00:56:36-3#

Person 1: What about the other terms? Saying; is the value or this severance due immediately or can the compensation be stretched over a period of X years? # 00: 56: 54-8 #

Person 2: Well, I have just had a partnership agreement, in which the severance was to be paid in five equal annual instalments. # 00: 57: 02-9 #

Person 1: Are there also agreements regarding a settlement amount, which is not yet due, on how to pay interest? # 00: 57:13-7 #

Person 2: Yes, as a rule these protracted payments are also remunerated. There are quite different rules, beginning with the base rate plus X percentage points up to the EURIBOR or LIBOR, you can actually see the whole range.

Person 1: You could take the discount rate, even if the maturity time is not congruent. This is clear. # 00: 57: 43-7 #

Person 2: I agree with you, it would be conceivable, especially since these extended payments also include an element of risk for the retiring partner. I have, however, not observed this. # 00: 57: 57-0 #

Person 1: What was the longest time you have seen in such contracts? # 00: 58: 02-3 #

Person 2: Five years. So, I'd say the rule is between three and five years. # 00: 58: 08-5 #

Person 1: Do you consider longer loan periods, regardless of whether one can expect this of the resigning partner, to be legally permissible? #00:58:20-1#

Person 2: That there is a legal restriction is not known to me, also in case-law I have not seen anything yet. So, at the moment I have not read anything about it, that beyond this temporal extension it was somehow considered questionable or immoral. Only from the perspective of a shareholder I would consider a period that exceeds five years as unacceptable because the entrepreneurial risk, from which the withdrawing partner is partly, will still

stay with him. So, in the case of bankruptcy, he may have a problem with the enforcement of his claim. #00:59:12-6#

Person 1: That's a very good point. He then has a compensation claim against the company. If this is stretched further than five years, is the claim secured in any form or is it the case that shares are transferred and this claim is merely an amount receivable? # 00: 59: 36-8 #

Person 2: It is true that this claim can be made against the company. Can it not be rather the case that one partner just will acquire the shares? # 00: 59: 49-1 #

Person 1: That's also possible, yes. But upon termination there is an entitlement in accordance with 738 BGB towards the company or you can, of course, agree on something else in company contracts, for example, that you have to tender his shares to the other shareholders, which also happens. Regardless of this, do you see a collateral way or is the issue not addressed? #01:00:23-3#

Person 2: Well actually, in my experience, this collateral is not addressed and in the case of insolvency, I ask myself: "This collateral would be worthless, if the company goes into bankruptcy anyway, then the shares are indeed worth nothing." # 01: 00: 43-0 #

Person 1: That's right. But if I assume that I have transferred the shares and I am no longer a partner, then I am a quite normal creditor. Then, when I have an asset, a mortgage, whatever, just as an example, this security would be at the very least in the context, recoverable, as long as no bankruptcy happened three months after the transfer, but when it happens in two years. Probably it is not common practice, especially for SMEs, that such things are secured. It's an argument for them to say, of course, the withdrawing partner has the full risk for five years; the risk he no longer wanted to have. #01:01:36-9#

Person 2: So, when I use the outlines of an OHG (general partnership) in Germany, the partner is in this follow-up liability for five years. #01:01:46-7#

Person 1: So, it is appropriate anyway. I now had rather a GmbH in mind, but also in the GmbH it will be similar regarding the collateral. I now come

to the penultimate question. We now have evaluation methods, we talked about future-oriented methods in a severance agreement, of course, we are talking about small and medium enterprises, about evaluation procedures, such as capitalised earnings method, or the DCF method, a detailed planning consideration in the numerator or the denominator, how the discount rate should be determined, etc. The shareholders of a SME are more likely to say: "Can you not find a very simple indemnity arrangement where we do not necessarily need an auditor or a neutral expert who calculate this time? # 01: 02: 49-2 #

Person 2: I can understand this demand and they do also come our way, only it is interesting that the person who is leaving and is interested in a compensation equal to the market value generally accepts the more complex process and the one who remains in the company usually has a greater interest in a very simple process. It is presumably related that the simplified procedure leads to lower values. #01:03:26-7#

Person 1: We therefore have no interest congruence and if an appraiser evaluates in accordance with the IDW standard, the probability is higher that the evaluation withstands a court decision. That is why you would prefer to argue for the implementation of such a regulation? #01:03:49-1#

Person 2: Yes, in a legal dispute in which a neutral expert will possibly be appointed who has no other choice than to determine an earnings value. So, he will hardly be satisfied with a multiple method, unless it was absolutely normal for this particular branch. But it's just a very flat-rate method and the multiple values are also always time-dependent. So, in 2014 we could observe other multiples than in 2008 or 2009 at the height of the financial crisis. So how high the multiple should be can hardly be fixed and if we refer back to publicly available sources, then one often has the problem that the multiple determination represents a kind of black box in which you cannot understand how this multiple has been derived. # 01: 04: 54-0 #

Person 1: When you just talk about the multiples. If you look at databases, whether they are reliable or not, I cannot judge because I do not know how many transactions are behind it. The Finance, for example; the Finance publishes in three groups, small businesses, listed companies and medium-

sized enterprises. At least here it can be observed that the factors in smaller companies are less than in medium or larger enterprises. If I assume this, then there must be a reason for it to be like this. This has nothing to do with the review, these are the prices that have been published there. There are indeed transactions behind them – how many there are, as I said, I do not know. Can one at least say that the market - for whatever reasons, whether it is these reasons that we have discussed, or the characteristics of SMEs, the fungibility- actually causes smaller companies to be sold at least pricewise at lower factors? # 01: 06: 10-8 #

Person 2: There is an assumption that a discount exists between large and SMEs. Could you also say that the SMEs are more profitable? #01:06:26-5#

Person 1: If that were so, I would have to consider the equity claim of this company accordingly in the review. That would then be analogous. # 01: 06: 37-3 #

Person 2: We are at the problem that the occurrence of these factors is not, at least for me, comprehensible. Whether there are actually transactions that underlie them or expert assessments, where also felt factors are being partially mapped. # 01: 06: 58-8 #

Person 1: I'll put the question differently. I have the opportunity to invest in Bayer AG as an investor or in a small medium-sized company in the chemical industry. My earnings expectations in the small business are significantly higher than for Bayer because a certain security can be assumed at Bayer. At Bayer, it is bigger than in the small business and I'm back at the difference between value and price. We have discussed all these topics purely from the valuation technique, from the procedure of the evaluation and why this should be done that way. Nonetheless, we stick with small and medium-sized enterprises. These differences in the return on equity or risk must nevertheless be reflected in some form. We take some factors into account in the numerator; this approach when we consciously address the lack of fungibility, that this reduction will be carried out and documented, all these issues have been addressed. If I can observe that, in principle, a medium-sized company sells to the factor of six and a small company to five. This is a clear difference, so far as I had to think about

how I transfer these price differences onto the valuation. Can you see any approaches of how, regardless of the indemnity regulations, one can also take deductions for various reasons, because there are other interests to be taken into account? Could this approach not be generally applied to the evaluation of SMEs, to bring about a simplification? #01:09:07-6#

Person 2: Well, this is an observed effect that the multiples of SMEs are smaller than of listed companies. I'm not sure whether one can necessarily deduce this from the expected returns or whether this limited fungibility is confused. So, things are being priced into the multiple, which cannot be unravelled in detail. #01:09:41-7#

Person 1: Exactly, I agree. It could be all the factors that are subsumed under these different factors or even in higher differences, which can vary. But what can be observed is that the factors are lower. But perhaps again this question: "It will probably be like you said, is your point of view that in the classical evaluation you should not simply take account of a lump sum, but always consider the individual factors in the assessment? You have argued this way, which I can understand. In the end, especially for SMEs how expensive such an assessment can be also plays a role. #01:10:28-8#

Person 2: The desire for a simple process always exists. Nevertheless, this simple procedure must lead to proper results. Since the multiple, when it is deduced clearly and takes into account all these things of which we have spoken, is not exactly trivial. Then, it is not enough to the look at the Finance magazine and choose one out of ten different sectors. Because often it is precisely so that the company, which is rated, cannot be clearly assigned to one industry and the proper discharge of these multiples then requires a lot of effort and research effort, so compared with the income approach you cannot clearly feel a supposed advantage. That's why I personally would always advise against the multiple method in the context of partnership agreements. # 01: 11: 38-6

Person 1: O.K. # 01: 11: 39-6 #

Person 2: For an initial value indication, this is a compatible method but you find problems when you do everything based on an EBIT-size for all. What is taken into consideration in the strict sense as interest bearing? You

already have problems like what should I do with the pension provisions, what do I do with certain items that are somewhere between equity and debt. There are many problems of differentiation which lead to the methods being so difficult. # 01: 12: 20-3 #

Person 1: Yes, I should like to thank you for your time and for the insightful conversation. # 01: 12: 32-9 #

Person 2: You're welcome.

Interview II

Person 1: Good morning Mr. X, first of all thank you for your willingness to participate in the interview. With your permission, I would like to start. # 3 00: 00: 13-6 #

Person 2: You're welcome. # 00: 00: 14-4 #

Person 1: How would you determine the indemnity for SMEs? # 00: 00: 22-4 #

Person 2: I would determine the compensation with a company valuation and the very reason is because we are here at a settlement in the dominated environment, because that even very commonly needs to be checked legally. At least I would recommend it, because we are in the German area, so especially in Germany, which is obviously a very important aspect. Whether we are in our international field, of course, there are settlements where the wife now lives in USA and everything is dependent on the US court. Then you have to think about it, of course. But here in Germany, I would definitely recommend the capitalised earnings method, because it is simply the most recognized, also in case law Court and the judges are familiar with it. Internationally, the DCF method is very common, which is also used a lot in the transaction environment. Of course, at the end of the day, both methods can be mutually converted, to add this. I think that at the moment in German courts it is the form of presentation and therefore, the discounted earnings method is common. #00: 01: 42-4#

Person 1: There are of course other methods, such as the Stuttgart method or the net asset method, the multiples method that is just used in the M&A-environment. Could you also use these methods in such a case? # 00. 02: 02-6#

Person 2: I would say that precisely the Stuttgart method is a method that was previously used a lot, but now hardly anymore. It is a method which is supposed to rate the substance and on the other hand in some ways a profitability, so a so-called 'mixed method'. Considering the evaluation of SME, of course, there also are topics, which have been discussed a lot. For

example, that one needs to see which SME it is exactly. SME though, does not equal SME. So, we need to look exactly at what kind of scale we are in the SME. I think you have initially defined, that you differentiate between freelancers and companies. It must be taken into consideration, whether it is a skilled trade company and then at what point it belongs to the category of companies and there is very often the question as to say, sometimes, that at the bottom there is only one substance and on top of this, for example, a workplace that you can rate. If there is only a one-man show, and not much more than this, then you can really see that you have a few scaffolds that are worth something and that substance and building on this is what one earns with his labour power. But maybe that is not transferable at the end of the day. I personally think little of the Stuttgart method or mixing method and think it is just as well that they are now increasingly losing importance in practice. Because I believe that ultimately the company is actually worth what you can generate in the future and that's ultimately what is also expressed by the capitalised earnings method. Even a substance would only be worth something, if you could either use it appropriately in a new environment, when I could sell it reasonably. But then I am also in a liquidation scenario. So, looked at like this, in my view, the substance per se is not a value. Of course, it would be the case if I had a valuable parcel of land, but in this case, I'm back in this area again where I think about whether it is necessary for the business or whether I can sell it individually, have an income on this and then rent a property for my future business elsewhere. So, because of this I would say, the classic mixing operations or value-oriented methods bring no blessing and are, in my terms, not adequate for the determination of indemnity. Then this topic multiple method, certainly they are common methods especially in transaction processes, in phases where you might simply get an overview of possible prices, so at the early stages, but here you must actually see that a multiple is a review pricing and ultimately, the question is between value and price. Now, if I make a fundamental review according to the excess process, just like in the discounted earnings or DCF method, I already intensively examine the substance and the budgeting of the company and that of course is limited in

the multiples method. Here, you also have to consider that the quality of multiple method increases with the quality of information that is being processed. Only then these procedures are complete and they are not necessarily very easy. # 00: 06: 15-7 #

Person 1: At the beginning, you mentioned the capitalised earnings method and the DCF method. Has that been said in the context that you would rather suggest an objectified method for indemnity determination, so that it withstands a court decision or because you would consider this from a business perspective to be more accurate? # 00: 06: 46-2 #

Person 2: More accurate compared to the net asset value method in particular? # 00: 06: 53-1 #

Person 1: Yes. # 00: 06: 57-3 #

Person 2: Exactly, this is what I said at the beginning, that against the theoretical background, the net asset method, in my view, is not very reliable and also not useful, with perhaps a few exceptions in the range of very small businesses. But otherwise it is not appropriate; meaning on the one hand not scientifically robust and on the other hand it does not make sense in practice. And it is probably so. People say that small tax consultants are still working with the classic Stuttgart method, based on the substance. I would say, from my experience after 15 years in valuation, that it absolutely does not seem sensible to me. I think that you achieve better results with DCF or the capitalised earnings method, while from my point of view, it is also good to do a cross validation. As a rule, you should also calculate the liquidation value, especially in the case of the company having high assets, for example, which you could also sell, valuable properties that could be used in a different way and thereby generate a high market price. Then you need to consider this somewhere as a lower value unit. This is an issue, and of course also a validation with the multiples method. I generally always do this so that at least you get a feeling, whether the value you have determined with the capitalised earnings method is somewhere on the right scale. #00:08:54-0#

Person 1: In your opinion, should it be a method which complies with the rules of the IDW S1, if the compensation is determined for SME or can it also be a method which complies to different rules? #00:09:15-7#

Person 2: I find it helpful to take a procedure within the IDW S1, because you already have a certain standardization. You can still calculate different S1 values and also the IDW S1 has various methods on the one hand, but also value concepts. As part of the settlement we would be in the value concept of the objectified value and I think it makes sense, because then you have a certain degree of standardization. We are talking about Germany here in a certain way. #00:10:07-4#

Person 1: Yes, it's about German companies. #00:10:07-4#

Person 2: It's just German. That's quite clear, as soon as you get in an international environment, all this does not exist. Since it is anyway handled quite differently, as people most of the time calculate with the DCF-method and in the international environment, it is absolutely common to make deductions for illiquidity, for size; things that we in Germany absolutely reject, especially in IDW S1. But I think if we are in Germany and set up a German contract, it is certainly helpful to refer to this, because then one has a certain standardization in the factor. #00:10:50-4#

Person 1: Which methods are most applicable in Germany, when settlements are determined or companies valued? #00:11:00-0#

Person 2: Severance pays and corporate evaluations before judicial reviews and tax occasions. Here, I already see the capitalised earnings method. #00:11:23-1#

Person 1: I would like to refer to the capitalised earnings method again. Especially for SMEs, the question arises as to how the discount rate should be determined. Let's start with the base rate. To some extent, is a government bond taken as a base or the Svensson method? Precisely because we are talking about SMEs, how should you proceed here? # 00: 12: 06-6 #

Person 2: I think the base rate according to the Svensson method based on these zero-coupon yield bonds with a 30-year duration is useful, because it is a process which is now recognized in all courts, which is a very important thing. In terms of other parameters of the capitalization rate, there are also

different opinions in the courts, but I think especially with the base rate, there is now quite a uniform opinion, that this Svensson method based particularly on Bundesbank data, is widely recognized and I think it is not so complex to implement, because you can get the data actually from the Internet. So, there is not a black box, so you don't need large tools or additional access to databases or something, this is actually not required. To determine the base rate according to the Svensson method is generally common and even in SMEs easily applicable. These are also topics that we thought about when we wrote the book, whether there are more meaningful alternatives, particularly for SME; the question whether one can come to simplifications. But I think in this case, simplifications make little sense. # 00: 13: 40-5 #

Person 1: Let us go straight on. The question arises whether CAPM is suitable for SME. Is CAPM the best method to determine the capitalization rate, or are there better alternatives? # 00: 14: 02-0 #

Person 2: The question arises what the alternatives are. The alternative earlier, back when I started with enterprise valuation, was base rate plus risk premium, whichever was needed. That is, the smaller the company, the higher the risk premium. I do not think much of it, because this goes in the direction of arbitrariness. So, I think ultimately that the risk premium is intended to reflect the risk compared to a secure investment, which I have because I invest in the companies, where I have a higher volatility of risk. Beyond this, it is supposed to individually represent the risk of my company and that's actually exactly what makes the CAPM. Then you take the risk premium and say: on the one hand, I have a market risk premium, so an excess return expected by the investor compared to a secure investment and this will be further completed with the company-specific risk. This consists of the operational and the financial risks of companies. I think the question definitely arises afterwards how far one extends this and how far one goes into the deep theory of CAPM, that CAPM does not allow any further surcharges. So, it is this pure theory and certainly it has its theoretical limits because, as a capital Market Model, it actually works under certain premises such as the perfect market and so on and also circumstances which we

certainly don't find in practice. But I believe that in principle it actually is a good explanatory approach, because it just tries exactly to represent the question, shows precisely these two or three main categories of risk and one at least tries to get somewhat closer to the risk level. I view it critically that people think they could exactly determine it mathematically. Because of this we are currently discussing the amount of the market risk premium also, for example, just how the market risk premium is developing in relation to the base rate. I also often see a total return expectation in the market, I know my international colleagues, they work much more in this direction. They look at the total return, which the market expected and then the base rate will be tightened and then you have a market risk premium that may also vary. In the past we determined the market risk premium historically, today there are new or different concepts under discussion, such as the implicit capital cost models, which ultimately also similar to the base rate, look into the future in regards to the market risk premium. We as a profession are still cautious there, because there are just not enough empirical studies in regard to this and the implicit cost of capital is based on estimates again and there's just the question of how good and reliable these estimates are, which are then taken as a basis. But in principle, it is an aspect, the market risk premium, because then very important creation factors show in an evaluation afterwards, also the determination of the Beta factor. # 00: 18: 24-2 #

Person 1: That would be the next point. So, in literature, CAPM is partly criticized for these data being determined, including the Beta that are based on capital market data or on listed companies and thus are not necessarily transferable to SME. There should be data from the fundus of the SMEs, that is not available however. I think you are aware of the criticism. But you would say there is currently no better alternative and therefore we use what we have. Did I understand you correctly in this summary? # 00: 19: 18-5 #

Person 2: Yes, in principle that's right. What we very often have in classic SMEs is that they are just not listed and therefore very often the peer companies are not listed either and you do not have comparative data. I think today a very important issue is, of course, peer group selection and of course there are also listed companies which have a lower market

capitalization. If you now look for peer companies, I am now oriented towards the great DAX companies or even the worldwide listed companies, so the global players of course you can say that they are absolutely not comparable in terms of size. One can say at the most that you have comparability over a specific market, so they operate in the same market, and I expect a similar market development for the product that my company manufactures like products of the comparative company. This is an indication, and some go on to just work in the context of industry Betas. Then there is of course the option, we do this as well to some extent, if SMEs - moreover, an SME is a broad term, so in my view there are also medium-sized enterprises that are listed. It's not only large corporations. Companies with 50 to 100 million Euro turnover can be found in the stock market and then they are sometimes similarly comparable, while often they are also distinguished by the fact that they have very focused business models that again cannot be compared to big corporations. So, I then think to myself, certainly not only the topic size plays a role, but also the issue that you basically have difficulty finding comparable companies because SMEs just very often have a focused business model and large listed companies are much more diversified. # 00: 21: 46-6 #

Person 1: Here we are at the point of systematic and unsystematic risks. In this process, not all risks are mapped and there the question rises as to how you could represent these. We will get back to this later. We have talked about indemnity. The issue is whether I evaluate the share directly or the total value or the pro rata share? For example, what if I reduce 25% of the share of the company? What would you say? What would be the correct procedure in the valuation? # 00: 22: 31-9 #

Person 2: So, I know the procedure, that the whole company has been rated and then the pro data share is determined. From my perspective, it is an essential point, the reconciliation of the total enterprise value of the share value. So, in my view, different risks and threads can be considered, especially if you are in a partnership, then you certainly have the total enterprise value and I can divide it between my shareholders, but then I need to consider the special shareholder accounts. They are part of the share

value, so that may indeed mean that, I have a “Kommanditgesellschaft” (limited partnership) with 3 shareholders and one has a very high capital account, because he leaves his money in the company and has perhaps even granted loans in addition. Then, of course, they trace the unit value. Whereas the other managing director who has leveraged his share, definitely has a lower deposit. In my view, this is only one aspect that ultimately makes the difference of the total value of the company to the pro rata value. # 00: 24: 13-4 #

Person 1: Discounts for lack of marketability, should this be considered in the indemnity determination and if so how? # 00: 24: 29-5 #

Person 2: There are certainly different views. I would say we are, as far as what we published at the moment in IDW S1 and also the paper about the SME we have published and ultimately the comments saying that fungibility discounts are not made for objectified enterprise reviews. I have a differentiated opinion, because I am completely honest and I have written it in my book. I can already see that for me as an investor the risk is higher than when I cannot get out of a company in the short term. Like if I have a lower fungibility. Personally, if I invest – and I can buy a share from a DAX company - I would expect a lower return than if I invested somewhere in the “Kommanditgesellschaft”, where I do not really know if someone would ever buy my share, especially when there are difficulties in company law, meaning that shares are freely fungible. And secondly, I would need to look for someone who will buy my shares. And for me this is associated with high transaction costs and I would need to take this into account. Among the opponents of this opinion it is argued that BASF as a whole is indeed not for sale. So, I can sell only a small proportion but if you want to sell them as a whole, it is also not for sale. On this basis, you generally do not work with fungibility discounts, but opinions differ here. In FAUB (Fachausschuss für Unternehmensbewertung und Betriebswirtschaft - Special Committee for Business Valuation and Business Management) the opinion at the moment is that you do not make any fungibility reductions in this case, but I personally would like to take a differentiated look at it. # 00: 26: 58-2 #

Person 1: Taking a differentiated look is a good word because often in the partnership agreements there are precisely these SMEs restrictions that the shares are subject to transfer restrictions, that they can be sold only to certain groups of people. You see it more differentiated than the FAUB, but according to IDW S1 in such cases, does it not have to be taken into account? # 00: 27: 31-5 #

Person 2: Yes, these are the special cases which we consider separately. If there are other restrictions, then they also need to be considered in the evaluation. # 00: 27: 43-8 #

Person 1: If so, where - in the numerator or the denominator? # 00: 27: 48-7 #

Person 2: I would not consider it in the denominator. So, I would either consider it in the numerator or as a discount. # 00: 28: 01-6 #

Person 1: So, numerator or discount is OK. # 00: 28: 04-1 #

Person 2: But then, this is explicitly indicated, meaning that you have to say this is the value of the company and due to the limitation, I make a discount of x and explain how this was determined. # 00: 28: 14-6 #

Person 1: So, make it transparent and comprehensible and show what motives have led there. # 00: 28: 22-8 #

Person 2: Yes, exactly. We have sometimes considered to model fungibility discounts precisely via transaction costs in the cashflows. This can be done and I think especially if it is a share valuation you can really think about making a deduction from the value. But, of course, I am with the critics at this point that one must be careful that this does not run totally at a flat rate. So, a deduction must also be founded, documented and be calculated, this I find very important. So now, as is common practice in the US, simply to reduce 20 or 30% for illiquidity or size or anything, I don't think much of, because that is arbitrary and not traceable. But if you really can justify it in a well-founded way, and this comes down to the individual case, that you cannot just lump sum because provisions in shareholder agreements are indeed different and that needs to be implemented in the fair valuation. # 00: 29: 35-5 #

Person 1: You have also addressed the fact that, because of the size of the company, so called ‘small-company discounts’ are indeed very common abroad. In Germany it looks different, since it is argued that empirical studies are lacking. Nevertheless, if one looks at transaction data, regardless of whether they are reliable or not, because I do not know the population behind it, do you realize that SMEs generate smaller prices than larger companies? Therefore, the question arises as to whether this should be considered in a compensation claim? How do you feel about this? # 00: 30: 23-4 #

Person 2: Yes, I have also made exactly these observations. I also see it like this, also in the transaction environment. But the question is where you actually consider it and I think the first approach is to consider the whole thing in the numerator. Because it is very often the case that cashflows of SMEs are significantly more volatile and there lies the question: Do you always plan one-dimensionally? Because what we really show above the numerator is an expected value. And this is often seen in an oversimplified way in the evaluation, by saying that you now have a plan and that is the value; the expected value. Generally, one could work with different scenarios, which are weighted by probabilities. Maybe by doing so you just get to the point when you look at the SME to see whether the planning is actually so resistant or whether it might be that alone from the business model the SME might depend on one or 2 major customers and if these cashflows disappear then what will happen? Well, the company may have no value at all anymore or no more surpluses because due to its structure it really is dependent on these customers. Regarding this, I think it is very important because to simply calculate sensitivities and by doing so you might come to the fact that you actually planned so beautifully with the three clients that it can no longer exist in the future, I just make half of the sales and if I'm lucky, only half of the result. As a rule, it's even less, because I have fixed costs which I can't reduce. So, I believe the first approach then is often the reason why SMEs are priced lower. # 00: 32: 34-7 #

Person 1: I can ask the question differently. I can look at the volatility of the past and perhaps project this same volatility on future earnings; that would be one approach, or there are also literary opinions that say precisely because it is so volatile, it would have to be reflected in the interest rate risk. Because they are expected values and whether these really occur, I cannot say, therefore I must account for it with a higher discount, meaning with a higher discount rate, which represents my risk of whether these expectation values occur or not. However, you have argued that you prefer to represent it in the numerator, because you then develop scenarios that you weigh accordingly and from this you represent a weighted average of these scenarios. What's so different about this approach from your point of view as regards the traceability? If I make that transparent, for example show these Small-company discounts in the risk interest or should I do this in the numerator? #00:33:52-9#

Person 2: I think that just in the numerator you can work with certain scenarios which are incorporated with certain assumptions than for example, if I would determine a risk premium or a discount rate simply based on the classic CAPM, calculating with the general industry risk and then make a surcharge. Then the question is really how do I quantify this surcharge? On the other hand, the question is how far should I go there? Should I go with the montecarlo simulation? But I currently think little of this. But if you look at it as just mentioned, and this simply makes sense in practice, that for example, for a due diligence if I'm working for banks and for example I review a debt service coverage, it is actually quite important to look at what are the real value drivers and what happens when it breaks or reduces so that you simply sometimes see how volatile the business model reacts, the business plan on admission of certain assumptions and that I think is extremely important. This should not be done only for a due diligence for a debt service coverage, but also for a valuation. If you do this, I believe that at SMEs you are very quickly at lower values than for big companies which have a lot more stable and broader base for their business. # 00: 35: 35-3 #

Person 1: But then it results from the decreasing income in the counter. The question that goes in the same or in a similar direction is, whether because

of the investor's lack of opportunity to diversify, also appropriate deductions are made and if so how? # 00: 35: 58-8 #

Person 2: This issue of lacking diversification has been widely discussed, for example in the field of the total Beta concept. What is a possibility would be to represent this topic in the capitalization rate. That is certainly in principle, in my view, not a fundamentally wrong approach and I also think that subjective evaluation remains applicable, because it actually just tries to identify risks in companies which are focused on a specific business model. Which then just have no broad diversification and, in principle, the essential background also is that for SMEs you assume that the investor as such is just not diversified. I think these are two different issues that we have seen in terms of diversification. So, once is the issue of the companies per se with their business model and the other question is just how far the investor is diversified and can he compensate risks at his level. As you can still see very often, especially with SMEs, the majority of entrepreneurs have tied up their assets in the company. # 00: 37: 26-4 #

Person 1: What is discussed controversially in literature and in particular in recent years is, that it is claimed that the probability of insolvency, of course for small and medium-sized enterprises is generally higher than that for listed companies, because due to their size and diversification opportunity, they have a more stable business model. Against this background, there are signs that this probability of insolvency also needs to be taken into account in the company valuation and this should be taken into account in the perpetuity. Would you advocate this and if so how? Also, there are again several opinions, either you would have to consider it in the numerator or there is also the approach to just consider this in the discount rate. # 00: 38: 39-0 #

Person 2: I think, for me, the insolvency issue is similar to the sovereign risk, which can be taken into account in both the numerator and the denominator. What is important is that one does not take that into account twice; that is quite clear. There are mathematical models that show that, ultimately, you can also take it in the denominator. These models are partly controversial, even in the literature there is some dispute as to whether these

models are correct or incorrect. I think in any case, for me as a practitioner, it is very important that you at least take this topic on board and I believe that in the past, this has been done far too little. In my view, this is not limited to non-listed companies, because, for example, particularly in the solar industry, we have actually seen a lot of bankruptcies in listed companies and we see it also in other industries such as the textile industry. Whether a company is listed, I have a company, the X AG, this means stock prices alone do not protect against bankruptcy. Particularly such issues are important to take into account and also at an early stage, it is important that you look at what the business models there actually are. Are they sustainable opportunities or existence? Is it substituted or is it subsidised only by the state and when the state promotion ceases, is it really still viable? Because such things do not fall into your lap. I think it is very important that one thinks about this and I do not want in every assessment of an SME the insolvency probability to be factored. That is total nonsense in my view, that is really rather a thing that's business model dependent, but you simply have to think about it. # 00: 40: 49-8 #

Person 1: We get right to the characteristics of SMEs; why the insolvency probability can be greater than with listed companies. But again, in terms of the process if you have the opinion that this company that you have just valued has a higher probability of insolvency. How should I measure this? Since there are approaches in the literature that say I look at credit ratings and the underlying PDs and place the order accordingly. But if I look at the ratings, well, SMEs usually have no external ratings, so from the big three I did not have, so I can just look at what the banks have done. But also, the Bank's rating only tells me how high the probability of default will be over the next twelve months. Then how do I make an evaluation that is forward-looking and also considerably longer than this period of twelve months, so like forever. The further it projects into the future, the less is the pro rata earnings contribution. In this respect, the explicit questions are: How do I do that? How do I put the probability of insolvency in the review? Where do I take the data from? # 00: 42: 11-6 #

Person 2: This is indeed no simple problem in practice, it might actually only be done via ratings. Yes, possibly also from comparable companies, but that is really a difficult area. For example, there are ratings also for the SME bonds, so there you are in the field, but this has now come in for criticism. So that's certainly a very big issue in the practical implementation. # 00: 42: 47-8 #

Person 1: But you would not see the problem if for example, I have a recognized rating process of a major bank, that I can project this probability of selection onto the entire duration. Do you consider this to be problematic or do you say: "I have nothing better and that's why this is an approach?"# 00: 43: 16-9 #

Person 2: I would probably do it like this because it is difficult to find another approach. However, if it is obviously distorted at short notice, then you have to think again. # 00: 43: 31-6 #

Person 1: A question that is always in discussion, especially in the case of SMEs, is perpetuity, since one assumes that the company will exist forever. The smaller the companies are, and you can see in studies now that many companies have to be liquidated because they cannot find a suitable successor. That means although the business model is valid, it will not be continued. There are also approaches to say, particularly for SME; Should I not necessarily consider a growth discount in the perpetuity in order to map this prospectively? # 00: 44: 13-4 #

Person 2: I would absolutely not do this, but what is very important is namely the question of the transferable profitability and I need to pose this question right at the beginning. So really the question is how much it will depend, for example, on the entrepreneur as a person and on the other hand, how long has he been in a company, for example, how many customer relationships are dependent on him and at the end of the period what is transferred at all? And one is very often then at the point when we say: that will only be transmitted for a limited time, which you will also ultimately find in an article. For example, in a shrinking-model (of profits or cash-flows) you could say: what can be transferred as a profitability, does not last forever, but that's just for a limited duration. You could say: for example,

for about 3-8 years I can still take over the customers, or the entrepreneur is still available for a certain time and with his work, the results are largely influenced. That I think is a thing which is very individual, so it is here just the customer relationship and maybe even technology. But I also think that you can see the whole thing in a much wider sense, you could expand this to the management factors and that's a very important issue in SMEs. # 00: 45: 56-9 #

Person 1: Yes, these are precisely the review-relevant or value-influencing characteristics of SMEs. You have just mentioned the customer dependence. You also mentioned further, how power relations between companies and owners that there is no separation between classic operating and private sphere, which raises the question: in determining the severance, how can these unique factors be properly reflected in SMEs? How do you do that for SMEs, that these factors also apply? Would I have to go through everything individually and consider them accordingly? But it is not necessarily in accordance with the IDW S1 when representing the objectified value in a classic way, as I assume a standard investor, or is now also the IDW S1 at the point, that of course, these factors are taken into account and if so, how do I do this exactly? # 00: 47: 16-1 #

Person 2: Well, we try to represent this in the Practice Note, which is available. The companion article in which it is in indefinite form again is in that. That is precisely this shrinking-model, where I hope now that there is not too much focus on the customer relationship. This is obviously the first step, but I think personally that this is also IDW S1 compliant that you simply look at the factors using a checklist. We have tried this here in our book and you really need to try thinking about it. It can also certainly be the case, for example, that the know-how is very strongly tied to the entrepreneur. I have known such entrepreneurs who would just tinker around and who were repeatedly developing something new. If he is no longer there, he is either truly replaceable or maybe the whole business model is just obsolete. If this company is too dependent on the entrepreneur, it is quite important that you look at the business model and that sounds obvious, but also at the value drivers. But, at the end of the day, it is just

like that. Also, in my practical experience, I find this to be so very important. Then certainly that you consider what the entrepreneurs actually cause, as SMEs do not necessarily mean that the entrepreneur does everything, there are SMEs which are third-party-administered which have a management. Here, the investor is not in the operative business, these also exist and then you can actually say: OK, you need to check the person dependence. But if in principle, you say that these companies are organized so that a new CEO can replace the old one and do the same thing, then it is that simple. Then you do not have this strong dependence on people, then you should not consider them either. I do not think that you always have to come to a shrinking of earnings in SMEs, but you just have to look at it. # 00: 49: 32-8 #

Person 1: Those are very classic value-influencing characteristics, if it is that evident. But if I still have a partner who is leaving, in your opinion, do I have to say - in order to follow this principle logically: What function did he have for the company, did he also have customer relationship, and do customers leave with him or the future income? Can I then consider this so explicitly in the indemnity determination? # 00: 50: 09-2 #

Person 2: I do not know whether I have to consider that in the indemnity determination. So, I think it really belongs to the valuation, so if I now do the IDW S1, even with the in-house knowledge today, then it needs to be taken into account. Then really do you have to worry about it? To repeat, there is always the issue of transferable profitability, it is a very important key point. Really, you do have to worry about how much depends on that person and if the member resigns then it is just gone. # 00: 50: 56-9 #

Person 1: We still find ourselves at the level that I consider in the numerator, no matter what factor of these peculiarities I consider, always in the counter again with the sensitivity analysis and corresponding scenarios and weighting. To take this example; the shareholder leaves who had a strong relationship with the two main customers and it can be assumed that these customers will not generate sales with this company anymore. Then I need to consider this in the income statement and especially in the profit situation, meaning in the company valuation. Then I run the corresponding

shares proportionately to get to the net asset value and to stay in this methodology? # 00: 51: 44-6 #

Person 2: Yes, exactly. That I think is certainly a subject which not only has to be considered when exactly the one is leaving, who has the customer relationship, but you always need to relate to the company as a whole, that one just sees if there is such a heavy dependence on the shareholders. That this just happens because they also only have a limited lifetime and there the question arises again; what is transferable? # 00: 52: 18-9 #

Person 1: If you had to prioritize, which value-influencing particularities of SMEs can be observed in practice, which would be your top three? # 00: 52: 36-8 #

Person 2: Certainly, once the entrepreneurial activity, so to what extent of the shareholders really do business, so say also leads the whole company, for example how he is the head of the company's strategic including leadership. Also, how the company as a whole, which is my personal definition, that is how this company as an organization is viable and to what extent it actually is dependent on a person, for example on the entrepreneurs; that is a factor. Then, certainly the second essential factor is the customer relationships and then I would say the technology. These were actually the things that I've already said. It can sometimes even be relations with suppliers, this always depends a bit on the business model, but in principle I would name these three first. # 00: 53: 57-8 #

Person 1: I can think of just one other thing. Just where don't separate private from the operational sphere. For example, I get a corporate credit just because I lay an unencumbered family house as collateral for the bank, or have the mortgage recorded, and therefore the interest rate is actually not commensurate with the risks, but only cheaper because of the collateral that I have given as a private person. If this shareholder leaves the company as one of three, indemnity has yet to be determined. Do I not need to take into account that if the security is no longer available, the interest rate on the foreign debt increases, so the question is: am I doing this, first in the evaluation and secondly where do I put it, in the numerator or the denominator? # 00: 54: 54-1 #

Person 2: Well, in principle, I would always use market standard financing conditions. The exception is when I have collaterals as a guarantee that I additionally had to consider in the counter, because one needs to represent the company showing how it could do external financing, isolated on the market. An exception is when there are certain fixed contracts, for example, when one partner gives the company a loan not with a certain fixed maturity, which was also previously terminated by very low rates, for example. Then, in my opinion, on this duration, the low condition needs to be set, but in perpetuity at the latest it is to be reconsidered and then ultimately adjusted to market conditions. One can assume that these particular conditions do not continue for ever, so also here there are indeed ultimately limited maturities in the articles of association. From my perspective, for sustainable earnings, only market standard conditions should be recognized, particularly for the funding, which is a complex issue. Certainly, on the one hand what loans are available, but also the areas such as guarantees, as private securities, which are found, all need to be seen as a whole. That is a question that you know very well, because you certainly look at what the overall financing structure and situation is, which is priced in at the end of the day and if you then just no longer have these collaterals from the private sphere, the conditions will change as well. # 00: 56: 50-5 #

Person 1: So, here we probably get closer to the classic question that can always be found in SMEs. If the managing director receives an adequate salary, which compares to a third party, do the family members all get an adequate salary, or is it higher or lower? Furthermore, the rent paid for the operational facility, which is also used in line with the market; are these all issues? But these issues are considered deliberately in the planning as soon as I say: this is not available anymore, then I have to use standard market values, that's obvious, right? # 00: 57: 28-0 #

Person 2: Yes, exactly. This also applies to the shareholder's wage, for example. # 00: 57: 31-9 #

Person 1: So that brings us to the last question. When I consider all these issues that we have now discussed. How can the indemnity for SMEs, under consideration of the interests of all stakeholders, be deliberately included in

the social contract? The background is that the legislator says you should also be aware of the interests of the withdrawing partner. He should receive the full and true value as well as the company, that is to say liquidity requirements and the economic situation of the company are taken into account. Because the withdrawing shareholder has the claim in the first place towards the company, unless the partnership agreement other arrangements apply. That means that the company must pay the severance to the shareholder. # 00: 58: 46-9 #

Person 2: That is certainly an issue. Because every company must also think about what the essential values and objectives are and at the end of day what stands in the partnership agreement? If, of course, the continued existence of a sustainable company is in the foreground, it is of course very important to ensure that, for example, the shareholder compensation, if it must be paid by the company can only be paid so that the company is not brought into liquidity or a jeopardizing situation. There's still the question how something generally governs this; there are shareholders statutes that say the shares must remain in the family; then the question of who will actually pay off, is it the company or do I find someone else, an external, who practically buys the shares? This is very often an issue that especially family run companies don't want to have an outside shareholder on board, for example. But you can also solve this problem quite quickly when someone wants to leave then you take private equity, but those are issues that families often don't want to deal with, because they simply say: no, we do not want that, and we put it down right in the principle and fix it in the statutes or in the Constitution that ultimately the shares may only go to family members. Then of course, there is the question of who needs to pay? Does the accepting shareholder then need to do it or does it need to come from the company? # 01: 00: 46-4 #

Person 1: In this case, I have taken the following example. The company needs to pay because it is about the compensation claim, according to 738 BGB. So that is the question that arises in the beginning, when I set up a company and I already want it to be implemented in the company contract. The first question is: what method for evaluation should I determine

already? In accordance to IDW S1, that is, I take a valid method of IDW S1, or do I consciously choose the multiples method? # 01: 01: 30-0 #

Person 2: You are ultimately free to choose, there are no statutory requirements stating how it has to be. # 01: 01: 38-4 #

Person 1: That's right. But I would like to see taken into account also the case if then, when calculating the severance pay, there is disagreement, then the outgoing shareholders could sue. What would a court say - very likely IDW S1, is that right? # 01: 02: 05-4 #

Person 2: Yes probably. With these severance evaluations, we are quickly in the area of moral standards. But in the past, it was often like this; that's not my specialty, because Mr. X (another interviewee) certainly knows more. With this 30% control that ultimately the market value, which is determined for example with the earning rate, is significantly higher than the compensation value fixed in the social contract, this is "immoral". # 01: 02: 42-1 #

Person 1: Exactly. If with this example a discounted earnings-related method or a future-oriented process is taken whether it was the discounted cashflow method or the traditional capitalised earnings method. So, you also need to ask the question of who setup the planning then - the outgoing partner or the remaining partner or the current managing director, whether this is a shareholder or not? There the problems already begin or do you implement immediately in the company contract, that it needs to be done by a neutral third party? The question is going in the direction that one says: in the article of association arrangements can be and can be implemented, which do not immediately consider the interests of all the stakeholders at this point. What would you suggest, what should one agree on here? # 01: 03: 56-2 #

Person 2: Since you are in the German environment, you can already refer to the objectified values of IDW S1. Because actually, the one who delivered the appraised report is obliged to validate the plausibility of the business plan in individual steps. At the end of the day, if there is no planning that is basically adequate, for this review occasion, if I really have just a plan that was created by the partner who needs to be compensated

with the dreams that he would like to have had, it is precisely the task of the neutral expert to optionally intervene in revision or if in doubt even create a new plan even that is possible in this concept of the objectified value. # 01: 04: 57-5 #

Person 1: Usually, the legislator says that this compensation claim can be limited by the corporate value, so, for example, if the enterprise value is 1 million, then the interests of the company and in particular the liquidity situation of the company can be taken into account in order to limit this claim accordingly. More than 50% discount is however, according to legislature, immoral. What would you personally consider to be adequate? # 01: 05: 37-8 #

Person 2: There I can't make a quantifiable statement. # 01: 05: 47-5 #

Person 1: As we have just already mentioned, the indemnity does not necessarily have to be due immediately. There are other ways to repay. Here, the legislator says that more than ten years would be immoral. The range is between one and ten years. Have you any experience of what might be adequate? Where you would say I do justice to both the person who withdraws as well as the company, which then doesn't have liquidity burdens immediately or at least where it's distributed over a specific period? # 01: 06: 32-2 #

Person 2: I personally think that you judge each individual case. But periods of five years and up to five years are certainly appropriate. There, I am also thinking of this earn-out provision, there you also even have periods of 3-5 years. There, of course, is always the risk that you tend to not make this earn-out phase too long. Of course, there is always the question as to how long can the company still be maintained the way it actually is, especially after being sold. What has been integrated so far? You have this less in a compensation case but the uncertainty of payment certainly increases with the period of time. But in such cases, the entrepreneur should also be protected, you also need to consider both sides, but I think 3-5 years is adequate. # 01: 07: 37-4 #

Person 1: Increasing risk - that is a good word. If I, as a leaving partner, engage myself in getting my severance within the next three or five years.

Should this be remunerated and if yes, at what interest rate? Perhaps the discount rate would be an adequate dimensioning factor? # 01: 08: 04-4 #

Person 2: Yes or no? That is the question, whether you take the full capitalization rate or, for example, half of the risk premium. It could be similar to guaranteed dividends, then it is done like this. That is certainly a question of what is superior, as it is relatively high then depending on which you take. It is difficult, I would like to make no direct statement. I think it is an interesting question. # 01: 09: 12-2 #

Person 1: With the indemnity determination, we are speaking of a dominated evaluation occasion. How can one then bring closer the total value and price in this settlement agreement in more detail? We have of course, partly done this by saying, yes accept discounts to a certain extent, we have however not quantified it. Are there perhaps other approaches, where you can make this connection between value and price in the severance arrangements and in the partnership agreement? # 01: 10: 00-1 #

Person 2: It is and remains difficult. A price is made by supply and demand and if you do not have comparable transactions, it is always difficult to determine the price and in this case, I believe, it is the better approach, at the end of the day, to determine the market value. It is actually about determining the market value and there is just the question of how it is determined, and I just do it with the pricing. It's also the same in international law, first, the market price and in the second step of the valuation hierarchy this surplus-oriented and forward-looking process, so the planned surpluses must be discounted. There's just always the question of whether I have an adequate pricing and it is often then again, a topic of SMEs that has to be considered individually. I can, of course, get closer to the price where I by working again with multiples but there is again the comparison of transactions you may call in again, where there is always the question of how far they are truly comparable and whether they reflect the price adequately. # 01: 11: 59-6 #

Person 1: Last, but not least. We have been speaking all the time about SMEs and if I consider all these things, I need a valuation professional who does it in order to ensure that the interests of all the stakeholders are taken

into account. You have suggested IDW S1. So, you think the review ensures it runs properly and the specifics are addressed. # 01: 12: 40-9 #

Person 2: Well IDW S1 and objectified value. That's really the important thing. Because in the IDW S1 you have different value concepts and there are also ultimately subjective values. One knows that this is not standardized directly, including the determination of an indicative value, so that actually means that I don't assess plausibility in the planning completely. So ultimately this full claim to the objective enterprise value according to IDW 1 addresses very many of these issues and especially because of the fact that we have substantiated the evaluation for SMEs with the tax consultants. We are therefore a bit further now that we have divided many of the special topics as well, in this Practice Note, which you need to consider again as an auditor if you want to determine this objectified value for SMEs and it is standardized. # 01: 13: 44-3 #

Person 1: So, I can understand the arguments mentioned, but especially as SME or as partner of a small company, I ask myself: can you not simplify the whole thing? Are there no other options where I can represent it simpler? If I assign an auditor to make an evaluation, will it cost me a fortune? # 01: 14: 08-8 #

Person 2: Yes, that's the way it is, I admit it. To ultimately evaluate a SME is partially much more complex than a simple publicly traded company. Especially because of the many personal factors that individually must be taken into account in the rating. I imagine that everyone is free who has put up a company contract and if all shareholders agree, I can just specify a severance clause in the contract where I say: I take the audited EBIT or EBIT generated from the past three years, and that will be multiplied 5.5 times and that's it. # 01: 14: 50-0 #

Person 1: That's what I could do, as long as there is no plaintiff and no judge, but once someone starts legal actions, I will have a problem. # 01: 14: 56-2 #

Person 2: Right there arises the question at the end of the day: is the value that is determined in this manner immoral, because it deviates too much from the actual market value? That is precisely the question at the end of

day; the burden of proof and this will probably be clarified again with an expert opinion. # 01: 15: 20-0 #

Person 1: This means that if you want to respect all the rules de facto you don't have any simplifications because you remain subjective. If you want to play it safe than we will have to stay with the objectified value according to IDW S1?

Person 2: At the end of the day, I believe it is the fairer method. We see that in the tax environment; this simplified income approach, it really is simplified. I have to say that quite clearly. One of these is the question – let us take the last three years - are they in any way representative of what the company may earn in the future? No, well then in addition I have the discount rate, that doesn't reflect the individual company risk and partly not the point in time. These are topics that you need to consider and whether you want this; that this (the simplified income approach) is less appropriate when it comes to reflecting the market value.

Person 1: Mr. X, thank you very much for the informative discussion and interview.

Person 2: Mr. Stilla, you are welcome.

Additional statements of the interviewees

Book value/Net asset value

Net asset or book value is: “completely water under the bridge.” CONS

“The intention of a book value clause was primarily to safeguard the company.” AUD

“Is also no longer legally warranted. The large discrepancy was decisive. My own personal opinion is: I think nothing of it.” AUD

“... knowing book value is unfair...” AUD

“Only meaningful to best ensure the survival of a medium-sized company; that is, the compensation is lower.” AUD

“It is also no longer legally warranted. The discrepancy between capitalised earnings and book value is too great.” LEC

“This method (book value)²⁵ is today excluded.” AUD

“Net asset value and book value are not accepted by the market.” CONS

Multiple method (MM)

“So, the multiples method reflects some risk and the cyclical nature of the individual sector.” CONS

“The multiples method should be used for severance payments.” CONS

“When we talk about an EBIT-multiple method, these are anyway valuations for unlisted companies.” CONS

“To an extent the multiples are a prejudice.” CONS

“It is not easy to learn the right factors. The transparency isn’t there. This method is therefore not secure.” CONS

“The multiples method is not suitable, even when it is laid down in the contract.” LEC

“The valuation must in every case evaluate the future prospects of the company; that is, what one would classically call the income evaluation.” LEC

²⁵ Clarifying note of the author

“The transactions, when they have really taken place, distort the image in SMEs particularly” LEC

“What is a comparable factor? Looking in databases? One can certainly avoid no hassle and costs with the MM.” LEC

“By means of the common valuation methods developed in business economics. I would principally go for the income approach.” AUD

“Multiples determination is a kind of black box.” AUD

“... as an example, the multiples method is not a valuation method in the narrow sense, but rather a plausibility check procedure” AUD

Stuttgart Method

“Nowadays they are rarely encountered. It is a half-truth, as a combination of assets and income. For this reason, no valuation and no severance payment should be determined.” LEC

“A mixed approach based on ideas: There is no truth, so I mix all second-best solutions. I consider it a capitulation, I find one can always make an effort and take care to determine the best possible approach and then apply it.” LEC

“Oriented to assets and the past, is therefore no longer used in practice.”

CONS

“No meaning in practice, since it is not future-oriented. Not a proper valuation method.” AUD

“Severance payments should be made future-oriented, hence no Stuttgart method.” LEC

“It is legally assailable and fiscally no longer in existence.” LEC

“This method is not accepted by the market. Completely out-dated method.”

CONS

Simplified Capitalised Earnings Method

“It is a bizarre combination in the calculation methodology, that should not be used in severance payments.” AUD

“It is not suitable to determine the market value.” CONS

Capitalised Earnings Method

“I think the theme of earning value is already a meaningful reference point, yes, because it is a recognised method, the courts know it, it is the state of business administration, so, state-of-the-art, and consequently I see actually multiple reference points.” LEC

“I find that we have a certain charm in the income approach method, that one can portray capital maintenance and even really the ability to distribute of results under German company law a little better.” LEC “

... but in the field of experts it is the income approach method.” LEC

“So, classic Adjusted-Present-Value.” LEC

“One method, the income approach method, is the one that is preferred by the auditors.” CONS

“The income approach method is not realistic, solely due to the interest rates and the perpetual annuity. “CONS

“At the end of the day, I consider it the fairer method.” AUD

“On the basis of accepted valuation methods developed in business administration. I would always go for the income approach.” AUD

“I believe that one comes to the more correct results with DCF or the income approach.” AUD

“What do I actually have left over now at the end of the day, what does the baker earn by selling bread?” LEC

“The income approach valuation is reasonable but on a standard market basis, that is, a comparison via multiples, that I as a M&A consultant have access to or can access. “CONS

Discounted cashflow method

“The Discounted Cashflow method can be relatively easily adjusted to the multiples method, by choosing the interest rates accordingly.” CONS

“The DCF method as used by auditors leads to unrealistic values.” CONS

“DCF is a standard company valuation method that anyone can do, and which is reasonably taught in every decent business administration studies and thus we focus on DCF.” CONS

“DCF is equivalent to the income approach and leads to the same results.”

LEC

“There, the difficulty of borrowed capital comes into play. When you misjudge the capital structure, you have this failure multiple times and it builds up.” *LEC*

“But I would always try to favour the cash-flow view, because the other is too simplifying.” *LEC*

“It’s just German. It is quite clear, as soon as one moves into the international environment, that it doesn’t exist. There it is handled quite differently anyway, there calculation with the DCF method is predominant.”

AUD

“One has an operative business, one has an idea of the operational value of the company and that you add cash or subtract debt, that is rather also in the thoughts of a businessman and that is the method, the gross method of the DCF valuation that frequently fits better.” *AUD*

“According to IDW S 1, the DCF method is equivalent.” *AUD*

“Yes, actually it comes from the sector of DAX, MDAX and such firms, for which it is then used. So, we do not find that it is the appropriate valuation method for middle-sized firms.” *CONS*

“So, then naturally a discounted cashflow method is a bit closer to reality, as you judge the actual financial strength without the pay-out blocks and take the value into account.” *LEC*

“In this respect the DCF method is a reasonable and appropriate method to make a valuation and determine a severance agreement.” *AUD*

Base rate

“The Svensson method is generally accepted.” *AUD*

“The use of the Svensson method, where in principle a structural curve is taken, is the only convincing argument in my view. And we apply this also to older cases, so clearly before going out to recommend it for further use, we see that it is accepted by the courts.” *AUD*

“We usually take the state bond as basis.” *CONS*

“I take the yield curve.” *LEC*

"It is implemented in the software program, the Svensson method." CONS
"When valuing a German company then I'll have to take the German base rate." CONS
"In my view, the only convincing method is Svensson-method." LEC

CAPM

"CAPM is inexpedient not only for SME but also for big enterprises, even for listed companies. Theoretically, no perfect market, no real comparable enterprises for the Beta. Past data states nothing for the future, this is not expert." LEC

"This is a model which has won a Nobel Prize and is what makes the American capital mark theory so good, but these are fairy tales: The emperor is naked." LEC

"CAPM is not suitable for SME, because the premises do not fit. There is no dispersion." LEC

"Why is it that the earning value calculated with CAPM diverges from the market value?" LEC

"CAPM can be only one starting point, because these lead only to values which do not correspond to the market value. The earning value calculated with CAPM lies very far away from the market value. Only the systematic risks are covered with CAPM and not the unsystematic risks." LEC

"The unsystematic risks are to be illustrated in the numerator and the overall risk in CAPM." AUD

"A point where I could not see any contradiction is that (SMEs) are not capital-oriented companies." AUD

"CAPM is inexpedient for SME. It does not describe the reality of the 'Mittelstand'. Moreover, one finds no comparable enterprises." LEC

"CAPM unsuitably, because I do not have a comparable capital market interest for SME." LEC

"CAPM is not suitable for small business. An individual interest which illustrates the risks is to be determined". CONS

Beta

“The Peers do not necessarily need to come from the same sector, the business models must be comparable.” CONS

“It would be better to take the original Beta factor, however, this is not possible with SME. Hence, one must derive the Beta factor on the basis of information listed.” AUD

“Also, when assessing listed companies it is not correct to take their own Beta factor, but those from alternative yields, i.e. from a comparative enterprise for an investment with similar risks.” AUD

“It is not adequate to indicate from listed companies to SME.” LEC

“The insecurity remains.” LEC

“The Peers are not comparable from the size, but act in the same market, hence, one can assume the same market development.” AUD

“To derive the Beta factor from a peer group is a pseudo quantification, it is a backward step compared with the healthy common sense from former times. The result is thereby falsified.” LEC

WACC

“The calculation for the interest rate is determined from the appraisal of the market.” CONS

“The interest rate is determined individually, according to the analysis of the enterprise. The relation of the enterprise to the decisive time is also to be taken.” CONS

I would take the given equity- and debtcapital structure of the company at decision point.” CONS

“To take a model which assumes the complete diversification of an enterprise, to value enterprises, which are not completely diversified, does not make sense.” LEC

“The biggest problems are that the diversification premises for SMEs, do not correspond to the reality, hence, it cannot be deemed suitable.” LEC

“With SME I always have an existing EQUITY/debt relation and no optimum.” LEC

“Otherwise WACC leads to the capitalization rates which lead to higher values than the feasible market value.” LEC

“The present circumstances should be always assumed for the individual enterprise, with which structures do I generate my cashflow.” LEC

“At the moment, the level of the market risk premium is discussed in terms of how this might develop in proportion to the base interest rate.” AUD

“But on principle this is of course an aspect which sees a market risk premium and because then just as quite essential assessment behind, which is also the inquiry of the Beta factor.” AUD

“The interest rate must be determined individually, base interest rate plus an adequate risk/market surcharge.” LEC

Institute of Public Auditors in Germany

*“These valuations lead to ludicrous values that are beyond the reality.”
CONS*

“Courts prefer the IDW S 1, because it is familiar.” LEC

“... because of course, for those that the result does not fit, they can then cite x and y.” LEC

“Thus, the best possible estimate of market value. ” AUD

“In an objectified valuation, I can take into account the individual characteristics of the company.” AUD

“The methodology of the IDW S 1 is all right. But the numbers are what count, that is, business planning, individual analyses etc.” LEC

*“The objectified valuation is the best possible estimate of the market price.”
AUD*

Perpetual annuity/growth rate/probability of insolvency

“Everlasting growth is not in line with market requirements.” CONS

“One should operate with growth rates very carefully. More than 2% is not adequate.” CONS

“One could attach the growth slightly or at zero, with it account would be taken a realistic value. A growth for the next 50 years, you do not get a return on investment.” CONS

“Basically, with SME the insolvency risk is not very high in Germany, I mean, over in America that is a complete different situation.” CONS

“If the enterprise can be continued by everybody, the perpetual annuity is entitled.” LEC

“After 100 years the perpetual annuity is over, afterwards it is not noticeable anymore.” LEC

“On the one hand, there is growth and inflation.” LEC

“An enterprise may not grow endlessly greater than the whole market. This is unsound and should not be done.” LEC

“If the enterprise existence is not foreseeable, one cannot count on the perpetual annuity. One would have to make an untrustworthy calculation with this scenario and then weigh the likelihood of such a scenario.” LEC

“I would not do a general discount for the size, because, a large company can also go bankrupt relatively fast, if some business risk develops, like maybe a small company which is more stable.” LEC

“I think, size in general is not inevitably a higher risk, I see this theme instead: Determined analysis of the business risks of the business model in the foreground.” LEC

“...in the perpetual annuity at the latest the conditions are to be settled by the market and they do not correspond as for example preferential financing conditions.” AUD

“An adjustment of the yields should necessarily occur for the perpetual annuity, i.e. not the best and last planning year, but maybe a means for the perpetual annuity.” AUD

“I do not want that with every valuation of SME a probability of insolvency is considered. From my point of view, that is total rubbish.” AUD

“Flexibility, also promptness to react on things, realising customer wishes, can be very positive from my point of view.” AUD

“By the objectified valuation it is assumed that the company can be continued by any investor, hence the enterprise can be continued forever and, therefore, the perpetual annuity is used.” AUD

“The German medium-sized company is doing great, I think, it has never been better than today, just look at the mechanical engineers and automotive suppliers.” CONS

“Similar to downsize-scenarios, which have a significant probability of occurrence like for example the running of an atomic power plant (decision of the Federal Government about phasing out nuclear energy in 2011).²⁶

“AUD

Diversification of the shareholder

“The investor-related situations have nothing to do with the assessment of the company.” CONS

“Besides, specialization can be an advantage, i.e. I can earn higher profits.”

CONS

“All the individual things, which are investor-related, should not be considered in the valuation of companies.” CONS

“The whole risk is relevant for assessment, quite easy because this is a theoretical construct which does not work in practice.” LEC

“No one would have the idea of not doing it (the consideration of the non-diversification)²⁷.” LEC

“...to take a reasonable capitalization interest....” LEC

“....it is disturbing that the typical SME-shareholder does not have anything in common with the CAPM assumption, therefore the total risk should be considered. I.e. it is relevant for the valuation.” LEC

“But not just try through CAPM plus different surcharges.” LEC

“It is very common, especially with SME that the entrepreneur has the majority of his wealth bound to the company.” AUD

“Only because the current investor is not diversified, (this) does not mean that reductions or changes in the interest rates are made, this does not make sense.” AUD

“This lack of diversification, which is typical for the Mittelstand, can also be positive for such a company.” AUD

²⁶ Clarifying note of the author

²⁷ Clarifying note of the author

“A non-diversification of the investor, and this is given typically with SME as a rule that he / she has bound the prevailing property in the enterprise, must play no role in the assessment.” AUD

Total valuation/ direct indirect method

“Direct method. Trying to consider only the cashflows of one owner are quite unrealistic.” AUD

“I have not found a concept that allows me to deviate from this procedure (indirect method)²⁸. I do not apply control premiums or discounts.” AUD

“If someone receives 15 % of the earnings then it (the share)²⁹ is worth 15% of the company value.” AUD

“By compensations (of the outgoing shareholder)³⁰, this is not relevant.” AUD

“In general, I do not apply control discounts (there is no need to use the direct method)³¹.” AUD

“We look at locking minority, fungibility of the portion, rights to a say, etc. Who is interested in such a portion in the market?” CONS

“First of all we value 100 % and then the quota.” CONS

“A company has to be valued always as a whole.” CONS

“In specific constellations, a share of 20% can be worth more than 20 % of the whole, because I can influence the control rights of a company.” CONS

“Usually overall valuation (of the company)³² and then calculation of the quota.” LEC

“Only if you have a disproportionate profit distribution, then one should use a direct method. Otherwise the total value and a portion of it.” LEC

Market Value/Full Value

“Yes, I think there is a misconception of the legislator concerning the existence of one value. This is not correct. We have different subjective

²⁸ Clarifying note of the author

²⁹ Clarifying note of the author

³⁰ Clarifying note of the author

³¹ Clarifying note of the author

³² Clarifying note of the author

values. For the same company, you will assign a different value than me.”

AUD

"So, I say this assumption of the legislation about the true value, the assumption is wrong here, the true value does not exist. Yes, you can always try to find a well-balanced value, taking into account the actual relations.”

AUD

“The estimate of the compensation claim should be based on the circumstances in an informed situation and not according to market prices in the slipstream of Facebook.” AUD

"... the true value is how much is paid in the free market. This is the only one, the only checkable value which is determined by the market situation. If I do not go to the market, I will never get the true market value, never.”

CONS

“The calculation should be based on the true value, market value or common value.” LEC

Interests of the parties

“A neutral third should make this regulation, so that in particular the interests of the remaining partners of the enterprise are considered.” LEC

"I must consider the interests of the remaining owner. Yes, I would also agree here." LEC

“First of all, it must be the common value and then whether this is financeable needs to be looked at. The amount of compensation should be orientated by this.” LEC

“First and foremost, the continuation of the company must be assured.” LEC

"The limitation is mostly always about the ability to finance the compensation." LEC

“The company is to be protected.” LEC

“Who retires voluntarily must accept the planning of the remaining shareholder. If not, then he may not retire.” LEC

"And in this respect, I would put a compensation regulation on a value... taking into account the financeability of the compensation from the assets of the society." LEC

"The outgoing partner should not be the winner." CONS

"The feasibility of the payment of the compensation should be primarily considered. Hence, either payment in instalments or reductions or a combination of both seems possible." CONS

"The compensation achievement is a strain for the enterprise, hence not the maximum may come to the payment, but a rather reserved height." CONS

*"The departure from the company should be tailored less attractively." AUD
.. it is a little bit like a separation clause, the marriage should be conceived that lasts forever, i.e. a separation should be unattractive." AUD*

"Reductions exist to protect the company and not to endanger it. It is justified." AUD

"The continuity of the enterprise should be in the foreground." AUD

"If then he goes, he must grasp the nettle and say: "well, then I will get less money." AUD

Characteristics of SMEs

"Often the owner is responsible for the majority of either the inventions or the sales. Some contacts get lost, if the owner withdraws." CONS

"Dependence on large clients." CONS

"Earnings are always dependent on people." CONS

"Well, I have a very strong personal dependence, which is probably the essential risk factor." CONS

"This is often somehow the missing finance power. Yes, well, usually the SME is limited, especially at times where at least long-term bank financing is getting more difficult." CONS

"All these problems or all these characteristics such as dependence on clients, dependence on employees, dependence on suppliers...." CONS

"That the owner suddenly somehow has an accident, or if leading employees run away, or if a large client collapses." CONS

“How many family members work here? Do they get a salary, which is at arm’s length?” CONS

“As everything, which was the earning power of the company was embodied in the person of this SME.” LEC

“That now an employee or also the owner himself is a key figure who cannot be replaced.” LEC

“The company stays on the market for so long, until a key figure, the owner, this important employee or an A-client is gone. And if that is recognizable, then this is also considered in the valuation of the company.” LEC

“As in many SMEs, there is a large dependence on the manager, who is involved in many processes of the company.” LEC

“Sales dependence, personal relations to clients play an important role in retail.” LEC

“What do I do with for example topics like dependence on clients or dependence on suppliers?” LEC

“There are companies, which basically only exist because of the owner, and if he withdraws, then only scrap value is left.” LEC

“Well, what about that, what has been achieved in the past, is that connected to certain persons? Persons are the decisive factor.” LEC

“For example, the performance relations between company and owner or other close people.” AUD

“A SME probably depends on one or two essential clients.” AUD

“This issue of insufficient diversification.” AUD

“How does it depend on one person for example the manager?” AUD

“The second essential factor is the client relationships.” AUD

“It can also be relations to suppliers.” AUD

“But especially small and medium-sized companies are dependent on few persons, well, on the family, on the owner.” AUD

“I think that with SME, where are very much dependences on some stakeholders.” AUD

“The security, a bank financing or something like that by private collaterals.” AUD

Fungibility/illiquidity

“BASF in total is also not sellable. I can only sell a small portion, but when you want to sell it in total, it is also not sellable. You basically do not work with fungibility discounts on that basis.” AUD

“....so, i.e. the buyer is the other shareholder or the company. In this case I would not consider a fungibility discount.” AUD

“...then we would reduce it around 15 to 20 %.” CONS

“There are differences in the fungibility en masse, so to say. Indeed, we use a discount in the form of percentage reduction of the total company value.”

CONS

“Okay, that is not fungible, I use a discount of for example 25 %.” CONS

“First of all, I do not see relevance for fungibility, I have to estimate the future cashflow instead.” LEC

“So, the suggestion is, the more fungible, the better, and that does not have to be the case.” LEC

“It is like I said excluded in some legal occasions of valuation, for example at the equal distribution of surplus³³.” LEC

“I always have difficulties quantifying it.” LEC

“That sounds really arbitrary to me, because there is no model to explain it.”

LEC

“Just, concerning the fungibility, it is 20 %.” CONS

“If this is just a one-time situation of withdrawal, then there is no fungibility surcharge.” LEC

“I would not use a discount or a surcharge, so now up or down, for me that is a question of the scenario.” LEC

“I would not use a discount.” LEC

Size-dependent premiums or deductions on the discount rate

“No one knows if at the time of the dispute, which will be sometime in the future, the company can be regarded as small.” AUD

“Small-company-discount, this I would like to consider least.” AUD

“Size is not the criterion, which I accept.” AUD

³³ In divorce law

"In Germany there are none of those clear empirical findings." AUD

"A smaller company just has other framework conditions." CONS

*"I would not do it, no. Why should there be a characteristic due to the size?"
LEC*

"I would not carry out a general discount for size." LEC

*"I would say that this small-company-discount is also not very justifiable."
AUD*

*"Flexibility, also promptness to react on things, realising customer wishes,
can be very positive from my point of view." AUD*

*"In my opinion, the wrong criterion is emphasized, i.e. whether the company
is large or small." AUD*

*"Thus, the smaller the company, the harder the topic. This has to do with
the decreasing number of potential buyers which causes the decrease of the
market price." CONS*

"The smaller the company, the smaller the valuation." CONS

"Not per se. In theory, the size of the company is unimportant." LEC

Adjustments

*"...or the shareholder works on a 1\$ basis, costs should be checked for a
third-party manager." CONS*

*"For instance, residential property is listed under business assets and must
be adjusted." CONS*

*"Expenses for gardener, cleaner, helicopter, and other hobbies of the
shareholder have to be adjusted. Compare with unknown third parties and
adjust in accordance with market conditions." CONS*

*"The shareholder's chauffeur, secondary residence, princely apanage for
the shareholder's spouse who is not employed in the company, mobile
contracts of family members." CONS*

"One of the tasks of an evaluator is to analyse these things." LEC

*"Or two managing directors, although this is economically not necessary in
view of the company size". LEC*

"Owner-related or specific components must be adjusted." LEC

“An experienced evaluator will quasi automatically carry out these adjustments in the framework of the analysis.” LEC

“Is it the company or the individual who owns patents and licenses? Have charges been levied for the use of them?” AUD

“Apply market conditions for financing, recognise guarantee fees for securities.” AUD

“The application of market conditions is methodologically correct.” AUD

“These adjustments are the (methodological) tools of the trade for each experienced evaluator.” AUD

Planning

“For sustainable results, (always) conditions in line with the market should always be considered.” AUD

“The one who furnishes an expert assessment is obliged to validate the plausibility of the planning calculation neutrally according to the single planning steps.” AUD

“They are formed on the level of the counter, the cashflow, expected values. I.e. we have classically three scenarios, management-case, best-case, worst-case.” AUD

“The transferable earning capacity is to be considered.” AUD

“Well, for the planning or for the creation of the planning a neutral expert may also help.” AUD

“A real neutral consultant, who does not have anything to do with the company, with the withdrawing shareholder.” CONS

“Those are cleared in the planning.” CONS

“Today the so - called financial modelling is an essential part of our work.” CONS

“...we take the current ones. Well, we refer to the present situation ” CONS

“...need a finance planning and from this finance planning the free cashflows are determined, which can go to the owner” CONS

“There are great approaches in the flexible planning, yes, then I arrive in some rooms of decision trees, which are very branched.” CONS

“Well, more than three scenarios are not useful in my opinion.” CONS

"Who does the planning? The planning has to be done by the company somehow." CONS

"The scenarios have to be planned to the best of knowledge and in all conscience." LEC

"Usually the one, who stays in the company does that (the planning)³⁴." LEC

"The entrepreneur does the planning, because that is his job". LEC

"The one who withdraws has to accept the planning." LEC

"Also, the auditor who is involved in the company, is not really suitable. That is obvious." LEC

"A plausibility works through a clear analysis of the company on the basis of appropriate and individual planning." LEC

"I actually see it like this: Determined analysis of the risks of the business model in the foreground." LEC

"The compensation has to evaluate the future perspectives of the company in any case." LEC

"Of course, you have to estimate, how much is transferable and how much is not?" LEC

"Try to estimate the development as well as possible through a plausibly justified scenario." LEC

"Well, I would probably choose three (scenarios)³⁵." LEC

"Identifying earning power and which can I transfer?" LEC

"Well the issue of plausibility is a very important topic, until I value a company, I'll have to question critically, put the finger on the weak spot." LEC

"Usually this is done by the one who stays in the company." LEC

"For valuation that (the business planning)³⁶ would have been critically looked at, yes." CONS

Probability of insolvency

"If the company is doomed to failure (due to noticeable signs)³⁷, then it can really go bankrupt (then this would have to be considered)³⁸." CONS

³⁴ Clarifying note of the author

³⁵ Clarifying note of the author

³⁶ Clarifying note of the author

"I know of no method which can really and truly capture the (insolvency risk)³⁹." CONS

"The risk surcharge is smaller for a large company and higher for a smaller company, and that is final." CONS

"The managing partner of a medium-sized company in Cologne, casually speaking, he works his balls off, to avoid the company going bankrupt, he works day and night." CONS

"But the only argument that small companies are more prone to insolvency than large ones in general, I would not support that." CONS

"...no general discounts, large or small..." LEC

"I actually reject that, because in my opinion, the correctly estimated values are considered in the counter?" LEC

*"First of all it is very difficult and there is no given recipe (for a method to consider the probability of insolvency)⁴⁰."*AUD

"Stock market quotations alone do not protect a company from going bankrupt." AUD

"...is rather something, which depends on the business model, but you still have to think about it." AUD

"So i.e. the probability of occurrence of the scenario of insolvency, which I include in the counter as a consideration of the expectancy value." AUD

"Where insolvency is a real scenario with a not irrelevant probability of occurrence, then I think you have to consider it." AUD

"I just have the general problem: of why should a company, just because it is a bit smaller than what you usually see, have a smaller value?" AUD

"A small size can also be a large advantage." AUD

Financial feasibility

"You can apply the classical assessment methods, however, the limitation must be the financial feasibility." LEC

"... a planning for the future development and this is a financial plan." LEC

³⁷ Clarifying note of the author

³⁸ Clarifying note of the author

³⁹ Clarifying note of the author.

⁴⁰ Clarifying note of the author

For me this is more a financial topic.” LEC

“The ability to provide funding for the compensation must be guaranteed. If a bank does not want to finance this, I’d need to think about other possible solutions.” CONS

“Payable compensation. What is financeable as a compensation?” CONS

“It is irrelevant whether the bank or the departing shareholder finances the compensation, it must be feasible at all.⁴¹” CONS

“And the second starting point would be the subject of financeability and the liquidity consideration: What can the company cope with? To what extent?” LEC

“The payment and the level of compensation must be at a reasonable extent for the enterprise.” LEC

Liquidity discount in context of financial feasibility

“...calculated the objectified value and then make a discount of 30 %...” AUD

“While making discounts 25%, 30% something like this.” AUD

“Another discount of 15, 20 %, then you would get quite a fair value.” CONS

“I cannot tell you off-hand that the gap between affordability and earnings value, are 25 or 30%.” LEC

“Well, 20 %, a fifth part I think is a nice sum at this point.” LEC

“A border is already reached; a critical border is already 75 % compensation related to the value.” LEC

“We talk about 25%- 30%, around a quarter. What is accepted by civil law and what is not, I do not know. This is negotiated and then it is around 25-30%.” AUD

“A discount, which corresponds to the justified stability interests of the company, should be a discount around 10 and 20 %.” AUD

“....which has to do something with liquidity. Around 30 % is quite a lot.” CONS

⁴¹ From a financial point of view

Finance magazine

“The multiples in finance are always relevant and can serve as a basis for an assessment.” CONS

“Nobody (no m&a consultant)⁴² has a transaction every three months.” CONS

“Here the transaction multiples flow in. But the database does not always have up-to-date.” CONS

“One does not get the data of the real transactions, hence, the picture is distorted.” LEC

“It is suitable to check the plausibility, a rough calculation but not more.” LEC

“However, it (finance magazine) does not serve as a base in an extensive analysis and assessment which can be substituted by it.” AUD

“At least there is a database, it is not equally good in all cases.” CONS

“The published data are sweeping and have a big range. Hence, these values are not helpful and do not substitute for a profound analysis of the enterprise.” LEC

Transferable profitability

“In case of doubt, no compensation can be justified, because if he was responsible for the large part of the yields, one can pay no compensation for his retirement.” LEC

“If the payment streams are stable, a suitable compensation is also to be paid.” LEC

“The future cashflows are relevant, profit strength must be identified and which of them can be transferred?” LEC

“The classical situation with SME is the owner's dependence which is not to be compensated by a successor.” CONS

“An essential point is the transferable profitability and for what time period. This is to be considered individually.” AUD

“If the whole business depends on the outgoing owner, then the enterprise is only worth a little or nothing.” LEC

⁴² Clarifying note of the author

“The enterprise is to be analysed precisely concerning which profitability do I have in the future, what was the role of the retiring partner or his family members, which risks arise (when retiring)⁴³?” CONS

“It cannot be the case that payment flows break off, the profit goes down half and of that an inappropriate compensation has to be paid.” AUD

Interest payment in case of respite

“For an extension (of the payment)⁴⁴ the retiring partner must receive interest. It is no interest without risk, hence, it would have to be higher (than a risk-free rate)⁴⁵.” LEC

“One could take the capitalization rate, because it would be the same risk.”
LEC

“It is right that concerning the rank and the risk it is entrepreneurial capital.” CONS

“If it is a subordinated loan then the interest rate should be matched accordingly.” CONS

“It would be also conceivable to take the capitalisations interest rate.”
AUD

“Now I have this regulation (delayed payment), so to speak I have an implied shareholder loan.” CONS

“It is about an appropriateness in view of the risk situation of the enterprise in this constellation.” LEC

“One should take typically the interest rate which are paid for shareholder loans.” LEC

Terms for extensions of the compensation

“Nobody profits if the company fails, then the outgoing partner does not have anything of from it.” LEC

“A term of more than 5 years is not acceptable from the point of view of departing, because the risk remains without having any influence.” AUD

“Up to 5 years are adequate. As with earn out phases of 3 - 5 years.” AUD

⁴³ Clarifying note of the author

⁴⁴ Clarifying note of the author

⁴⁵ Clarifying note of the author

"... one should not wait ten years for the last instalment of the compensation." AUD

"5 years is a tenor that in the end should be agreed on." CONS

"Compensation can be paid in 5 annual rates." AUD

"Periods of five years, so up to five years are absolutely reasonable." AUD

"Up to 5 years it is to be judged as reasonable." CONS

"Just if one assumes that he (shareholder) retires for age reasons and then it must not be too long." LEC

"A good solution would be over a period of maximum 5 years." LEC

Articles of association

"Nobody wants to know whether the regulation is valid; "let sleeping dogs lie". LEC

"As soon as one recognizes the compensation agreement is not correct and in need of improvement this can bring discord to the family. For this reason, nobody discloses the information." LEC

"Hoping that one determines with it (Stuttgart method ⁴⁶) quicker compensation and therefore avoids a quarrel is an illusion." AUD

"In new contracts, the capitalised earnings method is included." AUD

"Capitalised earnings method is also to be found." LEC

"In the meantime, the simplified capitalised earnings method can be found." AUD

"The Stuttgart procedure is included in many contracts." AUD

"Exactly like the Stuttgart procedure which is to be found in old contracts." CONS

"In quite old contracts the book value clause is to be found. Here there is considerable potential, because these must be changed in the partnership agreement to avoid litigation, because book value clauses are not valid." AUD

⁴⁶ Clarifying note of the author

Indemnity regulations

“To pay not 2%, but 6 %, if the withdrawing person agrees, when he is prepared to wait for the payment.” LEC

“Like I said, ideally you should determine that it would stand up in a court of law so that you do not have to sue the courts to accept it.” LEC

“...which do not generate advantages to the person withdrawing, so there is more pressure to cooperate. Well, this is really a thought which should be considered for compensation regulation.” LEC

“Then of course this is a question of identifying earning power which can be transferred.” LEC

“But I would advise anyone to use the capitalised earnings method and not a horoscope.” LEC

“Therefore, there is in practice the need for compensation regulations to ensure legal certainty.” LEC

“Because these dispute costs, which can be incalculable, are reduced, if robust, understandable clauses are used.” LEC

“I think the shareholders should think about the end of the company or the separation respectively and know what will happen to them.” LEC

“If there is any doubt, there is an arbitration or something like that and then it goes to court.” LEC

“Extending over several years and paying interest on the amounts for the withdrawing shareholder.” LEC

“Yes, well, actually it only works in a neutral way, if you really take someone, who is independent.” LEC

“Well, I think it would be progress, when a discount is included into the partnership agreement.” LEC

“For such cases, there has to be a data basis, a company planning, which can give the information which is needed at that moment.” LEC

“Actually, you have to install institutionally a company planning LEC

“.... often we had extended payment goals.” LEC

“Typically, you take the interest, which is used for shareholder loans.” LEC

“I cannot today include a constant multiple in a compensation regulation.”

CONS

“But really also an interest, which is in a way the motivation to pay the shareholder.” CONS

“A classic planning calculation is also the basis for each company transaction.” CONS

“Because usually we have a situation where the compensation amount of the shareholder is subordinate to the loan capital of the bank.” CONS

“Basically, I have to value the company in a classical way.” CONS

“And furthermore, the payment of the compensation is a strain for the company or the former shareholders.” CONS

“And that the parties feel bound to the judgement of the valuer.” CONS

“What you can do theoretically is determine a valuation method.” CONS

“Because at a termination regulation usually the compensation regulation leads to a lower amount than selling the company.” CONS

“That then a delayed settlement of this compensation amount is agreed over three, four, five years.” CONS

“So, and when we are in the situation that we have a subordinated loan, then it also should be priced like a subordinated loan.” CONS

“It can be determined who does the planning.” AUD

“According to the usual valuation methods, which were developed in business management.” AUD

“They should be included in the planning of sales and return, cashflow planning.” AUD

“As we are in Germany we can refer to the objectified values of the IDW S1.” AUD

“That would be the most useful (to implement a regulation in the article of association)⁴⁷ in my opinion.” AUD

“I would recommend making a regulation as to who orders an arbitrator's award.” AUD

“But what is really important is the question for the transferable earning power.” AUD

“Therefore, it is an advice to make the contract in a way so it cannot always lead to disputes.” AUD

⁴⁷ Clarifying note of the author

“There is even the chance that it does not end up in court.” AUD

“A clause would probably be useful which proposes that an expert can be suggested or that it will be given to a neutral third.” AUD

“But maybe this is not transferable at the end of the day.” AUD

“You do not have a mortgage or something similar.” AUD

“Well these discounts for the withdrawing persons are there to protect the company.” AUD

“Today the capitalised earnings method or the discounted-cash-flow-method would be adequate.” AUD

APPENDIX IX

Discount rate

Determining the cost of capital in addition to the estimation of future revenues is a key component in business valuation. The capital costs comply with the return expected by an investor, depending on the risk of the investments made by them (Metz, 2007). There are several methods to determine this calculation interest rate. Here, the most important two have particular relevance for SMEs. The determination of the risk premium is either determined on capital market orientated reference models or individual values resorted (Reese, 2007; Tschöpel, 2004; Drukarczyk & Schüler, 2016; Behringer, 2012).

These are in particular:

- Surcharges according to the individual risk-taking propensity of the investor
- Surcharges which are calculated using the CAPM



Figure 57. Determination of risk premium

The consideration of the uncertainty can be either in the numerator by discounts to the expected value (certainty-equivalent-method) or the

denominator considered by increases in the discount rates (Schacht & Fackler, 2009; Behringer, 2012).

With the certainty equivalent method, uncertain future incomes are converted through reductions in guaranteed revenues (Ballwieser & Hachmeister, 2016). Depending on the risk tolerance of the investor, the security equivalent corresponds with either a high or a low deduction. The remaining amount regarded as safe will be discounted at the risk-free rate and thus corresponds to the business-value (Drukarczyk & Schöler, 2016). The certainty equivalent method requires assumptions about the level of risk appetite of the investor (Peemöller & Kunowski, 2015).

If a consideration in the numerator does not take place, the future earnings can be discounted with the calculation interest rate increased by a risk premium. The interest rate for a risk-free investment is increased by a risk premium which matches the investor's risk appetite (Drukarczyk & Schöler, 2016). In practice, both nationally and internationally, the risk premium method has prevailed, i.e. the entire risk of entrepreneurial activity is displayed in the capitalization rate (Dörschell, Franken, & Schulte, 2009). This is the thought, mainly of the business administration, that the certainty equivalent method and the risk premium method are equivalent (Drukarczyk & Ernst, 2010). It may be a reason, that the certainty equivalent method is not popular in practice (Ballwieser & Hachmeister, 2016).

Individual surcharges

The business profits or cashflows from a company are to be discounted using a capitalisation rate to determine the present value of a company to the valuation date (Kranebitter, 2012; Steinbach, 2015). If risk premiums are formed, then the risk-free basic interest rate based on the individual return expectations of the investor at an alternative investment are taken as a basis (Bark, 2011) and a subjective surcharge will be added (Ballwieser & Hachmeister, 2016). The risk premium and the capitalisation rate as a whole have to be in line with the principles of equivalence (see section 2.4.). This is equivalent for the risk the

investor undertakes investing in the company. Using the base rate and risk premium is common both in Germany and internationally.

Market risk premium

The market risk premium is derived from the total return of the market portfolio minus the risk-free interest rate (Dörschell, Franken, & Schulte, 2012). The market risk premium can be determined in different ways. The derivation is based on expert opinions (Metz, 2007), based on historical data (Stehle, 2004) or the prices of securities (Dausend & Schmitt, 2011). The suitability of the experts' estimate for company valuation purposes is highly doubtful since neither neutrality nor the knowledge of the respondents can be verified and the survey occurs unsystematically and selectively (Reese, 2007).

The derivation of the market risk premium from forecasting models such as dividend discount models or earnings capitalization models (Metz, 2007) equals methodologically in so far as they are based on earnings estimates by financial analysts in conjunction with current market prices (Dörschell, Franken, & Schulte, 2012). It can be stated that the estimates of future market risk premium are subject to considerable uncertainty. The assumptions on which these estimates are based on, cause results, which are highly sensitive to changing parameters (Wagner, Jonas, Ballwieser, & Tschöpel, 2006). Therefore, there are general objections to the use of these future oriented forecasting models, due to the non-given feasibility and experience in Germany (Metz, 2007; Wagner, Jonas, Ballwieser, & Tschöpel, 2006; Stehle, 2004; Dörschell, Franken, & Schulte, 2012). The determination based on historical revenues is not unproblematic either (Metz, 2007; Ballwieser & Hachmeister, 2016), yet it is widely used in practice in identifying market risk premium (Baetge, Niemeyer, Kümmel, & Schulz, 2015; Keller M. , 2015; Tinz, 2010; Aschauer & Purtscher, 2011). The market risk premium is hereby derived from historical returns compared with historical risk-free interest rates (Wagner, Jonas, Ballwieser, & Tschöpel, 2006). Depending on what methods are used, the results can vary accordingly. In the result and in the interpretation, subjective influences cannot be excluded. Ballwieser and

Hachmeister (2016) mentioned that the reviewer has the choice between future-orientated assessment methods and determination of market risk premiums based on historical data, i.e. the choice between two unsatisfactory alternatives. Further detailed discussion of the advantages and disadvantages of different methods or models should be avoided at this point. Further and more detailed discussions on the possibilities of determining market risk premium can be found in (Koller, Goedhart, & Wessels (2015)).

CAPM is one of the most popular models (Zwirner, 2012; Aschauer & Purtscher, 2011; Peemöller V. , 2015) and was developed by Sharpe (1964) , Lintner (1965) and Mossin (1966). It is based on the portfolio theory of the capital market, to explain stock returns and derive recommendations for actions. To derive appropriate statements, assumptions are made, which are ideal-typical and simplistic (Fama & French, 2004; Kuhner & Maltry, 2017). It is not the goal of this thesis to explain the complete model of CAPM, but rather to address the main characteristics. In the detailed overview and development of the model, reference is made to Sharpe (1964), Lintner (1965) and Mossin (1966). According to (Dörschell, Franken, & Schulte, 2012; Sharpe, 1964; Lintner, 1965; Mossin, 1966; Copeland, Weston, & Shastri, 2014; Pratt & Niculita, 2008), the assumptions are:

- All investors decide on the basis of an investment period. It is therefore called a ‘one-period-model’. This is necessary for simplicity, as the consequences of multiple periods would be a very complex model. It has to be considered, though, that this assumption might be problematic, as unsafe multiple period returns or cashflows are discounted using CAPM.
- The investors, who are security buyers and sellers in this case, show risk-averse behaviour, i.e. this risk-aversion affects the lower-risk investment opportunity positively, in case of an alternative investment with the same expected return, e.g. risk-free government bonds.
- All investors have identical investment expectations concerning the return.

-
- The investors make strict rational decisions.
 - The market prices of the securities cannot be influenced individually by an investor due to his market power.
 - All securities are traded on the market and are optionally divisible and liquid.
 - Liquidity in any amount can be received and invested at a risk-less interest rate. Therefore, the investors have an optimal mixture of the investment portfolio.
 - All investors are diversified broadly. The mixture of securities reduces the risk according to the portfolio theory.
 - The market is information-efficient, i.e. all information is available for free and at the same time for all market participants.
 - The investors are anxious to maximize the risk benefit and consume benefit of their capital at the end of the planning period.
 - A complete market exists and there are no frictions through rules, laws foreclosing entry to the market, taxes or transaction costs.

Considering the above-mentioned assumptions of CAPM for the capital costs, the graphic presentation of the capital market line and the security line show the following: Both models (see Appendix VIII) should be differentiated clearly, as they include different risk measurements (Franke & Hax, 2004; Schütte-Biastoch, 2011).

Capital market line

The capital market line shows a linear connection between the risk of an efficient portfolio and its expected return (figure 58). The efficient portfolios of risky positions lie on curve AB. The straight line between the risk-less interest and the line of the efficient portfolio presents all in this case available combinations. This straight line, which passes from the risk-free interest through the coordinates of the market portfolio, is called capital market line.

$$E(r) = r_f + \sigma \frac{E(r_m) - r_f}{\sigma_M}$$

r_f = risk free rate; σ = standard deviation; r_m = expected return on the market; σ_M = standard deviation for the market

Equation 17. Capital market line

The investor can improve his risk-return-position, if he not only prefers risky securities but also adds risk-less securities. The ratio depends on his individual risk appetite, i.e. the risk-taking propensity of the investor can be graphically seen through his position on the capital market line. At point B' the investor is more likely to take risks as the one at point M or A'.

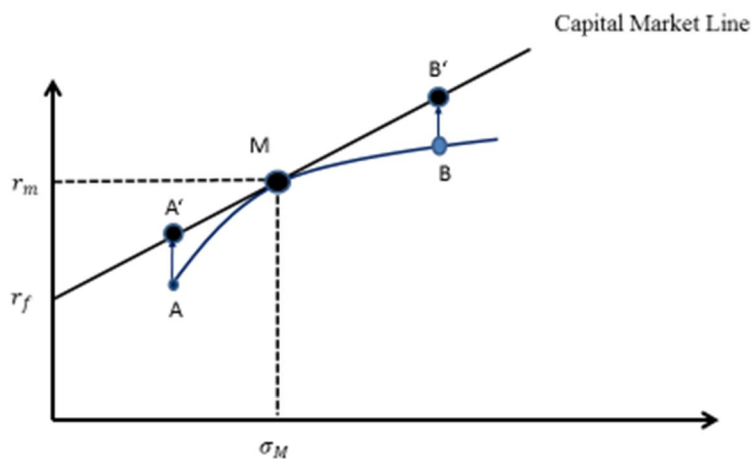


Figure 58. Capital market line

Security market line

Further development of the model for the security market line (SML) is necessary for the sought equity costs of each security, i.e. the expected return.

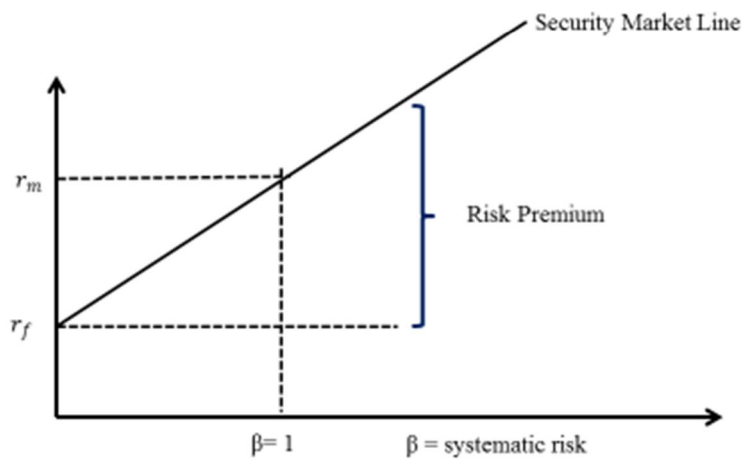


Figure 59. Security market line

The SML is called the ‘heart of CAPM’ (Stahl, 2015). The expected return of a single security is determined through the sum of the risk-less interest and the market risk premium multiplied by the Beta factor.

$$E(r) = r_f + (r_m - r_f)\beta$$

$E(r)$ = required return on security; r_f = risk free rate; r_m = expected return on the market; β = Beta of the security

Equation 18. Security market line

The risk surcharge is composed of a general price component, which is the market risk premium, and a security respectively company-specific quantity component, which is the Beta factor. The components of the risk surcharge have already been shown, the Beta factors are presented in the following.

Beta

Systematic risk is recognised by multiplying the market risk premium with an individual Beta factor (Hütteman, 2007). The future profitability of the company depends only partly on management decisions, strategic orientation, the product and service portfolio, investment decisions, capacity for innovation, etc., which is called ‘unsystematic risk’. Unsystematic risks are company-specific and can be largely eliminated through diversification (Baetge, Niemeyer, Kümmel, & Schulz, 2015). The political environment, unpredictable crises, such as financial and economic crises, sectoral developments, disasters and similarities are included in the systematic risk, i.e. risks that affect an entire economy or industry. Systematic risk cannot be eliminated, generating a portfolio of various and diverse investments (Metz, 2007; Hood & Lee, 2011). CAPM assumes that unsystematic risks are offset by investment in other positively developing assets and therefore no risk premium will be granted for unsystematic risks by the market (Schacht & Fackler, 2009).

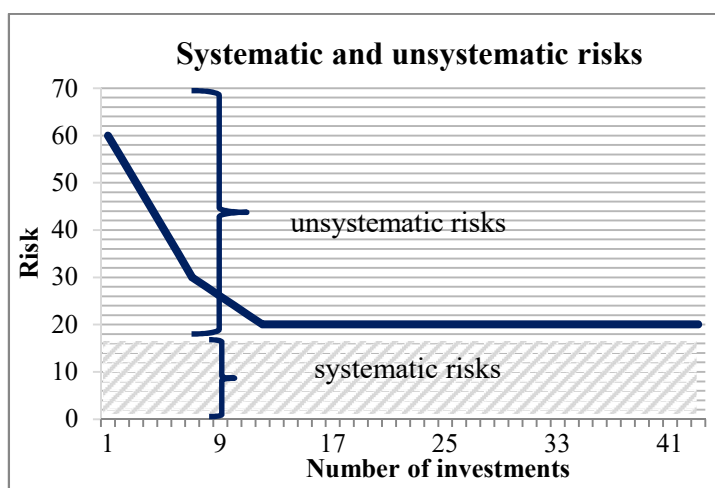


Figure 60. Development of systematic and unsystematic risks

The Beta factor is the degree of risk compared to the market portfolio, i.e. subject to the contemplated share of the same fluctuations as the overall market, then the Beta is one (Meitner & Streitferdt, 2015). If this stock has a higher volatility than the overall market then the Beta increases accordingly

i.e. it is higher than one (Ballwieser & Hachmeister, 2016). Since the Beta is a factor, if the Beta is greater than one, the calculation interest increases overall and thus the value of the company is lower.

The Beta factors are past related (Lütkeschümer, 2012; Wollny, 2010). Here, it is assumed that the Betas on the timeline remain unchanged and are therefore transferable to future developments (Schacht & Fackler, 2009). It should be noted at this point, that the derivation of future developments based on historical data is criticized in literature because of the equivalence principle (Janos & Tracia, 2012; Ihlau, Duschka, & Gödecke, 2013; Metz, 2007; Stahl, 2015).

A study of historical Betas carried out by Blume (1971; 1975; 1979) showed that Betas move over time towards the market average, i.e. towards a value of 1. With this background, Blume (ibid) proposes to adjust the determined autoregressive trend. Based on his findings, approximated formula have been established in practice, which are referred to a so-called 'one-third two-thirds procedure' (Dörschell, Franken, & Schulte, 2009; Ihlau, Duschka, & Gödecke, 2013).

$$\beta_f = \frac{1}{3} + \left(\frac{2}{3} * \beta_h\right)$$

β_f =future Beta factor (adjusted factor); β_h = historical Beta factor (raw Beta)

Equation 19. Adjusted Beta

The application of the formula results in high historical Betas being decreased and in turn low historic Betas increased. Because there is no compelling economic justification for this phenomenon revealed by Blume (op. cit.), Zimmermann (1997) assumed that there is no economic reason for this.

Whether an adjustment in the practice of evaluation has to be made is evaluated differently in the literature and in judiciary. The Higher Regional Court of Saarbrücken (2014) is of the opinion that which Beta is preferable still remains unsettled in the theory, and therefore proposes an average of

historical Betas and adjusted Betas. The Higher Regional Court of Frankfurt decided (2015) that the originally determined Beta factor; the raw Beta, is to be considered. Sheld (2013) argues that due to the non-given future orientation, an adjustment of the Beta factor has to be made. Dörschell et. al. (2012) however, explicitly state that adjusted Beta factors are allowed to be used only in exceptional cases.

At derivative of the betas of comparable companies it is to be noted that the debt ratios differ for evaluating companies. Therefore, the Beta of the settlement or the comparable companies to calculate in an unindebted Beta factor has to be made in the first step. For companies which are only financed by equity, the Betas are unindebted i.e. unlevered. If the company borrows capital, the Beta is in debt, i.e. levered (Stahl, 2015). Market values have to be calculated for both the borrowed capital and equity (Munkert, 2005). In practice, for calculation simplicity, book values are used because it is assumed that the values are in line with the market (Baetge, Niemeyer, Kümmel, & Schulz, 2015).



Figure 61. Debt ratio adaptation-process

The conversion into an unindebted Beta is calculated using the following formula:

$$\beta_u = \frac{\beta_l}{[1 + (1 - t) * \left(\frac{D}{E}\right)]}$$

β_u = unlevered Beta (Beta without debt); β_l = levered Beta (Beta with debt)

D/E = Leverage (debt/equity); t = tax rate of the company to be valued

Equation 20. Calculation unlevered Beta

An unindebted average Beta of comparable companies is formed. This average Beta is re-levered based on the debt ratio of the company to be valued (Ernst, Schneider, & Thielen, 2012). This is achieved according to the same principle with the following formula:

$$\beta_r = \beta_u * [1 + (1 - t) * \left(\frac{D}{E}\right)]$$

β_r = Beta re-levered

Equation 21. Calculation re-levered Beta

By multiplying the calculated Betas with the market risk premium, the systematic risk of a comparable investment is displayed.

The Beta factors determined for listed companies include the company specific leverage and thus the funding risk. The structure of these benchmark companies with regard to leverage deviates from that of the company being valued. Therefore, it has to be adjusted. This means that the beta factors are unlevered and correspond to those of a debt-free company. In the next step, these unlevered beta factors are aggregated in order to establish comparability by means of adjustment to the funding risk of the company to be valued.

The calculation of the unlevered and the re-levered Beta is described in the following: Against the backdrop that, in practice, it is almost impossible to identify a single reference company that matches the valuation object with regard to the comparison criteria, the Beta factor is derived from Beta values of companies belonging to the same industry or from a group of comparable companies (Baetge, Niemeyer, Kümmel, & Schulz, 2015).

Direct and indirect method

The value of a company’s shares can be determined directly or indirectly. Using the direct method, the earnings or cashflows that flow to the shareholder are the basis for the valuation. The indirect method takes the overall earnings or cashflows to determine the company value from which the quota is calculated.

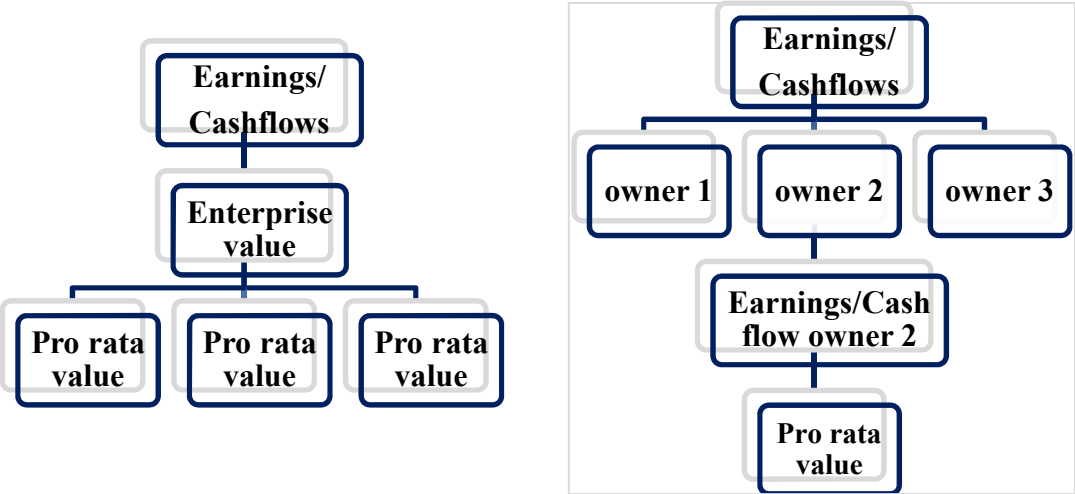


Figure 62. Indirect and direct method

Using the direct method, the individual goals of the future shareholder are included (Kranebitter, 2012), i.e. synergies, investments, expansion and increased market share. In general, a control premium is seen as an equivalent to express the additional value of influence in the corporate policy of a company.

Package surcharges are criticized because of their subjectivity that undermines a fair market value (Matschke & Brösel, 2013). In other words, if the potential influence increases or decreases by the transfer of the shares package, surcharges or discounts are discussed that are then added or subtracted to the share value.

Schacht and Fackler (2009) argue that the reason for valuation determines the use of the direct or indirect method. The supporters of the direct method argue that in dominated occasions a modification of control rights also take place and thus the shares could have a higher value (Lorenz, 2015; Zwirner, 2012). Others state that for minority shares a minority discount is necessary because they are more difficult to sell (Seiler, 2004; Hofmann, 2011; Lorson, 2004; Pratt & Niculita, 2008). The goals and position of the potential buyer are therefore crucial. If 25% is not relevant for any shareholder, a minority discount needs to be applied. Should these shares be capable of altering the control rights then a premium has to be applied. Bearing this in mind, one of the questions to be answered in this thesis is whether the direct or indirect method should be used when a shareholder retires.

Probability of Insolvency

The termination of a company can be caused by expected or unforeseen events. An expected event can be liquidation, for example. Literature and valuation practice agree that the termination of the company should be considered in valuation since it has consequences on the future returns and cashflows (Langguth, 2008; Institut der Wirtschaftsprüfer, 2014; Schütte-Biastoch, 2011; Schröder S. , 2014; Aschauer & Purtscher, 2011). One unforeseen event can be insolvency. Reasons for insolvency are illiquidity in general, according to Article 17 insolvency code (Bundesministerium für Justiz und Verbraucherschutz, 2016) or threatening illiquidity according to Article 18 insolvency code (ibid), i.e. if the debtor cannot fulfil the payment obligations or is not able to fulfil 90 % of the payment obligations within 3 weeks (BGH, 2005). Another reason for insolvency is the over-indebtedness of the company, according to Article 19 InsO. In 96 % of all cases the

illiquidity or the threatening illiquidity is the reason for insolvency declaration in Germany (Friedrich, 2015).

There are different approaches regarding insolvency risks in literature. A common approach is to consider it in the adequate target rate (Friedrich, 2015). There are proposals of how to quantify such a probability of insolvency. This risk quantification can be carried out with the use of credit default swap premiums or capital market data (Gleißner, 2013; Kalweit, 2008).

One of the most frequent recommendations is based on credit rating procedures. These procedures express the ability of the debtor to fulfil the assumed obligations or the level of probability of a default (Reichling, 2003; Bösch, 2013). On the basis of a risk analysis, which is usually focussed on annual accounts for companies, the debtor is classified in an ordinal scale of probabilities of default (DeFusco, McLeavey, Pinto, Runkle, & Anson, 2015). Ratings are issued by independent rating agencies such as Standard & Poor’s, Moody’s or Fitch, and by financial institutions such as banks, which are necessary for granting loans (Gleißner, 2014). The rating overview of S&P (table 36) and the appropriate cumulative probability of default (table 37) are shown below.

General summary of the opinions reflected by our ratings		
Investment Grade	AAA	Extremely strong capacity to meet financial commitments. Highest rating
	AA	Very strong capacity to meet financial commitments
	A	Strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances
	BBB	Adequate capacity to meet financial commitments, but more subject to adverse economic conditions
	BBB-	Considered lowest investment-grade by market participants
Speculative Grade	BB+	Considered highest speculative-grade by market participants


	BB	Less vulnerable in the near-term but faces major ongoing uncertainties to adverse business, financial and economic conditions
	B	More vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments
	CCC	Currently vulnerable and dependent on favourable business, financial and economic conditions to meet financial commitments
	CC	Highly vulnerable; default has not yet occurred, but is expected to be a virtual certainty
	C	Currently highly vulnerable to non-payment, and ultimate recovery is expected to be lower than that of higher rated obligations
	D	Payment default on a financial commitment or breach of an imputed promise; also used when a bankruptcy petition has been filed or similar action taken

Ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories

Table 36. Standard & Poor's rating scale (Standard & Poor's, Guide to Credit Rating Essentials, 2016, p. 9)

Global Corporate Average Cumulative Defaults Rates by rating (1981 – 2014) (%)

Time horizon (years)



Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AAA	00,00	0,03	0,14	0,24	0,36	0,47	0,53	0,61	0,67	0,74	0,77	0,80	0,84	0,91	0,98
AA	0,02	0,07	0,13	0,24	0,35	0,46	0,56	0,65	0,73	0,82	0,90	0,97	1,05	1,12	1,19
A	0,07	0,16	0,27	0,41	0,57	0,75	0,95	1,13	1,32	1,51	1,69	1,84	2,00	2,15	2,32
BBB	0,20	0,57	0,96	1,46	1,95	2,43	2,84	3,26	3,66	4,06	4,49	4,84	5,17	5,50	5,84
BB	0,76	2,35	4,23	6,06	7,71	9,28	10,59	11,75	12,80	13,74	14,52	15,18	15,75	16,24	16,77
B	3,88	8,80	12,97	16,22	18,70	20,72	22,37	23,69	24,82	25,91	26,82	25,57	28,26	28,88	29,49
CCC/C	26,38	35,38	40,67	53,77	46,28	47,24	48,27	49,06	50,03	50,73	51,28	51,94	52,72	53,38	53,38

Table 37. 2014 Annual Global Corporate Default (Standard & Poor's, Standard & Poor's Default, Transition, and Recovery: 2014 Annual Global Corporate Default, Study and Rating Transitions, 2015, pp. 56 - 57)

The probabilities of insolvencies and defaults are not congruent (Schlecker, 2009), since there are different definitions for probability and default (Knabe, 2012) and collaterals are also considered among other things (Langer T. , 1999). The probability of default can, however, be viewed as an approximation of the probability of insolvency (Allert, et al., 2011).

Usually SME do not have an external rating from an independent rating agency because they do not use refinancing on the capital market and a rating would cause significant one-time charges and continuous fees (Grunow & Figgner, 2006). Therefore Ihlau, Duschka and Gödecke (2013) and Gleißner and Füsler (2014) suggest using bank ratings. They differ according to the groups of institutes, but they display the probability of default over one year (Achleitner & Everling, Rechtsfragen im Rating, 2005). A comparability can be worked out concerning the probability of default. Gleißner (2013, p. 86) and (2011) suggests the following formula to consider the risk of insolvency.

$$EV_0 = \frac{E(CF) * (1 - p)}{c + p}$$

EV₀= Enterprise Value at point in time 0, E = Expected Value of cashflow without risk of insolvency, c = capitalisation rate, p = probability of insolvency

Equation 22. Consideration of insolvency risk

Considering the growth rate, the above formula is modified as follows.

$$EV_0 = \frac{E(CF) * (1 - p)}{c - g + p * (1 - g)}$$

EV₀= Enterprise Value at point in time 0, E = Expected Value of cashflows without risk of insolvency, c = capitalisation rate, p = probably of insolvency, g = growth rate

Equation 23. Consideration of insolvency risk and growth (BALLWIESER & FRIEDRICH, 2015, P. 454)

The POI increases over the years due to the cumulative effect. This cumulative effect can be shown in the following simple formula.

$$Pos = (1 - poi)^n$$

Pos= Probability of surviving; poi=probability of insolvency

Equation 24. Probability of surviving

The probability of surviving is 99% in the first year, in year two it is 98 % [(1-0,01)²=98,01] and then it decreases gradually. This cumulative effect is seen in particular as an overvaluation of the terminal value (Gleißner, 2017).

As insolvency significantly influences the lifetime of the company and a potential insolvency risk should be considered especially when valuing SME (Allert, et al., 2011; Gleißner & Ihlau, 2012; Nestler, 2012). However, failure cannot be predicted with certainty and the investigation of failure rates of small and medium-sized enterprises are not easy. There are some private credit agencies such as Creditreform or Bürgel, as well as the Federal Office of Statistics, that provide insolvency rates. All of them define SME differently and liquidation of companies for different reasons is also included. Overall, the insolvency rates differ from each other and liquidation may occur due to other reasons, such as lack of successor or personal decisions, even though the firm might have been financially successful. Therefore, when analysing insolvency rates it is sensible to distinguish between liquidation or closure of the company and failure due to an unprofitable business model. Consequently, a precise and direct determination of the probability of insolvency is not possible (Allert, et al., 2011).

Even though that probability of default (PD) and PoI are not identical there are some analogies in terms of approximation (Kehrel, 2011). These values are considered to be suitable for insolvency rates (Gleißner & Fuser, 2014; Knabe, 2012; Leker & Sonius, 2015). As already described, ratings and in particular

probability of default, should be implemented in business valuation. It has to be stated that ratings measure the credit default based on systematic and unsystematic risks (Knabe, 2012) and are therefore not fully comparable to the probability of insolvency from the owner's perspective.

In addition, SMEs do not usually have external ratings of the recognized rating agencies such as Standard & Poor's, Fitch and Moody's or an external rating at all. Consequently, only ratings from the banks are available. Their basis for determination is the PD, nonetheless their rating is different from each other (Deutsche Bundesbank, 2007). This means that a SME can have various ratings and diverse PD from different banks. Each bank calibrates the PD and ratings themselves, based on their credit defaults (Deutsche Bundesbank, 2003). Synthetic simulation-based ratings (Allert, et al., 2011; Metz, 2007; Gleißner & Knoll, 2011) require a data base that the appraiser usually does not have from SMEs (Schütte-Biastoch, 2011; Ihlau, Duschka, & Gödecke, 2013). Therefore, only ratings from banks are available. These ratings are based on historical data. To generate a rating, banks require the financial statements of the last three years. This is the basis to display the PD for the period of one year (Achleitner & Everling, 2005). As such, banks only take into consideration the past economic situation from a snapshot in time, rather than the ability and stability to generate future income streams.

Growth Reduction (growth-rate)

Future-oriented procedures, such as the capitalised earnings method or the different variants of the DCF-method, consider the individual company growth of the returns or of the cashflows. Different specifications of the DCF-methods are separate from the Flow to Equity (FTE)-method, especially the Adjusted Present Value (APV)- and the Free Cashflow (FCF)-approach (see Appendix II).

The values in the counter, such as earnings or cashflow, and the discount interest rate are nominal quantities in practice (Ballwieser & Hachmeister, 2016). Growth can be measured in different ways. In the context of a two-

phase model, growth is displayed in the predicted surpluses for the detailed planning phase (Tinz, 2010). During the transition of the detailed planning phase to the continuation phase, constant nominal quantities such as returns and cashflows are used, and a non-consideration of growth therefore implies a real decline of the values in the counter. Thus, the growth model, which is derived from Gordon and Shapiro (1956), is used in the continuation phase, and assumes an infinite geometrical growth of surpluses with a constant and safe rate. A so-called ‘growth reduction’ is considered by using a growth-rate (Bark, 2011).

$$V = \frac{CF/E}{r - g}$$

V = Value, CF/E = Cashflow or earnings, r = Discounting rate, g = Growth rate

Equation 25. Growth model

The risk premium, which consists of base interest rate plus market risk premium multiplied by the Beta factor, is reduced by a so-called ‘growth reduction’ (see figure 63).

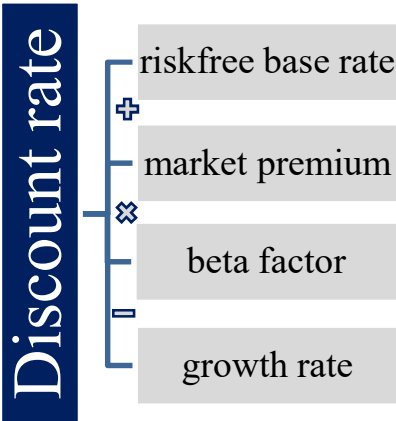


Figure 63. Adjusted discount rate for growth

Based on a long-term prognosis in the phase of the perpetual annuity, the changes in the amount, the reinvestment growth and especially the price change are related; company-specific inflation rates are seen causally.

The volume-related growth is realised through sales expansion in connection with savings (Ballwieser & Hachmeister, 2016). The organic company growth, which is primarily enabled through the self-financing of investments, is based on an accumulation of future returns (Pawelzik, 2010). Furthermore, it is assumed that the company can shift the future inflation-related cost increases on its customers (Langguth, 2008). Therefore, the growth reduction is also known as demonetization (Teewinkel, 2004). These factors affect the individual company returns or cashflows, which can then be distributed to the owners of the company.

The growth rate, which implies the price-, volume- and reinvestment-related growth, can be determined as follows (Friedl & Schwetzler, 2010):

$$g = (1 + \pi) * (1 + v) - 1$$

g = growth rate; π = inflation related growth rate; v = volume-related and reinvestment-related growth rate

Equation 26. Determination growth rate

There is no generally accepted procedure for the quantification of the growth rate (Albrecht, 2004; Loßagk, 2014). Usually in practice the orientation is towards the expected demonetization rate (Schacht & Fackler, 2009). Apart from estimating the inflation rate, the valuer has to determine if the company which is to be valued, can compensate for the inflation better, exactly or just partially. On the basis of these premises, a higher, equal or lower growth discount is to be used. In addition to these assumptions, it should be forecast whether the company which is to be rated has amount-related and reinvestment-related growth effects (Bark, 2011; Koelen, 2009).

The following assumptions are the basis for the growth discount in perpetual annuity.

After the detailed planning phase, the income situation, the asset situation and the financial state are steady, i.e. the cashflows or the returns do not change, they grow at a constant rate or the changing cashflows or returns are displayed at a constant growth rate (Bieg, Kußmaul, & Waschbusch, 2009). The implementation is made with the following formula.

$$EV_t = \frac{CF_{t+1}}{r - g}$$

EV_t = Enterprise value at the beginning of the perpetual annuity; CF_{t+1} = Cashflow at the beginning of the perpetual annuity; r = discount rate; g = growth rate

Equation 27. Growth rate implementation in perpetuity

Particularly with SMEs, the question is raised as to whether the above-mentioned assumptions for considering the growth discount are appropriate due to the given characteristics. On the basis of the effects of the average growth in the phase of the perpetual annuity, i.e. an infinite period starting at the end of the detailed planning phase, the effect on the company can be substantial (Metz, 2007; Naumeier, 2015).

APPENDIX X

Transcription

The software program f4 was used to facilitate transcription. With f4 the replay speed of the interview can be reduced without being incomprehensible and it is possible to wind forward and back with a foot pedal. This enabled me to transcribe the interviews without using a touch-typing system. Afterwards, I listened to the audio recordings again, checking the transcripts for accuracy and editing when necessary. I transcribed all the interviews in basic language form: without interjections, pauses, pronunciation, intonations, etc. I made some syntactical or grammatical corrections to increase readability. Lines were numbered consecutively and timestamps were set at each change of speaker. This modest transcription process ensured a clearer understanding and better access to the content of the experts' expressions. This was more appropriate and useful than following complicated transcription rules. There is no need in the analysis of the expert interviews (particularly using content analysis) to make extensive and strict transcription rules, as it primarily involves the content and not the style of speaking. The experts all have an academic education and can express themselves well verbally. They are equipped with the relevant technical technology for this research topic and are used to giving lectures (lecturers and professors) and presentations (auditors and M&A consultants). The transcriptions were then re-read and checked for readability.

As already mentioned, I focussed on the content and made sure that all the answers were transcribed correctly by sending transcripts to the interviewee to review and modify or amend if necessary. Only a few changes were made by the participants. This might be because of the participants' reduced interest or time limitations or the high quality of the transcripts.

Although the transcription was time consuming, it had some advantage. I listened to the interviews and read the transcripts several times, which allowed me to familiarize myself with the data and ensure that no data had been lost. I was also able to make some notes that I then included in the coding process (Morris, 2015).

The transcripts were anonymized and the participants were given an anonymous identification marker. The data was stored securely according to the regulation of the University of Gloucestershire. I am the only one who has access to the files and am therefore the only person who can identify the respondents.

To avoid the potential danger of changing the data by translating inaccurately, all the transcriptions were kept in the original language of German. As Corbin and Strauss (2015, p. 367) note, “.... *too much valuable time and meaning can be lost in trying to translate all the research material.*” They go on to say that parts will have to be translated into the language the research is to be published in (ibid). Two transcription samples of expert interviews can be found in Appendix VI and VII, as well as all correspondence with the participants, data analysis and important quotations (which I translated into English).

The research focusses on an issue primarily located in Germany and much of the data generation and its analysis and interpretation were conducted in German. However, the work is written in English and presented to a primarily English-speaking readership. This raises the challenge of producing an English translation of appropriate quality in order to enable the English-speaking readership to comprehend the contextual sense making of the participants. There would have been some benefit from having an English basis because no translation would have been necessary. However, the research subject represents a specific German issue. If the interviews were conducted in English, certain insights could probably not be expressed or at least not with the same degree of clarity, regardless of whether each interviewee was in a position to do so. The advantages of conducting the interviews in English would probably only have been possible at the expense of in-depth insights.

The translation of passages in German and interviewee statements were undertaken to the best of my knowledge. To ensure comprehensibility, particularly when translating the interviewee statements, it was occasionally

necessary to deviate from a literal translation and to provide additional information in brackets or explanatory footnotes. Despite the numerous efforts made to translate and explain the German specifics, ultimately possible cultural particulars may have been lost or diminished, even though measures were taken to minimize this.

Coding

All interview transcripts were uploaded. I then categorised the interviews into separate groups for analysis, i.e. auditors, M&A consultants and lecturers and then generated a codebook based on the research questions, research objectives and interview guide. This codebook was an initial template to code the text. The topics were defined to allocate the content of the transcript and the emerging thoughts around the interview process. I then created key words to paraphrase the topics or categories (Brinkmann & Kvale, 2015). A first step in organizing the data was made as “*Codes are labels that assign symbolic meaning to the descriptive or inferential information compiled during a study*” (Miles, Hubermann, & Saldana, 2014, p. 71). This might be an entire paragraph, one or more sentences or one word (Miles, Hubermann, & Saldana, 2014). The text to be coded was based on units of meaning, sentences and partial paragraphs, ensuring that the content and the relevant information remained whole and logical.

I used a combination of predefined (deductive) codes and emerging (inductive) codes in this thesis. Deductive coding needs predefined categories that are based upon a theory to connect the text with the codes (Given, 2008). The pre-established categories enable well-organized data analysis. On the other hand, this procedure is not able to reveal (new) themes from the transcripts and therefore prevent findings that are a priori categories (Zikmund, Babin, Carr, & Griffin, 2013). In contrast, inductive coding allows themes and categories to evolve from the text and so is appropriate for exploratory research (Bryman A., 2016). The researcher learns what the experts already know rather than ascertaining his own knowledge in advance.

The creation of categories also corresponds to questions from the interview guide; in other words in ‘a priori coding’ each research question, research objectives and interview questions were broken down into nodes and these nodes were used to code the text (Flick, 2014). According to these pre-established categories, the transcript was coded through an initial template, which NVivo stores in nodes identical to my predefined themes.

The first type of nodes represented a broader categorization and all the text related to this theme was stored under that node. The themes were divided into main categories and subcategories, e.g. income approach method (main category) and base interest rate and risk rate (in each case as a subcategory). This initial template was later modified to enable a code for each concept to be assigned, so that demarcation from other categories was possible.

All interviews were gradually coded under this category system. The code book was updated with newly emerging categories from the transcripts, and coded further so that it eventually resulted in the final version of the hierarchical category system with the main categories and subcategories.

I tested many versions of the category system and the coding guidelines and the text passages were modified further while the subcategories were inserted, formulated and defined according to the coding rules. I carried out the process in iterative cycles until no new themes were identified. One advantage was that I became more familiar with the content of the transcripts. I could also generate new nodes from the text. In the coding process, I had to recode some parts and link some statements to different nodes. This was necessary because some statements cannot be coded one-to-one because they are relevant to more than one question or a group of themes.

The following figure shows the process model of deductive and inductive category building, according to Mayring:

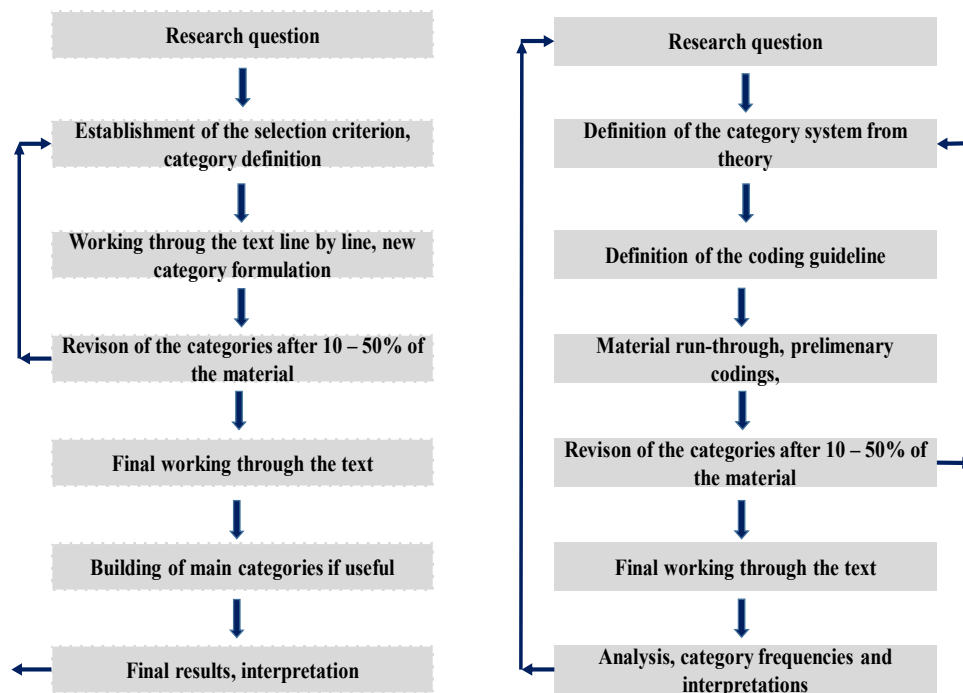


Figure 64. Inductive and deductive category development following Mayring (2014, p. 80 and 96)

Ultimately, behind every tool there has to be a person who analyses the data. But such a tool can lead to data manipulation and stifle creativity, especially when using a computer to analyse qualitative data which is usually ambiguous (Robson, 2011; Roberts & Wilson, 2002). Nevertheless, using computer software can facilitate and enhance the analysis process. In the end, I had to shape the analysis process and use the software with care to assist data analysis. It is generally recognized that the analysis thus depends on the researcher (Babbie, 2016; Alasuutari, Bickman, & Brannen, 2008; Collis & Hussey, 2014; Easterby-Smith, Thorpe, & Jackson, 2015).

The first step in the process was investigation of data and content. King and Horrocks (2010) advise familiarizing oneself with the content of the interviews by reading the interviews several times and recording discrepancies, ideas and questions in memos. This ensures that thoughts are not lost. In the course of coding, memos were written in order to document questions, anomalies and peculiarities.

The NVivo was used after coding to record the frequency of topics and to conduct compound searches. For example, I conducted many text searches with words such as ‘indemnity’, ‘valuation’, ‘SME’, ‘specifics’, etc. to make sure that I included all the relevant information and checked if issues were coded as defined in my codebook. Even when frequency is not the decisive criterion in qualitative research, it clarifies that certain themes, for example ‘transferable profitability’ are important due to their overall frequency. Connections not recognized using the various search operations were excluded but also used to confirm nascent interdependencies and relationships (Kuckartz, 2014). Both display types, as clouds or in corresponding Excel spreadsheets, can thus facilitate further analysis. Examples of this are the connection between SME specifics and sustainable earnings and cash flows after withdrawal of the partner.

I then summarized each node in different categories e.g. creating three memos for the node indemnity, one each for auditors, M&A-consultants and lecturers. My prime objective was to highlight the statements and the differences within the group related to a topic. I then compared the content of the nodes to find patterns, differences and relationships between the groups, and contradictions, which I recorded in the memos. Within this process, I used NVivo features such as cluster analysis, group queries, text search, compound search, word frequencies, clouds and models in order to ensure I sought important information, contradictions or patterns.