Critical Success Factors in Private Real-Estate Funds Performance from an Investor's Perspective

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Abstract

Alternatives are increasingly part of the investment portfolio for most institutional investors and real estate is a significant item in this allocation. Non-listed real estate is one way to acquire real estate and the market for this has risen in Europe over the last two decades.

Despite the high investment value, non-listed real estate funds have not been explored thoroughly in academic research. Most existing studies are quantitative and only focus on the UK. This study focuses on Germany and is qualitative. The research was conducted via semi-structured interviews with participants from Germany or those that have German clients. Market participants were investors, fund managers and consultants. Interviews were the main data source, supported by feedback from market participants and a case study.

The findings of the research highlight that market participants are aware of the complex nature of non-listed real-estate funds and the results are visualised in a framework. However, not all success factors are incorporated in the performance measurement framework as it applies to a wide range of funds and focuses only on a few items. The four main perspectives are fund manager, fund structure, properties and financial aspects.

This research contributes to academic understanding of the performance measurement of non-listed real estate funds which is not found in any other studies to date. It provides new insights into the success factors for non-listed real estate funds as seen by market participants. This includes the use of expert judgement (most probably including elements of gut feeling) and the dependence on very specific factors for the success of any fund. These findings have both academic and practical significance.

Declaration of Original Content

I declare that the work in this assessment was carried out in accord with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the assessment 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 this assessment are those of the author and in no way represent those of the University.

Signed: Britta Nielsen

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Abbreviations

AIF	alternative investment fund
AIFMD	alternative-investment fund-manager directive
BAFIN	German financial authority
BREEAM	Building Research Establishment Environmental Assessment Methodology
BSC	balanced score card
CapEx	capital expenditure
CBD	central business district
EEA	European Economic Area
FTE	full time equivalents
GAAP	generally accepted accounting principles
GAV	gross asset value
GFC	global financial crisis
IPE	investment & pensions europe
KAGB	Kapitalanlagegesetzbuch
KPI	key performance indicator
KStG	Körperschaftssteuergesetz
KVG	Kapitalverwaltungsgesellschaft
LEED	Leadership in Energy and Environmental Design
NAV	net asset value
NOI	net operating income
OECD	Organisation for Economic Co-operation and Development
SPV	Special purpose vehicle
UCITS	Undertakings for Collective Investments in Transferable Securities
USD	US dollars
WALT	weighted average lease term

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1 Introduction

Since the late 1990s an increasing number of institutional investors have started to invest in private real-estate funds with third-party managers (Kutsch, 2010). The European markets, as tracked by Inrev, grew from €75 billion GAV[1] in 1998 to about € 300 billion GAV in mid-2016 (Figure 1, Inrev 2016a). In the last three years preceding 2015, private-equity real-estate investments have become a preferred route, as evidenced by increasing equity commitments (Almond, 2015). Figure 1 shows how the financial crisis of 2008 and the following years led to a decrease in the GAV and the number of funds that are now active. In recent years, equity commitments to private-equity real-estate funds have picked up again, and the numbers of funds have increased, demonstrating that non-listed real estate remains a preferred route to real estate (Inrev, 2016b). The average investor has about 75% to 85% of his or her real estate holdings in private real estate (van Nieuwerburgh, 2015) but not necessarily in funds. Andonov et al. (2012) confirm the growth of indirect real-estate investments for pension funds.

[1] GAV = Gross asset value

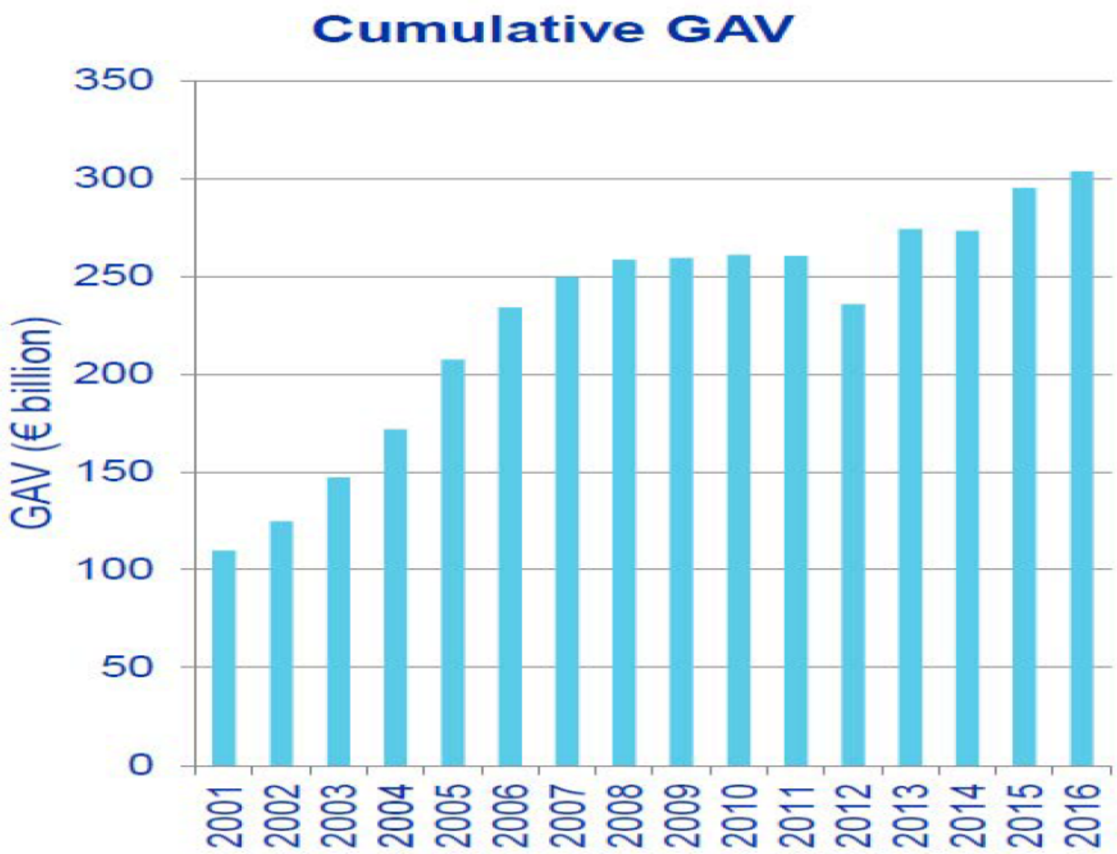

Figure 1: Growth of indirect real-estate investments

Source: Inrev (2016b)

The size of the total investable universe is difficult to estimate (Gordon et al., 2016). Baum et al. (2011) estimate the size of the unlisted real-estate-fund universe to be worth approximately €1.7 billion or 14% of the total investable universe. Barnes (2016) estimates the value of real estate worldwide to be around 217 billion USD. Gordon et al. (2016) estimate the value of investable real estate at 49.2 billion USD. Teuben et al. (2016) estimate that the global investable real-estate market is equal to 7.1 billion USD which is close to the number Gordon et al. (2016) estimate for institutional real estate. Combining the two figures would result in an estimate of around 5.8 billion USD for private real estate. Almond (2015) estimates a smaller total universe, but roughly the same percentage. Gordon et al. (2016) estimate 5.5 billion USD – a similar range. Van Nieuwerburgh et al. (2015) estimate that 85% of real-estate investments are made in non-listed form, but this does not necessarily mean that those are all fund investments. Approximately 75% of the investable universe is in Europe and North America (Baum et al., 2011; Teuben et al., 2016). Gordon et al. (2016) estimate a slightly smaller figure (65%). When combining all these figures, non-listed real-estate funds in Europe represent about 8-10% of the investable universe in Europe.

Kaiser (2004) roots the increase in real-estate funds in the burst of the dot.com bubble at the beginning of the 2000s. After the bubble burst, many investors were faced with both falling equity values and falling bonds values, as both represented different sides of the same thing. Afterwards, they started to look for sources of return other than bonds and stocks. Clayton et al. (2013) attribute the increase to the emergence of new investors and the rise of new vehicles and strategies.

The rapid growth of this new asset class led to an increase in the number of funds through fund launches before the managers had established a clear proof of their capabilities (Baum & Farrelly, 2009; Baum et al., 2011). Donner (2010) suggests that the real-estate industry is less sophisticated than other industries. Little public data is available on private funds, however, the market is becoming more transparent as regulations/directives from INREV and other industry bodies are becoming more widely known and used by fund managers (Anglin et al., 2009; Fuerst& Matysiak, 2013; Fuerst et al., 2013). Investors are also becoming more assertive (Baum et al., 2012; Noorman & Hobbs, 2012). Therefore, a trend to more transparency appears to be emerging (Brounen, 2014; Fuerst et al., 2013).

In the 2016 *Global Real Estate Transparency Index,* JLL (2016) note that transparency is improving—especially in markets such as the UK or Canada, which are already considered highly transparent.

The results from private real-estate funds invested over the last ten years have been disappointing (Alcook et al., 2013; Baum et al. 2011, 2012). Too few managers have managed to generate excess returns and many funds have lost a lot of money. Since 2001, the INREV Index has yielded an average return of 5.2%, which is moderate and lower than the result of the public real-estate index for the same period and region at 7.2% (Brounen, 2014). Both indices focus on Europe.

While the period has certainly been unusual, there are some managers who manage to deliver strong returns despite the issues at hand. The period up to the global financial crisis (GFC) generated impressive returns (Fuerst & Matysiak, 2013). Baum and Farrelly (2009) conclude that methods are needed to analyse the performance of these vehicles and to evaluate whether managers are doing a good job. The industry appears to have learned some lessons from the GFC (Clayton et al., 2013; Inrev, 2014a).

The foregoing paragraphs lead to the following questions: What are investors looking for when investing in real-estate funds? And how does the concept of risk interlink? Which factors influence the risk and return on property and what can be diversified away (Clayton et al., 2013)?

According to Kaiser (2004), investors in real estate search for stability, distributions and over-performance. This might be true for the asset class, but the reasons why investors have chosen to invest in non-listed real estate instead of an alternative is not answered.

Several studies identify performance drivers (e.g., Alcook et al., 2013; Baum & Farrelly, 2009; Baum et al. 2011, 2012; Bond & Mitchell, 2010; Farelly & Stevenson, 2016; Fuerst & Matysiak, 2013; Hahn et al., 2015; Tomperi, 2009). However, there are some limitations to many of these quantitative studies due to the use of a limited number of funds (e.g., Baum & Farrelly, 2009), the focus on a short time period (Baum et al., 2011, 2012) or the inclusion or exclusion of the GFC period (Baum et al. 2011, 2012). The data might have been insufficient to reach firm conclusions. It is difficult to obtain reliable indices or benchmarks in Europe outside of the UK (JonesLangSalle, 2016). Furthermore, quantitative approaches are often problematic as accounting rules are not standardised. Meanwhile, most funds follow some international accounting standard, such as IFRS, but there are differences between (and in between) these standards. Valuation policies also differ. These differences in valuation could be timing; some value their properties once a quarter, others value their properties just once a year. There are also differences in valuation methods. The German valuation method is especially known for lagging market movements and for thus overestimating prices in a bear market and underestimating prices in a bull market (Baum, 2015). But this holds true of valuations in general (Matysiak & Wang, 1995; Webb, 1994) and not just for German valuations. In addition, valuations contain a smoothing effect. Zemp (2007) surveys investors in German real-estate Spezialfonds, which are mainly German institutional investors. The focus here is on Germany, it is limited to one vehicle and was written and conducted more than a decade ago. Also, Zemp's study focuses on investment decisions. Kutsch (2010) published her study more recently, but it focuses on UK investment decisions of investors in private real-estate funds and the interviews were also done a decade ago. Clearly, while some topics have been important for years, preferences are changing. But what happens once you have invested in a fund? There is currently no study that covers this area of interest.

Investors are expected to monitor their investments, but do they? A reasonable assumption is that they monitor performance and factors that were important when they made the investment decision. Amenc et al. (2011) studied the approach of 293 investment-management professionals to performance measurement and discovered that investors used just a few key performance indicators (KPIs). As the above-mentioned studies show (INREV, 2016b; Kaiser, 2004; Kutsch, 2010; Zemp, 2007), there are many reasons to invest in private real-estate funds and focusing just on standard financial KPIs does not appear to be appropriate for real-estate investment funds. Do investors monitor other aspects?

The relationship between investors and fund managers is referred to in economic literature as the principal-agent relationship (Katz & Rosen, 1994). A principal (investor) hires somebody else (fund manager or agent) to perform the management of real-estate investments on their behalf. However, the agent might not perform as the principal wishes, especially if their interests diverge (McAllister et al., 2008). One of the obstacles for new fund investments is that the interests of investors and fund managers might not be aligned (Inrev, 2016b). One would therefore expect that some monitoring/control of the fund managers would take place after the investment has been made.

Wright (2013) observes a conflict in private equity between managers and investors. Inrev (2012) confirms missing alignment between what investors and fund managers experienced in private real-estate funds during and after the financial crisis. The principal will therefore establish some sort of control mechanism in the form of reports, advisory board/supervisory boards meetings and regular updates. The financial crisis marked a turning point regarding the desire of investors to exercise control over their indirect real-estate investment. New fund offerings or fund extensions offer investors more control when previously, control was given to the fund manager. This is illustrated in the figure below.

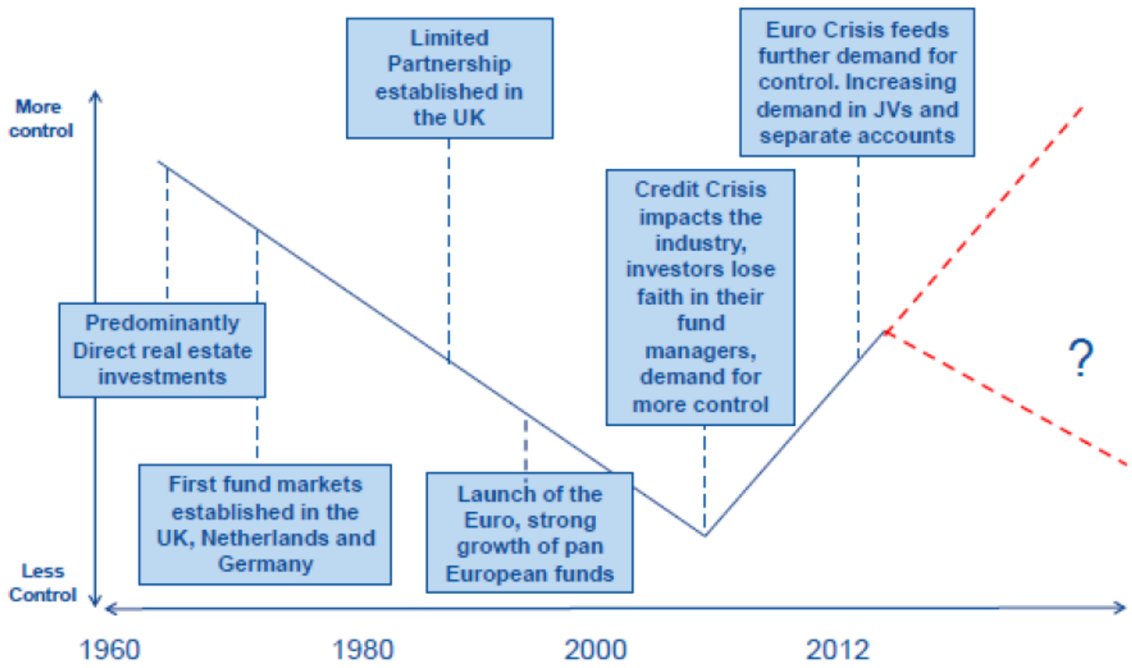

Figure 2: Changes in control over time

Source: Inrev (2012)

There is good reason to expect that some form of performance measurement takes place at the level of the investors, but what is done remains unclear. Combining the knowledge of experienced market participants by exploring what is done and adding current academic research to create a performance-measurement framework—or at least to set the basis for one—appears to be a natural progression of the research done so far.

1.1 Market overview: private real estate in Germany

This subchapter introduces the world of private real estate funds and their players. It explains the role of real estate and other alternative investments in a portfolio for institutional investors. It also defines aspects of real-estate investments.

1.1.1 The role of alternative investments in a portfolio

Before we at look real estate, we must place the asset class into context and explore who these institutional investors are, what their general needs are and what role alternative investments play in the portfolio of an institutional investor.

An institutional investor is looking for investments which will deliver a reasonable return at a reasonable level at risk.

Bonds, cash and (traded) equities are traditional asset classes. Private equity, commodities, hedge funds, infrastructure and real estate are considered alternative investments (Schweizer, 2008). This list could be expanded to include agriculture and forest investments or illiquid credit.

Real estate has always been part of the investment portfolio for certain investors, (e.g. UK institutional investors (Kutsch, 2010)). For others, it became accessible when it was possible to own smaller portions of real estate through partnerships or other structures. This is especially true for smaller investors who allot a little of the portfolio to real estate (Andonov et al., 2012; Kutsch, 2010) but want to own more than one property or gain access to lumpier assets. In a real-estate fund, one can invest small amounts or billions. Others had to be convinced that real estate would not fall apart in every downturn (Clayton et al., 2013).

Chun et al. (2002) note that institutional investors prefer high-quality assets and high-quality locations. One of the explanations they offer for this is the U.S. law under which an individual can be held liable if the investment cannot be defended in court. What constitutes a high-quality location and asset depends on regional differences, changes in time and subjective judgement. Van Nieuwerburgh et al. (2015) state that primarily, office and retail properties in good locations fulfil the investment needs of institutional investors and that most do not need a full representation of the market.

Although the quality of the asset itself is important, a prime office property will be a property located in the centre of the business district. A Grade A office building is located in a good location –the central business district or some other established location. A Grade B location always has some drawbacks: not as well established, noisier, further from public transportation etc. What exactly constitutes an A quality of building may be country specific.

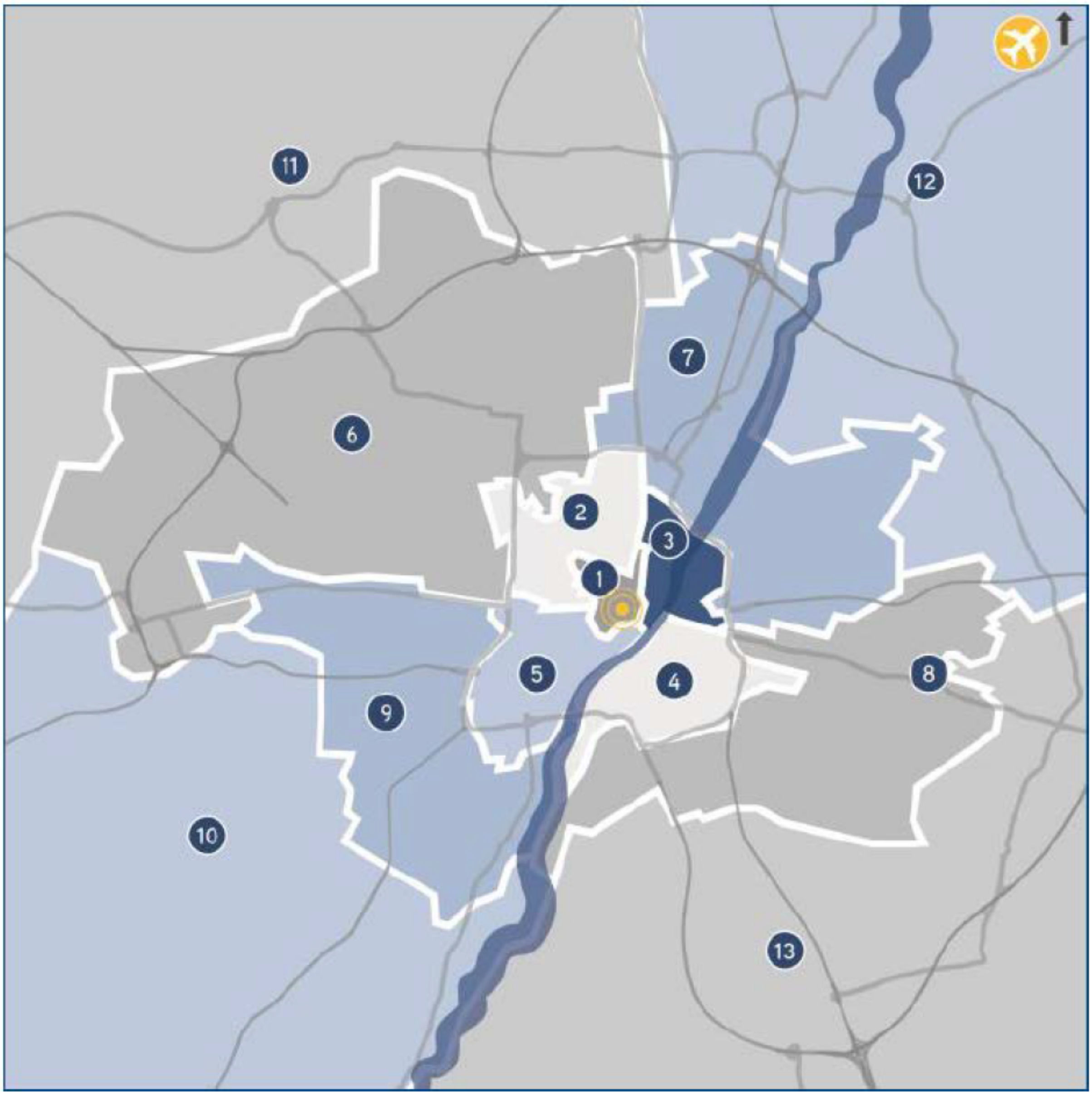

Figure 3: Munich Office Market

Source: Colliers (2017)

Figure 3 illustrates different office locations in Munich. The prime location is right in the centre of the city. Good locations (A) include 2, 3, 4, and 5. The remaining locations within the city limits (thick white line) include the B locations, and the rest are considered C locations. There are always some spots which are of better or worse quality than the rest. A newly built office building would rent for €27 to €43 per m^2 per month in Location

1, for €20 to 25 in Location 2, and €13-14.5 per m^2 per month in Location 13 (München, 2017).

Institutional investors primarily invest in prime A and B locations/buildings. Strong C locations like *Unterföhring* (within location 12 in Figure 2 and home to the ProSieben/Sat1 network and a back-office location for Allianz and UniCredit) might also attract institutional money.

Figure 4 illustrates how the total universe of investable properties is split between institutional-quality real estate and non-institutional real estate.

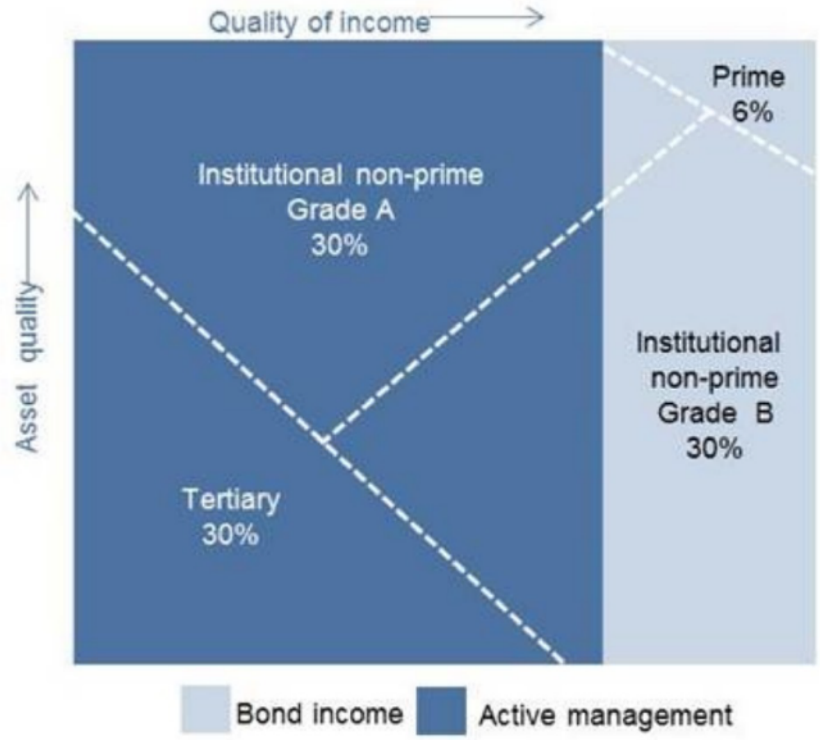

Figure 4: Composition of the real-estate universe

Source: JP Morgan Asset Management (2016)

Staying with the Munich example, institutional investors would primarily buy in locations 1 to 9 and only selectively in locations 10 to 13. The current (Q3 2017) prime yield for an office in Munich is 3.25% (Colliers, 2017), but the range is up to 5% for the city (1), up to 5.8% for the rest of Munich and up to 8% for the periphery (München, 2017).

Figure 5 illustrates the current returns for prime offices in other European cities.

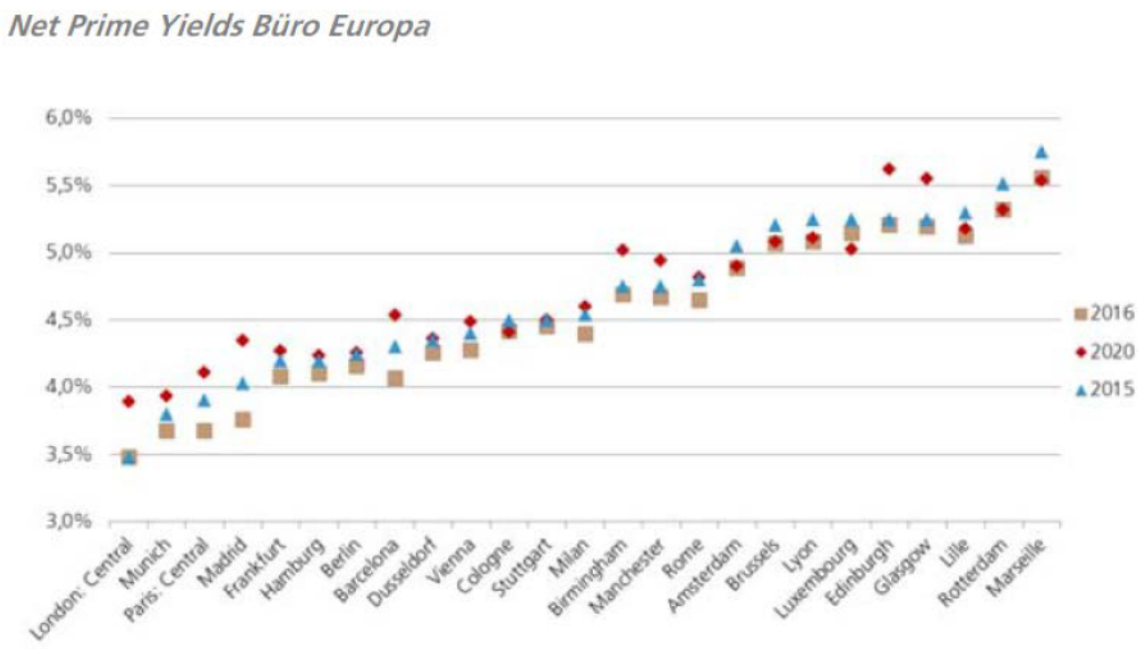

Figure 5: Net Prime Yields Office in Europe

Source: PMA, January 2016

Real estate was an important asset class long before stocks and bonds existed or became important and property ownership predates equity investments by millennia. The Dutch East Indian Company was founded in 1602 and is said to be the oldest listed company in Europe. The first shares in Germany were issued in 1809 by Dillinger Hütte, a company which still exists today (www.dillinger.de).

Bonds have been around for at least five thousand years (Cummans, 2014), but the first bond by a national Government was issued in 1694 by the Bank of England (England, 2016).

Bonds and equities are the dominant asset classes, but investors are increasingly expanding their investment horizon into alternative investments, which have some common features (Chambers et al., 2015).

1. Diversification

Bonds and equities are different types of investment in the same thing but alternative investments should give an investor the benefit of a different kind of return. There may be a correlation between bonds and equities, depending on the type of alternative (asset class), but the characteristics of the return are often distinct or unique.

An office might be rented out to a listed company but the returns are independent of fluctuations of the share price of the company itself and they do not necessarily depend on its economic situation. An office rental contract is for a defined period and the rent depends on the rules of the contract, irrespective of the economic situation of the company.

Correlation with regards to real estate can be rather low. The correlation of direct real estate to bonds and equities is estimated to be around €0.29 and €0.10 for investors in European real estate, European large-cap equities and European government bonds. Listed real estate exhibits a similar correlation to European government bonds but a much higher correlation to large-cap equity (JP Morgan, 2015).

2. Illiquidity

Traditional asset classes can be traded regularly and in small quantities. Alternative asset classes can often only be traded infrequently, and the units are larger. A bond in a distant emerging market might also be traded infrequently.

Real estate in listed real-estate form can also be traded in small quantities and tends to be rather liquid.

3. Inefficiency

Securities that are listed on a stock exchange through the rules of transparency are thought to be efficient. *Efficient* means that market prices reflect all information (Fama, 1970; Fama 1991). Alternative assets tend to operate in inefficient markets where information is considered to be inefficient. This is certainly true for many real-estate markets (Jones Lang LaSalle, 2016, Appendix I).

4. Non-normality

Traditional securities show an even or planned distribution of returns (Chambers et al., 2015). Alternative assets do not necessarily provide normal distributions for returns which exhibit major volatility over time (Athanassiou, 2012). This is especially true for hedge funds; certain types of real-estate investments may show the same characteristics. In real estate, although rental return may be easily analysed and show recognisable distributions over time, capital gains are much more volatile. A property that is rented out long term to a good tenant on a long-term contract should provide constant income. Capital gains are often less certain.

Several studies (Craft, 2001; Jones et al., 2015; Ennis & Burik, 1991; Kallberg et al., 1996; Worzala & Baijtelsmit, 1997) have suggested that institutional investors should invest a large percentage of their assets in real estate. Some authors (Kallberg et al., 1996; Jones et al., 2015) suggest the optimum is around 9%; others (Craft, 2001; Ennis & Burik, 1991; Worzala & Baijtelsmit, 1997) suggest that the figure should be higher. Ernst &Young (2015) sees a benefit in investing 5% or more. The reasons people invest are manifold; some have been discussed before. Consider these three reasons, for example (Andonov et al., 2013; Chun et al., 2002; PWC, 2016):

1. attractive returns
2. different or independent sources of return (in contrast to bonds and equities)
3. real-estate hedges against inflation and/or bad times.

Table 1 shows a recent survey by a large general consultant concerning which alternative assets institutional investors invest in. Real estate comprises approximately 1/3 of alternative investments. It can therefore be seen as an important factor.

Table 1
The role of real estate in an alternative investment portfolio

Funds of Hedge Funds	6%
Direct Hedge Funds	21%
Private Equity FoF	12%
Direct Real-estate funds	34%
Direct Infrastructure Funds	5%
Illiquid Credit	5%
Direct Private Equity Funds	18%

Source: Middlemass (2016)

The introduction considers the increase in investments in private real-estate funds. Kutsch and McAllister (2006), following Kutsch et al. (2005) and Kaiser (2004), investigate the reasons why investments in private real estate have increased so much since the beginning of the 2000s. They found that insurance companies and others started to offer real-estate investment and asset manager services to third parties so they could generate fees by managing real estate; but it remains open whether this condition was necessary for the expansion or for the growth. However, it became clear from the research that the possibility of earning fees is important to investment managers. Investors want to earn a return from their investments and investment managers want to earn a management fee from managing and investing on behalf of investors. Inrev (2012) points out that the origins of fund investment began when the decision was made to invest outside the domestic market or outside one's own regulatory requirements. Fuerst et al. (2013) claim that access to property (and to a lesser degree expert management and liquidity considerations) are responsible for the increase of non-listed real estate. According to Baum and Farrelly (2009), scale has been one of the biggest barriers for cross-border investment even for larger investors—especially those who want a diversified portfolio (Fuerst & Matysiak, 2013).

Thus, it can be seen that private real-estate funds are an established and important alternative asset class for institutional investors. Next, the institutional investor and the fund manager will be defined.

1.1.1.1 Institutional Investor

Non-listed real-estate funds are often classified as alternative-investment funds and fall under the scope of the alternative-investment fund manager directive (AIFMD). The directive defines a collective investment undertaking as an alternative-investment fund if it raises capital from several investors and does not fall under the directive regarding undertakings for collective investments in transferable securities (UCITS) (2009/65/EC) (Undertakings for Collective Investments in Transferable Securities). The AIFMD directive (2011/61/EU) was translated into German law on July 22, 2013. One of the issues it had to address was the definition of an institutional investor (*professioneller Anleger*). Instead of defining this anew, the German government decided to use the definition from Appendix II of the directive (2004/39/EG) on financial instruments (§ 1 (19) Nr. 32 KAGB).

This includes the following institutions:

a) credit institutions
b) investment firms
c) other authorised or regulated financial institutions
d) insurance companies
e) collective investment schemes and the management companies of such schemes
f) pension funds and management companies of such funds
g) commodity and commodity-derivatives dealers
h) locals
i) other institutional investors
j) superannuation funds

Endowments and professional pension schemes should also be considered institutional investors in addition to the above-mentioned foundations. [2]

The term *plan sponsor* is used quite often in the United States. Plan sponsors are institutional investors who are responsible for the investments of defined plans such as corporate retirement plans. Plan sponsors finance their own company's pension, as do other pension funds. Insurance companies invest for various reasons: e.g. to fund pensions and to cover their liabilities. Credit institutions and investment firms might invest in real estate so that they can offer this to their clients, but they might also invest for the reasons mentioned above for some other types of investors.

Jones et al. (2015) consider pension funds, sovereign wealth funds, endowments and foundations to be institutional investors.

In the UK, institutional investors are mostly: general insurance, life insurance and pensions (Baum, 2015).

As the focus here is on Germany, superannuation funds or sovereign-wealth funds are not relevant. This study concentrates on institutional investors which are insurance companies and pension vehicles. Table 2 shows how investors in alternative assets are made up of 34% pension funds and 10% of insurance companies; banks and endowment also invest, but to a lesser degree. Although wealth managers are the second largest investor in alternatives (19%), they are not in focus here as they invest on behalf of private

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[2] § 1 (19) Nr. 32 KAGB –semi-professional investors are defined o capture those investors. Those are investors that either qualify through some criteria or invest €30 million.

individuals. The ultimate beneficial owner of pensions and insurances are private individuals, but a typical pensioner or insurance client does not know how much of his or her money is invested in which investments. Decisions about pension funds and insurance companies are most likely to be made in-house without consulting the ultimate beneficial owners; in wealth management, the investor might have more influence and is therefore considered a semi-institutional investor or private investor.

Table 2

Investors in alternative assets

Pension Fund	34%
Insurance Company	10%
Sovereign Wealth Fund	6%
Endowment and Foundation	2%
Fund of Funds	2%
Wealth Manager	19%
Bank	2%
Other[3]	25%

Source: Middlemass (2016)

1.1.1.2 Fund manager

Fund manager refers to the firm and not to the individual who manages a real-estate fund. Sometimes fund managers can act as both investors in external mandates and as fund

[3] The underlying survey contained seven categories of investors and 'other' includes investors which could not be allocated into one of the other categories. It has not been analysed in detail.

managers offering the opportunity for others to invest in the real-estate funds they manage (McAllister et al., 2008). Chinese walls are supposed to separate these two businesses.

Fund managers have different origins: Some are pure real-estate-investment companies which are owned by management (Hines, Jamestown, Tishman Speyer), others are part of a bank or asset manager (BlackRock, Deutsche Bank or Unicredit), still others are linked to real-estate agents (LaSalle Investment Management, Savills or CBRE) or insurance companies (PGIM, StandardLife or Axa). Some are focused on niche strategies and others have a global footprint or offices in many European markets.

1.1.1.3 Asset Allocation

An institutional investor usually conducts an asset allocation study every one to three years to determine which asset classes to allocate money to. The objective is to find an allocation that is optimal concerning an earlier defined goal (Brown et al., 2010). Determining which asset classes to invest in is commonly believed to be an investor's most important decision (Brown et al., 2010; Schweizer, 2008).

In 2008, Schweizer pointed out that alternative assets in asset allocation and in institutional portfolios are increasingly important. As noted above, real estate is a large share in alternative investments. Andonov et al. (2012) note that pension funds have increased their allocations to alternatives (real estate, private equity, hedge funds, infrastructure and commodities) from 9% in 1990 to about 16% in 2010. In 2016 (Mercer, 2016), investors allocated 18% to assets other than bonds and equities.

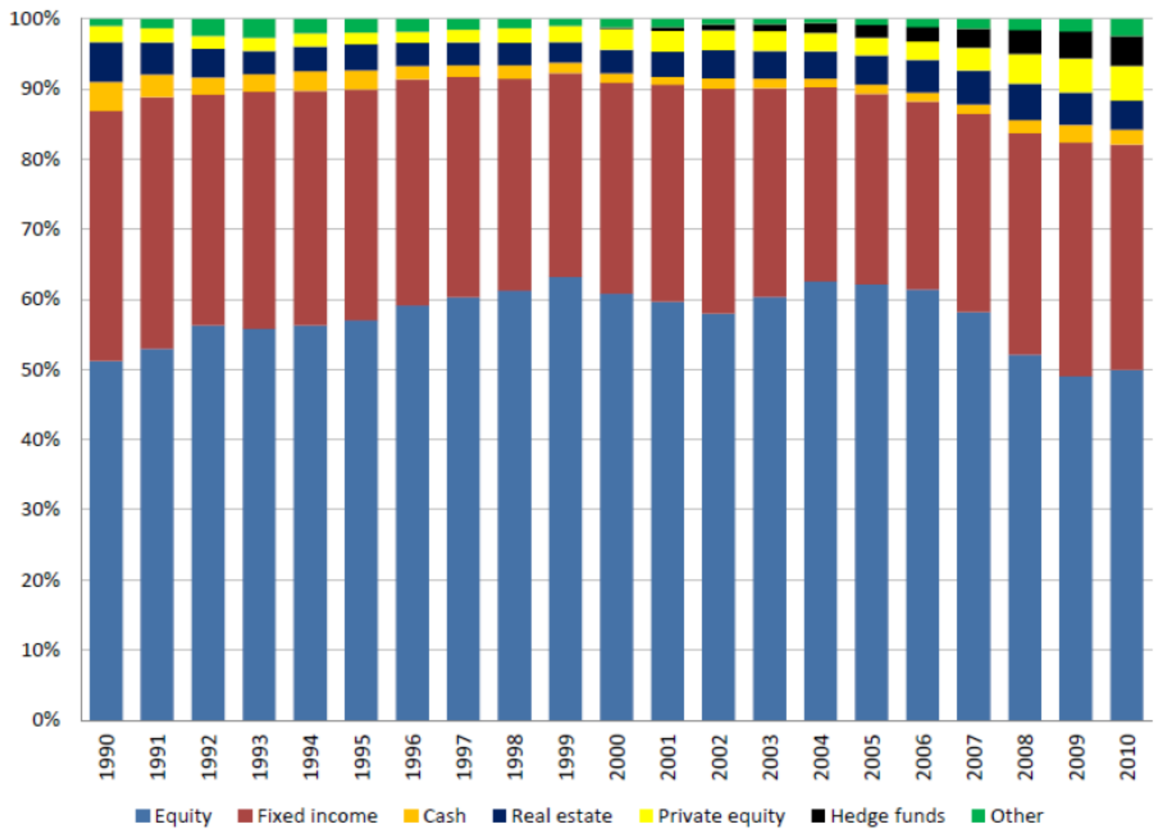


Figure 6: Asset allocation of U.S. pension funds

Source: Andonov et al. (2012)

1.1.1.4 Private Real-estate investment Funds

Real-estate funds offer the investor the possibility to invest in large-scale projects like central-business-district (CBD) offices and (hopefully) access to professional management and diversification.

Private real-estate fund is a synonym for *indirect real-estate investments* or *non-listed property funds* and variations thereof.

Inrev defines a private real-estate fund as "a structure where the capital of at least three investors is pooled to undertake a pre-defined strategy of investing into real estate assets"

(Inrev, 2012). Inrev also acknowledges that this definition is not used homogenously across the industry. Joint ventures may also be considered as non-listed-property funds.

Indirect real-estate investments can be made in various forms which range from joint ventures (a pooling of interest by at least two investors) to investments in listed companies (such as the German open-ended funds and real-estate investment trusts (REITs)). The general characteristics of these vehicles are portrayed in Figure 7 below.

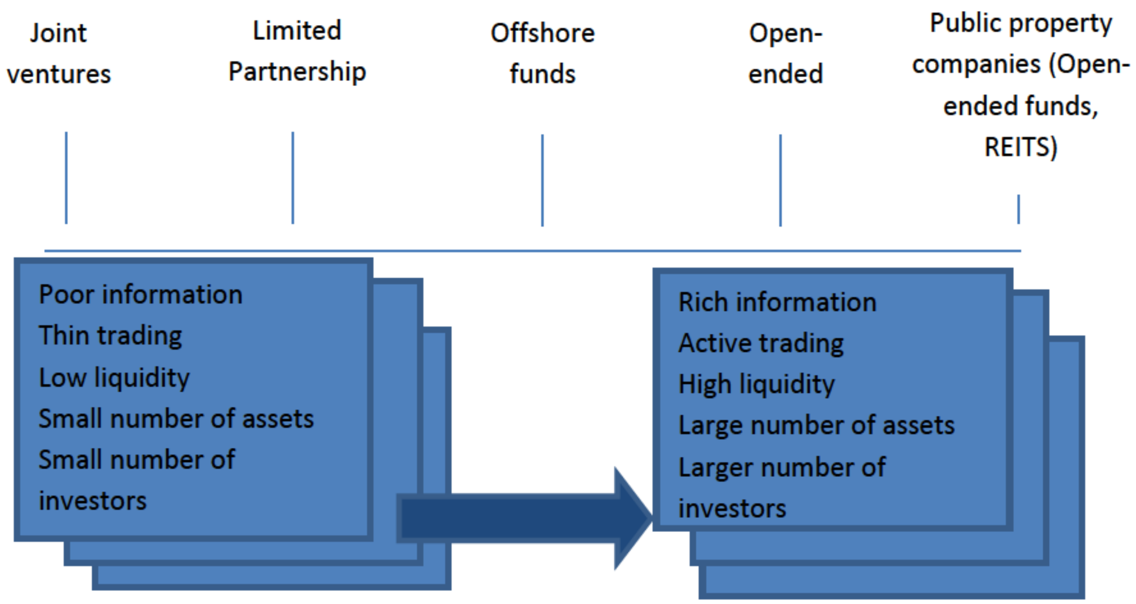


Figure 7: The range of private property vehicles: adapted by the author for Germany from Kutsch and McAllister (2006).

REITS and investment vehicles that are listed on the stock exchange are excluded from the definition of private real-estate funds (see above). Other forms, such as joint ventures, co-investments, club deals, etc. are not in the focus of this research.

85% of real-estate investments are made in non-listed form (Nieuwerberg et al., 2015). But this does not necessarily mean funds; they could also be directly held.

At the end of 2012, German institutional investors allocated about 7.1% of their assets into real estate, mostly German special funds (Just and Sebastian, 2013). Kleine et al. (2012) estimate that this number will grow to 8.4% in the next three years. It is also expected that the trend of German institutional investors investing primarily in German special funds will continue. The analysis by Kleine et al. includes about 123 institutional investors, whereby the market capture of the study remains unclear. Of those interviewed, more than 95% are invested in real estate. Newell (2013) says that the average pension fund in Europe has an allocation of 9.1% in real estate and the larger the investor, the higher their allocation.

For German institutional investors, private real-estate investment funds represent a sizeable investment which is expected to grow in the future. Research (Heinrich et al., 2015; Inrev, 2016a; Jones et al., 2015) suggests that the world-wide allocation to real-estate and non-listed funds might increase; a trend that should also apply to German investors, thereby increasing the importance of the sector. Jones et al. (2015) note that, over the last three years, allocations to real estate by institutional investors have increased by nearly 95 bps and are expected to reach 10% by 2016. They even suggest that the allocation could increase to 15% over the next decade, thereby including a shift from alternatives to the main asset class. Mercer (2016) suggests that German investors have allocated between 5% for corporate pensions and 17% for other investors.

Open and closed-ended structures

Private real-estate funds are offered in open-ended or closed-ended formats. Open-ended funds do not have a life-span (Farrelly & Stevenson, 2016). These structures allow investors, within limits, to enter or exit a fund over a period. Closed-ended structures run over a fixed period.

A typical investment in a closed-ended fund is structured as follows: Limited partnerships or offshore (e.g. Luxembourg) vehicles often operate for a limited time. A standard life span is seven to 10 years or up to 12 years (Farrelly & Stevenson, 2016) - nine years according to Kutsch (2010) and is typically divided into four periods: capital-raising, investment, holding and divestment. During the capital-raising period, the investment manager develops the idea, sets up the vehicle and the investment strategy and looks for seed investors. The number of seed investors depends on the amounts they are willing to invest and on the market. Typically, one would expect three to four seed investors. Once they are found, have done their due diligence and have agreed on the terms, a first closing takes place and the commitment/investment period starts. This lasts about three to four years (Baum& Farrelly, 2009). The investment manager has about 12 to 18 months to find additional investors and achieve a final closing. During the investment period, the manager implements the investment strategy. Investors may or may not be asked for approval on individual purchases, sales or gearing. This depends on what has been agreed upon signing. German investors prefer voting rights. Usually, the individual investors have little control (Inrev, 2014a), but this depends on ticket size and fund structure – combining many investors may increase control. The duration of the holding phase depends on the type of investment pursued and the strategy connected with it. If a property is bought just to rent it out, it will probably be held for a longer period than if land is purchased and developed for sale. Typically, the last two to three years of the fund's life is the divestment period. Although the fund has its phases, investments also have their phases. It may be appropriate to sell an investment early to benefit from some opportunities or avoid some risks. Closed-ended funds are quite often blind-pool funds, which might add another layer that needs to be supervised. In a blind-pool fund, one might not know the exact properties the fund intends to invest, but one usually sees some potential investments. One also knows the geographic focus, the intended sectors and the intended investment style.

Real estate is a long-term investment. Collett et al. (2000) estimate that the average holding period is 13 years but indicate that it varies over time. Unless you are looking for a tenant or would like to sell the asset or something extraordinary happens, you are not getting real feedback from the market on the value of the investment. Real estate is a unique piece, so sales or rentals of similar offerings can only approximate the value of the property the fund owns. The same applies to valuations. Most funds appraise the value by an external appraiser at least once a year, but the real value can only be seen when an asset is sold (Geltner, 1992).

Leading indicators for performance measurement are therefore important for investors in those kinds of investments. In closed-ended private real-estate funds, a certain amount of capital is committed for a certain period; it generally cannot be withdrawn or increased by the investor (Aarts & Baum, 2013). The decision to invest in a private real-estate fund, therefore, has more long-term implications than investment into a mutual fund. In theory, with open-ended, private real-estate funds, one can enter, increase, decrease or exit anytime. Closed-ended funds must be traded on the secondary market (Kutsch, 2010) if one is to get out before "maturity". In practice, whether one can trade in or out of a fund depends on the market cycle. In the boom phase, when many investors want to enter the fund or increase their investment, an investment queue might line up. At the same time, when the market crashes, open-ended funds are closed. Open-ended funds are an additional possibility whereby investors can generate alpha by the timing of investments (Baum et al., 2011). An investor could earn an additional return if he enters a fund when the market is down and exits the fund at its peak level.

The choice between closed ended and open-ended funds depends on the nature of the underlying investments and regulatory/legal requirements. According to Kutsch (2010), open-ended funds are usually core funds while the majority of closed-ended funds are value-added or opportunistic funds.

The focus of this thesis is on non-listed funds in any juridical form (limited partnership, funds) and different jurisdictions (UK, Luxembourg, Germany, Jersey, Cayman Islands, etc.). The characteristics of the vehicles differ concerning the fund structure and institutional requirements (Fuerst & Matysiak, 2013).

A fund (according to the AIFMD[4]) is any collective investment undertaking which raises capital from some investors by investing it in accordance with a defined investment policy for the benefit of those investors.

[4] See above under Institutional Investor

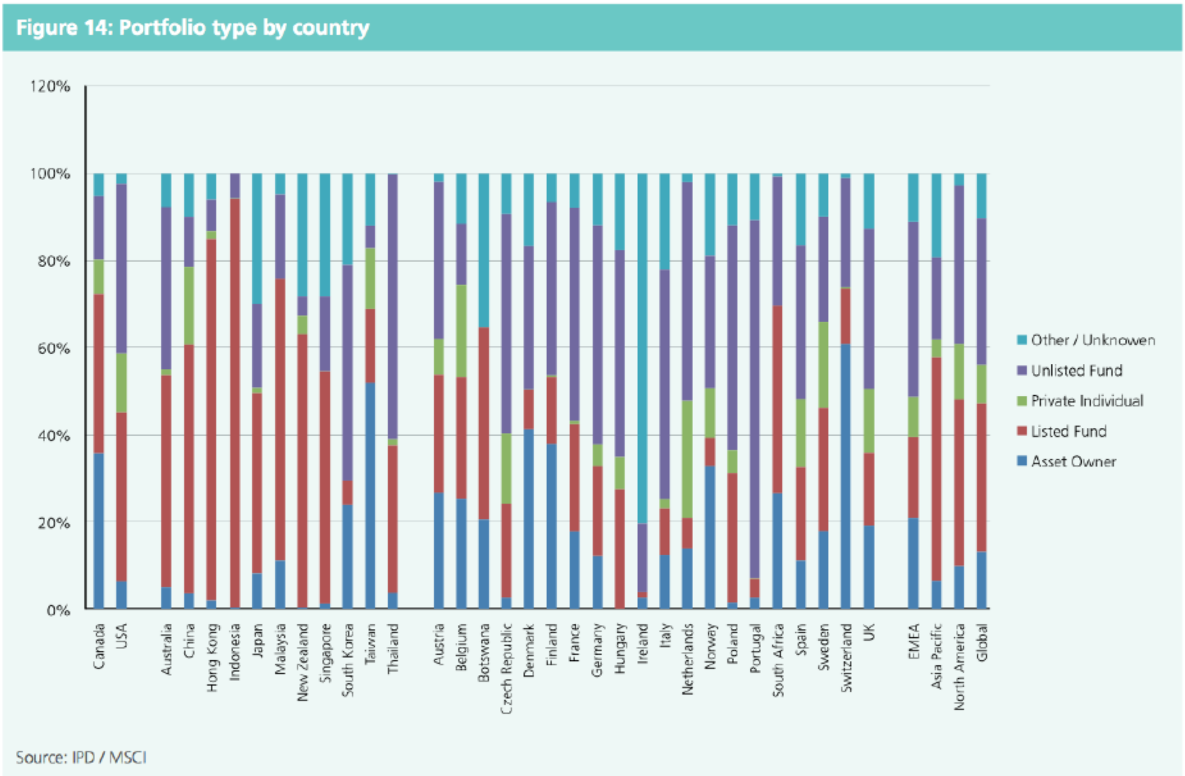


Figure 8: Portfolio type by country (Figure 14 from Clacy-Jones and Teuben, 2014)

Source: van Nieuwerburgh et al. (2015)

Figure 9 below illustrates the focus of the thesis:

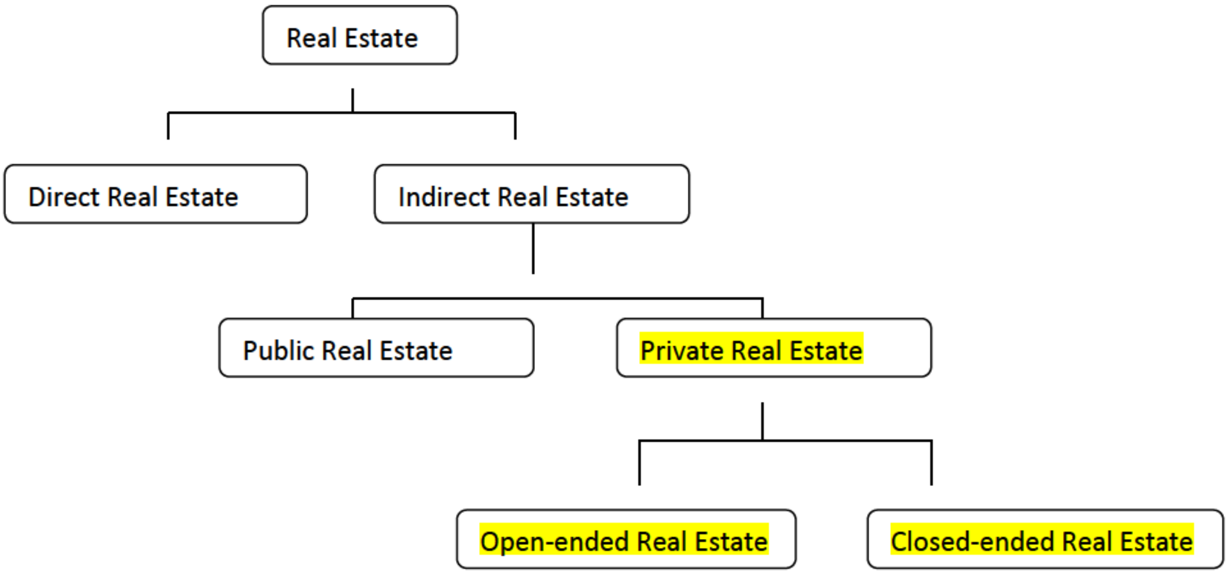


Figure 9: Private Real estate in context

1.1.2 Tax and Legal framework in Germany

Although both private and institutional investors exist in the same legal system, the rules that apply to both types of investor can differ. Also, because the universe of institutional investors is broad, so are the requirements of investors: They range from investors who have very few legal requirements to those who are regulated by a financial authority. The tax and legal framework as it applies to German investors in particular is briefly explained below.

1.1.2.1 Legal framework

Institutional investors in Germany are regulated by the German Financial Authority ("Bafin") and must comply with regulations such as the *Anlageverordnung* (investment ordinance). The *Anlageverordnung* applies to certain entities only in Germany, but Solvency II rules affect many companies in Europe. The requirements of each investor are unique: Apart from the external legal framework, internal rules may exist which will also limit the legal framework. Although Solvency II rules apply to many companies, the situation in Germany is unique as life insurance companies have guaranteed a level of return to their clients.

To understand the German market, it is helpful to have a basic idea of the *Anlageverordnung*, although it does not apply to all German institutional investors. Lawyers such a Norton Fulbright Rose or Pöllath & Partner translate their client news about the *Anlageverordnung* into English, which shows the importance of this rule.

German insurance companies and certain pension vehicles are regulated by the *Versicherungsaufsichtsgesetz* (VAG, German Act on the Supervision of Insurance Undertakings). Investments made by companies which fall under the scope of the VAG must follow certain rules with regards to security, profitability, diversification and spread under Section 54, Subsection 1 of the VAG. The *Anlageverordnung* clarifies and completes the investment principles as laid out in the law. The *Bafin* gives further guidance about the law and the *Anlageverordnun*g through circular memoranda and other vehicles. Entities which are not subject to VAG rules might also be subject to the rules of the *Anlageverordnung*.

It is important for fund managers targeting German clients and German institutional investors to know these regulations because a regulated investor can invest and a fund manager can distribute offerings to a larger number of potential investors only if a product is structured in a way that complies with the rules.

The regulated entity can only make investments according to these rules if the investment is eligible to serve as a guaranteed asset. The underlying assets and the legal form of the investment vehicle are both important when deciding on this. Once it has been determined that the investment itself is eligible, one must decide which category it falls into.

Real Estate in the *Anlageverordnung*

Real-estate investments are regulated in Section 2, Subsection 1, Sentence No. 14 (c) of the *Anlageverordnung* and they allow investments into direct real estate in EEA or OECD countries, participation in real estate companies and/or comparable foreign shares, shares or units in domestic (open-ended/closed-ended) and specialised AIF or in closed-ended mutual funds. Investments in foreign-assets pools are allowed if they were issued by a fund manager who is domiciled in another state of the European Economic Area. The fund manager must be under public supervision and must possess a permit comparable to Section 20 of the *Kapitalanlagegesetzbuch* (KAGB) [German Capital Investment Act]. In case of an indirect investment, the country in which the real estate is located is irrelevant. The investment, however, must be comparable in nature to a direct investment. If a fund is located in a third country, then it will not be considered an eligible real-estate investment but could qualify as a private-equity investment.

Investments into open-ended real-estate mutual funds are no longer allowed. Open-ended mutual funds that were acquired under the old rules (before April 8, 2011) are normally considered guarantee assets, but new investments are not. In 2011, lock-up periods of 24 months and a notice period of 12 months were introduced for German open-ended mutual funds, but the *Anlageverordnungs* investor could only agree to a maximum notice period of six months. Open-ended funds, therefore, stopped being allowed investments for restricted assets in 2011.

The entities may invest up to 25% of their guaranteed assets into real estate, as defined above (Section 3, Subsection 5 *Anlageverordnung*).

Real-estate funds under Solvency II

Solvency II replaced Solvency I as of January 1, 2016. Insurance companies with a gross premium of €5 a year or more or whose gross technical provisions calculated under Solvency II exceed €25 million are subject to the rules of Solvency II. Such insurance companies need to maintain a certain solvency capital, which addresses the individual business risks of the company and is calculated according to rules which apply across the EU. New principles (in contrast to those of Solvency I) that should guide the risk management of the company have also been established. Companies that must follow Solvency II do not have to follow the rules of the *Anlageverordnung*. Solvency II is based on three pillars: minimum capital requirements, supervision of risk and public disclosure. The objective of Solvency II is to ensure that all entities which fall within the regulations will be able to fulfil their obligations.

Pillar 1: Minimum Capital Requirements

Depending on the kind of insurance company, an absolute minimum capital exists which equals €2.5 million for non-life insurers, €3.7 million for life insurers and €3.6 million for re-insurance companies (captive insurance companies only need €1.2 million). Apart from these absolute numbers, solvency capital requirements are also needed depending on the risk of the companies. Thus, large companies have capital requirements which are much larger than the absolute numbers above. The amount of capital should be such that there is only a 0.5% chance that the capital will be inadequate in the following years.

Pillar 2: Supervision of Risk

Insurers must report to their financial supervisory authority. The supervisors may require a top-of-capital or a change in procedures if these are deemed unsatisfactory.

Pillar 3: Public Reporting

Insurance companies are required to report on their financial condition in a harmonized way.

What does this mean for investors that are insurance companies?

Companies need to have a catalogue of investment criteria that secures the quality, liquidity and profitability of the investments undertaken. Extensive reporting requirements and risk-management aspects are also there. All investments need to be regularly valued: a so-called market-consistent valuation. This means that they should reflect the value at which they could currently be traded. Allocation decisions are more complex, as the amount of equity required for investment must be taken into account. Heinrich et al. (2015) suggest that if minimising the equity required to Solvency II as a primary objective, the allocation to real estate should be zero.

Taxation in Germany

The tax and legal structure of a fund is a determinant of the return. The general objective when structuring a fund is that it should be tax efficient. A fund manager normally has a general idea of the tax regime that applies to their investors, but cannot know the details. Therefore, the fund manager would most likely choose an investment structure that maximises the return for the fund and pay less attention to the individual requirements of the investors.

The following section briefly summarizes the tax situation for investors who reside in Germany.

A corporation that resides in Germany is liable for taxes on its worldwide income according to Section 1, Subsection 1 of the *Körperschaftssteuergesetz* ("KStG") [German Corporate Tax law]. While this is the general rule, one can distinguish between three general types: fully taxable, special rules and tax-exempt.

Case 1: Fully Taxable

Corporations and branches of non-life insurance companies are fully taxable with their worldwide income. Dividends are tax-free if more than 10% of the shares are owned by another company. The same applies to disposals, but here 5% of the gains are considered non-deductible.

Case 2: Special Rules

Life and health insurance companies and pension funds do not have the same benefit with regards to dividends and gains from disposals. These income items are considered fully taxable unless the rules of parent/subsidiary directive 2011/96/EU apply. The same companies may make a provision for premium funds. This reduces the total taxable income. In practice, the board of directors together with the supervisory board of the insurance company decide upon the taxable income, according to Section 21, Subsection 1 KStG. The taxable income that must remain at a minimum is the net income from long-term investments.

Case 2: Tax-exempt

A few pension providers and insurance companies are tax exempt (Section 1 Nr. 3, 4 and 20 KStG).

Relevance for private real-estate funds

Investments are made in real estate, so what is the relevance for private real-estate funds?

Real estate is taxed where the property is located. Most double-tax treaties which Germany has concluded include an exemption from taxation; others (such as Spain's) avoid double taxation with the credit method. Taxes paid in Spain are credited to the German tax due.

A German resident company that is fully taxable would look at the total amount of taxes due when setting up a structure in a 100% owned investment. If the tax rate in the foreign country is lower, it would aim to shift the burden to the foreign country. On the other hand, if the tax rate in the foreign country is higher than in Germany then it might shift the tax burden to the foreign country by using shareholder loans.

A tax-exempt investor has a different agenda. As the entity does not pay taxes in Germany, the focus is to maximize the return from investments. For this kind of investor, it is most interesting to minimise taxes at property and fund level.

For an investor that is fully taxable, a structure that converts interest income into dividend income can be of interest. This structure might be less of interest to a special-rules or tax-exempt investor, as the dividend and tax income are treated for them in the same way and there are usually costs associated with setting up companies and retaining holding companies.

1.1.2.2 German Special Fund

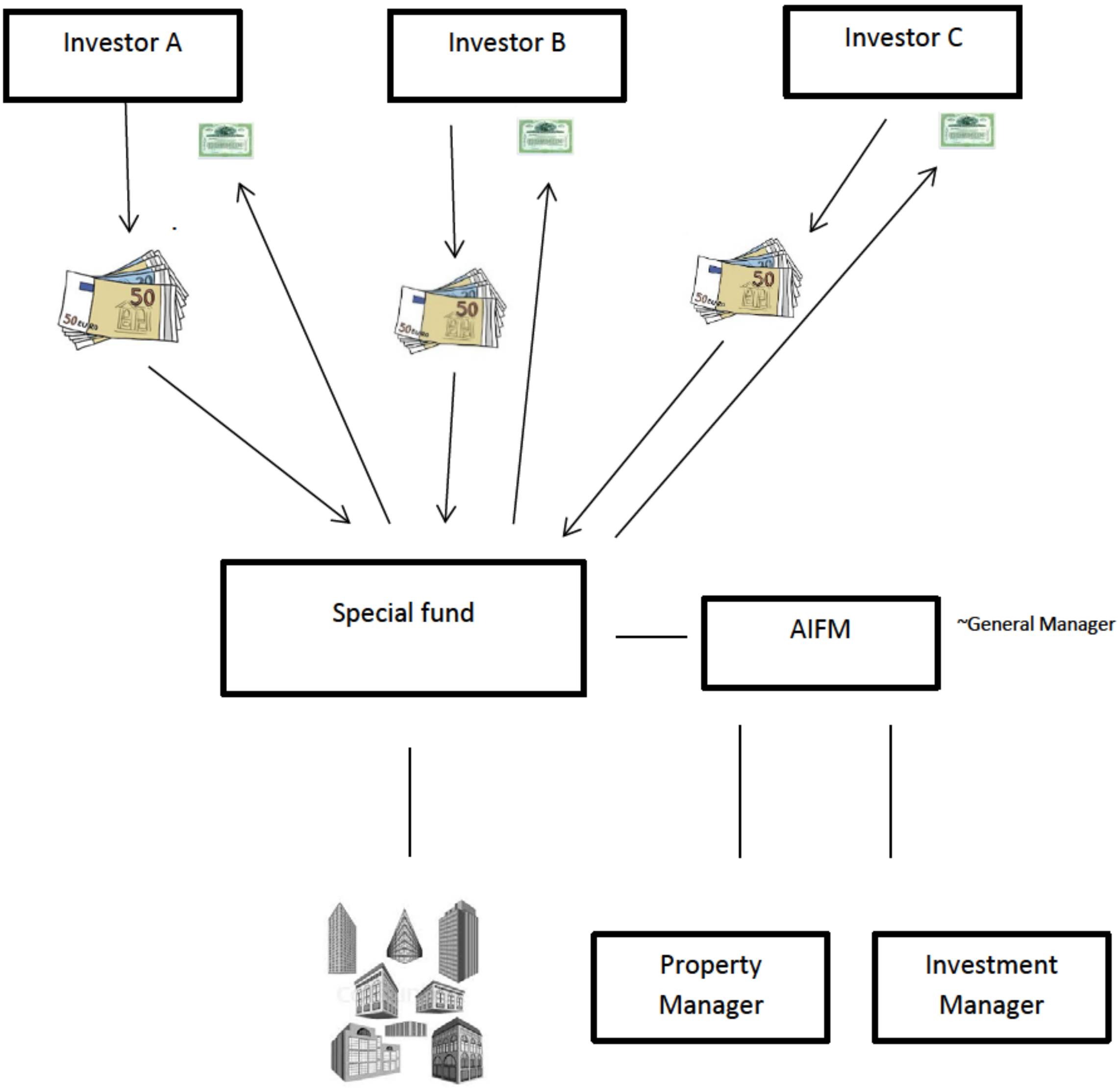


Figure 10: Special Fund Structure (Spezialfonds)

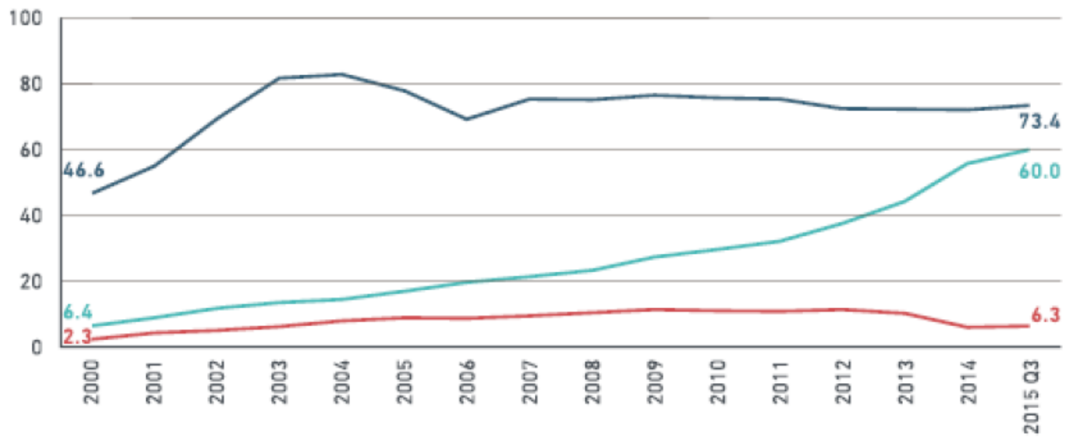
The German special fund or special AIF is an investment vehicle popular with German investors and has the following characteristics:

- indefinite life
- possibility to redeem every six months
- valuation with a few exceptions, often according to the German valuation system

- leverage up to 50%
- only institutional investors can invest
- regulated by German supervisory and tax law

At the end of 2014, 300 special AIFs existed with a volume of below approximately € 50 billion and a focus on real estate (Eglitis and Gläser, 2014).

Figure 10 shows the increased importance of special funds in Germany. It also illustrates the decreasing importance of open-ended funds which target institutional investors. This is a result of the disallowance of investors, which are subject to the *Anlageverordnung,* to invest in open-ended funds.



- Open-ended funds for individuals
- Open-ended funds for institutional investors
- Special funds

Figure 11: Fund volume in open-ended and special funds, 2000-2015

Source: Gläser, 2016

1.1.3 Real-estate investment styles

Investment styles are concise definitions that try to explain the risk-and-return characteristics of a particular investment. The different styles may also be used for benchmarking (Fisher & Hartzell, 2016).

The real-estate industry uses three different styles (Kaiser, 2004):

- core
- value-add
- opportunistic

Some fund managers like to add a fourth category: core-plus. Core-plus would lie between core and value-add.

	CORE ≤ 40%	CORE >40%	VALUE ADDED	OPPORTUNITY
Target percentage non-income producing investments	≤ 15%		15%> - ≤40%	> 40%
Target percentage of (re)development exposure	≤ 5%		> 5% - ≤25%	> 25%
Target return derived from income	≥ 60%			
Maximum LTV	≤ 40%	>40%	> 40% - ≤ 60%	> 60%

* To be applied to newly launched funds from 2011 onwards.

Figure 12: InRev Style Classification

Source: Inrev (2012 b)

Core real estate refers to properties that aim to achieve a high return on income and low volatility. It refers to four major property types: office, industrial, retail and residential. Leverage is low, the property itself has a high occupancy and it is located in a well-established location in an institutional market. Both returns and leverage figures have been shifting downwards over the last 10 to 15 years. Income return in Europe, net of fees, is currently expected to be around 3-5% and total return between 4-6% - Fisher & Hartzell (2016) estimate core returns to be around 6 – 8 % and leverage would be below 50% and trending toward 30%.

Value-add real estate refers to properties which bring in more income through capital appreciation than from current income or to properties in locations which are not considered core locations or a major property type. Leverage is moderate, and more leasing risk can be taken. Location can also be emerging. Income return would be 0-2% and total return 6%+. Fisher & Hartzell (2016) estimate 12 – 15 % for value-add investments.

Opportunistic real estate refers to properties which are in one or several respects higher on the risk curve due, for example, to exposure to development, a significant leasing risk, high leverage or a combination of several risk factors. The location could be in secondary or tertiary markets. Total return is 10%+, and income return can be neglected. Leverage is 65% +. Fisher & Hartzell (2016) estimate 15 % for opportunistic investments.

A fund is characterized according to the focus of its underlying portfolio. A core fund might have some value-add investments and vice-versa.

Each fund manager classifies a fund according to their own definition and this may or may not compare to the definitions above (Baum et al., 2011). Some factors can be measured objectively, and others might call for judgement. An office building let on a long lease to a single tenant in a secondary market might be considered a core investment because of the length of the lease and the quality of the tenant; others would call it value-added. The style can also change when tenants leave or when the location falls out of favour or when the quality of the property changes. Properties can migrate between styles (Kaiser, 2004).

Jones et al. (2015) suggest that the definitions can be different in the USA than in Europe. Fisher and Hartzell (2016) suggest that value-added and opportunistic funds out-performed Core funds before the GFC but under-performed for 2004-2008 vintages.

1.1.4 Conclusion

This subchapter introduced the indirect real-estate market in Germany by defining institutional investors, describing the legal framework German investors operate under and providing some orientation to indirect real-estate funds.

1.2 Contribution

The study expands the knowledge of private real-estate funds—an area in which existing research is thin (Farrelly & Stevenson, 2010; Kutsch, 2010). Previous studies have considered general investment intentions, factors that are important when selecting new investments and factors that have an impact on performance, but not performance measurement. This study explores what investors do and want and what they consider important; it thereby allows the market participants to explain their world.

1.3 Role of the researcher

The author considers herself to be an insider in indirect real-estate investments, as she has worked as a portfolio manager for a large investor in indirect real-estate funds for almost 10 years and has set up a performance measurement process for her own organisation. This experience lays the ground for the present study. The research idea is therefore based upon the prior knowledge and experience of the researcher. This prior experience is reflected in the first set of the interview guide, which was materially adapted after the pre-test.

1.4 Research aim

The aim of this study is to explore current practice and the desired characteristics of private real-estate funds and to develop the basis for a performance-measurement framework.

1.5 Research Questions

This research aim leads to the following research questions:

1. How is the performance of private real-estate funds measured by German institutional investors?
2. What are the critical success factors in private real-estate performance?
3. What are the similarities and differences in performance-measurement approaches, and is there a common ground for a performance-measurement framework?

Several objectives need to be addressed by this study:

1. to explore whether a common definition of *performance* can be provided for private real-estate funds
2. to explore how German institutional investors, measure the performance of their investments in pan-European real-estate funds
3. to identify factors and characteristics that are of importance to investors in private real-estate funds

4. to critically evaluate the status quo of performance measurement and how the status quo can be improved

1.6 Structure of the Thesis

This thesis is an explorative study of European private real-estate funds with a focus on German investors.

Chapter 2 is the literature review. It is split into three subchapters.

Subchapter 1 discusses two performance-measurement frameworks in general and their suitability for the performance measurement of private real-estate funds.

Subchapter 2 starts with a definition of *performance* and reviews the little research available on the performance of real-estate funds, expanding it further into finance.

Subchapter 3 summarizes the research objective based on the literature review and the research questions which leads to a presentation of the methodology. It also develops a preliminary framework based upon the literature review.

Chapter 3 focuses on research methodology and explains the author's underlying research philosophy and how the research was conducted. The research philosophy underlying this research is pragmatic, and the research strategy involves case study. Data is collected by way of semi-structured interviews with market participants. Semi-structured interviews were selected in order to give the researcher a better insight into the performance measurement process of investors and factors that are relevant and the possibility of identifying additional explanatory variables for the performance of real estate funds.

Chapter 4 lays out the findings from the interviews. It also provides a first analysis in relation to some research questions.

Chapter 5 discusses the findings from the interviews, contrasts them with the literature review and updates the framework, which is subjected to an initial validation.

Chapter 6 summarizes the findings and points out any additional research which one could consider because of the current study.

2 Literature Review

The thesis introduction explains some concepts and gives an introduction into the market of private real estate in Germany. The following literature review focuses on performance measurement. It starts with a discussion of different ways on how performance could be measured, before focussing on performance drivers for real estate funds. The last part of this chapter is dedicated to combing the above and setting the scene for a preliminary framework.

2.1 Performance measurement in General

Baum (2015) suggests that performance measurement only deals with the past. Portfolio analysis and portfolio strategy are disciplines which focus on the present and the future. The aim of the study, however, is to lay the foundation for a framework which covers past, present and future. This approach is in line with research on performance measurement in general.

The starting point for this section is provided by two articles which review the existing literature on performance measurement: Neely (2005) and Taticchi et al. (2010). Neely's article was commissioned as an update to his 1995 article, which also appeared as a reprint in the same issue of the journal (Neely et al., 2005).

Neely (2005) identifies four main authors in the field of performance measurement: Bob Kaplan, Andy Neely, Rajiv Banker and Abraham Charnes. The authors are identified by citation/co-citation analysis: Those authors who are cited more than 100 times are named as main authors. The most-cited author is Bob Kaplan (cited about 400 times in 2005); the other three authors are cited between 111 and 153 times. It is interesting to note that each author has a different background: Kaplan's background is in accounting, Neely's is in operations management, Banker's is in accounting/operations research, and Charnes' is in mathematics/operations research. The most frequently quoted article (119 times) is the 1992 article on the balanced scorecard by Kaplan and Norton. This does not come as a surprise, as the concept is widely known. According to Neely (2005), it is used by between 30% to 60% of firms (Fortune 500). Also, the 1992 article by Kaplan and Norton is the most frequently cited article (eight out of 10 years between 1995 to 2004). Although the number of publications on the topic of performance management is increasing, the dominant authors remain the same. At first this result is not surprising as earlier works can be cited more often; but considering only citations per year, the result does not change much. So, the balanced scorecard appears to be the dominant concept.

Taticchi et al. (2010) extend Neely's work with respect to both time and dimension. As the article is explicitly based on Neely's 2005 work, the methodology remains the same. Taticchi et al. (2010) identify the same lead authors as Neely. Kaplan remains the most-cited author, whereas Neely, Banker and Charnes are cited less often (approximately 50%). Also, the individual articles that are most frequently cited remain the same. The article further identifies different frameworks and models, most of which focus on large enterprises and a few on specific situations. Without explaining the necessity to differentiate between large enterprises and SMEs, Taticchi et al. (2010) suggest that the research on performance management and large enterprises has matured and that future focus will lie on research for small and medium-sized companies (SME). Nudurupti et al. (2011) claim that most research on this topic does not consider the fundamental differences between SMEs and large enterprises. Based on the literature review, Bob Kaplan and Andrew Neely appear to dominate research on performance measurement. Thus, it seems reasonable to review the performance-measurement frameworks these authors have developed. These frameworks are the balanced scorecard of Kaplan and Nolan and the performance prism of Neely. Charnes and Banker focus more on data-envelopment analysis methodology (Neely, 2005; Tattichi et al., 2010,) than on constructing performance-measurement frameworks.

2.1.1 The Balanced Scorecard

Kaplan and Norton developed the model and first published it in 1992 (Kaplan and Norton, 1992). This article is the most-frequently cited article in performance management according to Neely (2005) and Tattichi et al. (2010). However, there is little advice on how to build a performance-measurement system from scratch. The balanced scorecard (BSC) was introduced to measure and monitor performance at the business-unit level (Kaplan and Norton, 1996a). Departments and divisions should develop their own balanced scorecard based on the corporate BSC (Kaplan and Norton, 1996b).

In the past, performance measurement focused on numbers and control. The BSC constitutes a multidimensional way to measure performance (Kaplan and Norton, 1993) and combines financial and non-financial measures. It covers the four perspectives: financial, customer, internal business process and learning and growth. Key to the BSC is that all performance measures are linked to strategy, or to phrase it differently, all performance measures are designed to include strategy-linked performance measures. Banker et al. (2004) show that, in practice, it is rare if only measures that can be linked to strategy are included. Ittner and Larcker (2003) note that "businesses fail to establish such links partly out of laziness or thoughtlessness" (p. 90).

The financial perspective has traditionally been the focus of performance management in companies. When the BSC was developed, academics (according to Kaplan and Norton,

1992) indicated that one should set the financial perspective aside, as it is a consequence of the operations of the company and financial figures will improve if the operations improve. Kaplan and Norton (1992) disagree with this and include the financial perspective in the model. This perspective discusses financial considerations. One can support this, as operational improvements come at a cost and the company must make use of them. For example, cutting down production time only helps to improve the performance of the company if either sales are increased or the time saved is used for other means. If a company merely produces more in less time, it might end up increasing its storage. Financial measures are backward looking (Kaplan and Norton, 1992). The perspective does not have a leading indicator.

The customer perspective is the second focus of attention for many companies and accordingly constitutes part of their mission statement. It tries to answer the question: How do customers see us? (Kaplan and Norton 1992). Time, quality, performance/service and costs are important to customers.

The internal-business-process perspective focuses on a) what a company must do to satisfy its customers (and its shareholders) and b) what the company must do to support the business. From this perspective, only strategy-linked objectives and objectives which support those are selected.

The learning and growth perspective focuses on how a company can improve its ability to learn and to innovate. This includes training employees and the corporate culture of a company.

Figure 13 below illustrates the BSC. The vision and strategy of the company are indicated in the centre.

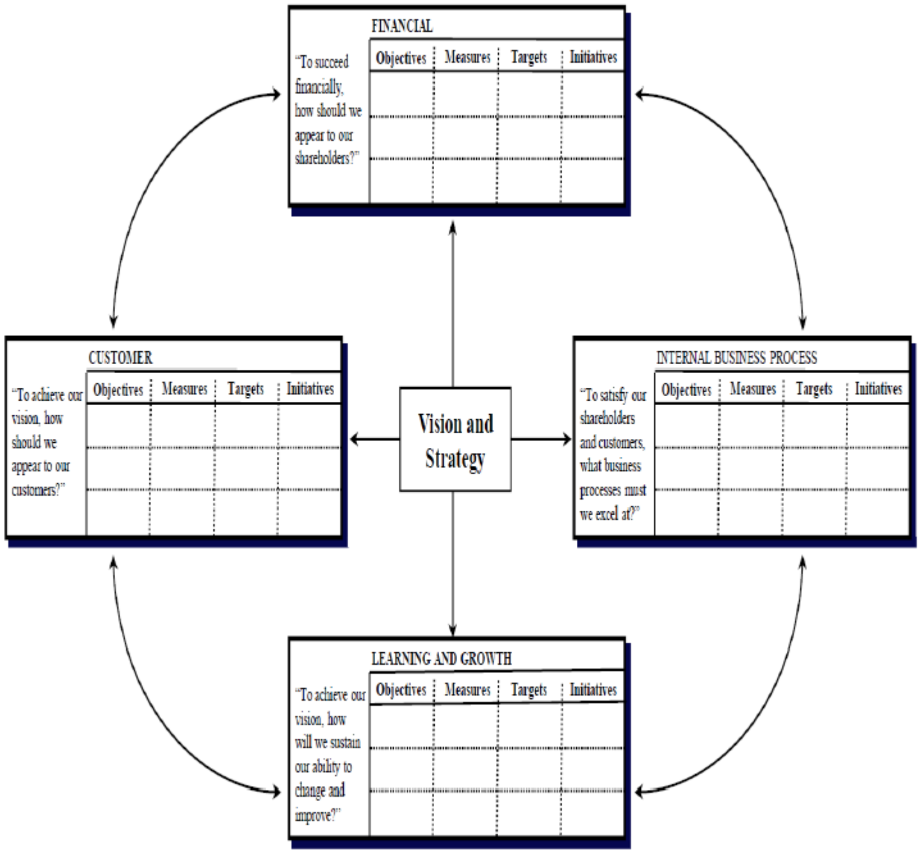


Figure 13: Conceptualization of performance from the balanced scorecard

Source: Kaplan (2010)

A set of objectives, measures, targets and initiatives must be defined for each of the four perspectives. They need to be cross-validated to determine whether they can achieve the strategic goals.

> **Objectives:** Identify what needs to be done to achieve the perspective mission. For example, how should we appear to our shareholders to succeed financially? The objectives should focus on the most important issues.

Measures: Quantitative or qualitative determinants of success for an objective.

Targets: Goals that each objective should reach over a pre-defined period. They are used to evaluate the progress towards reaching the objective.

Initiatives: Action(s) that are taken to achieve the objective. They are planned while the targets are set.

The BSC should be more than a collection of key success factors; they should be linked, and their validity should be examined through feedback loops (Kaplan and Norton 1996b). The inclusion of financial and non-financial measures makes the scorecard "balanced" according to Pangakar & Kirchwood (2007). The BSC has not only been used for business units but also for joint ventures. But before looking at this, we must examine the performance prism.

2.1.2 Performance prism

The performance prism was developed in the early 2000s by the Cranfield School of Management headed by Professor Neely. The performance prism is a second-generation measurement framework (Neely et al., 2001). It contains five perspectives (called facets), and they add on to the BSC.

The first facet is the stakeholder perspective. According to Neely, stakeholders were only shareholders or customers in the BSC and employees, suppliers, intermediaries, the local community (etc.) are not mentioned. The question raised by this first facet is: Who are the important stakeholders and what do they need? (Neely et al., 2001).

The second facet is the strategy perspective. Strategy is key in the BSC framework, it is the sum of the whole system. In the performance prism, the strategy perspective is of equal standing. The question raised by this second facet is: What are the strategies we require to ensure that the wants and needs of our stakeholders are satisfied? (Neely et al., 2001).

The third facet is the processes facet. The question raised by this third facet is: What are the processes we must put in place to allow our strategies to be delivered? (Neely et al., 2001). As in the BSC framework, the process perspective is linked to strategy. It also includes processes that are supplemental to strategy.

The fourth facet is the capabilities facet. This includes a combination of people, practices, technology and infrastructure that are needed to execute the business processes (Neely et al., 2001). This recognises that, in today's world, technology and infrastructure are increasingly important. It also recognises that this only leads to benefits if technology/infrastructure and people work hand in hand. It is interesting to note here that capabilities are linked to processes, as most people would not consider themselves to be part of processes alone. The question raised by this fourth facet is: What are the capabilities we require to operate our processes? (Neely et al., 2001).

The fifth facet is the stakeholder-contribution facet. Stakeholders want something from a company but they also contribute something. There is give and take at the same time. This holds true for almost all stakeholders. The recognition of this symbiotic relationship is special to the performance prism and differentiates it from other frameworks. The question raised by the fifth facet is: What do we want and need from our stakeholders? (Neely, 2007).

The performance prism is not a static performance-management framework; instead, it helps management frame their own questions when developing a performance framework for their own organisation (Neely et al., 2001)

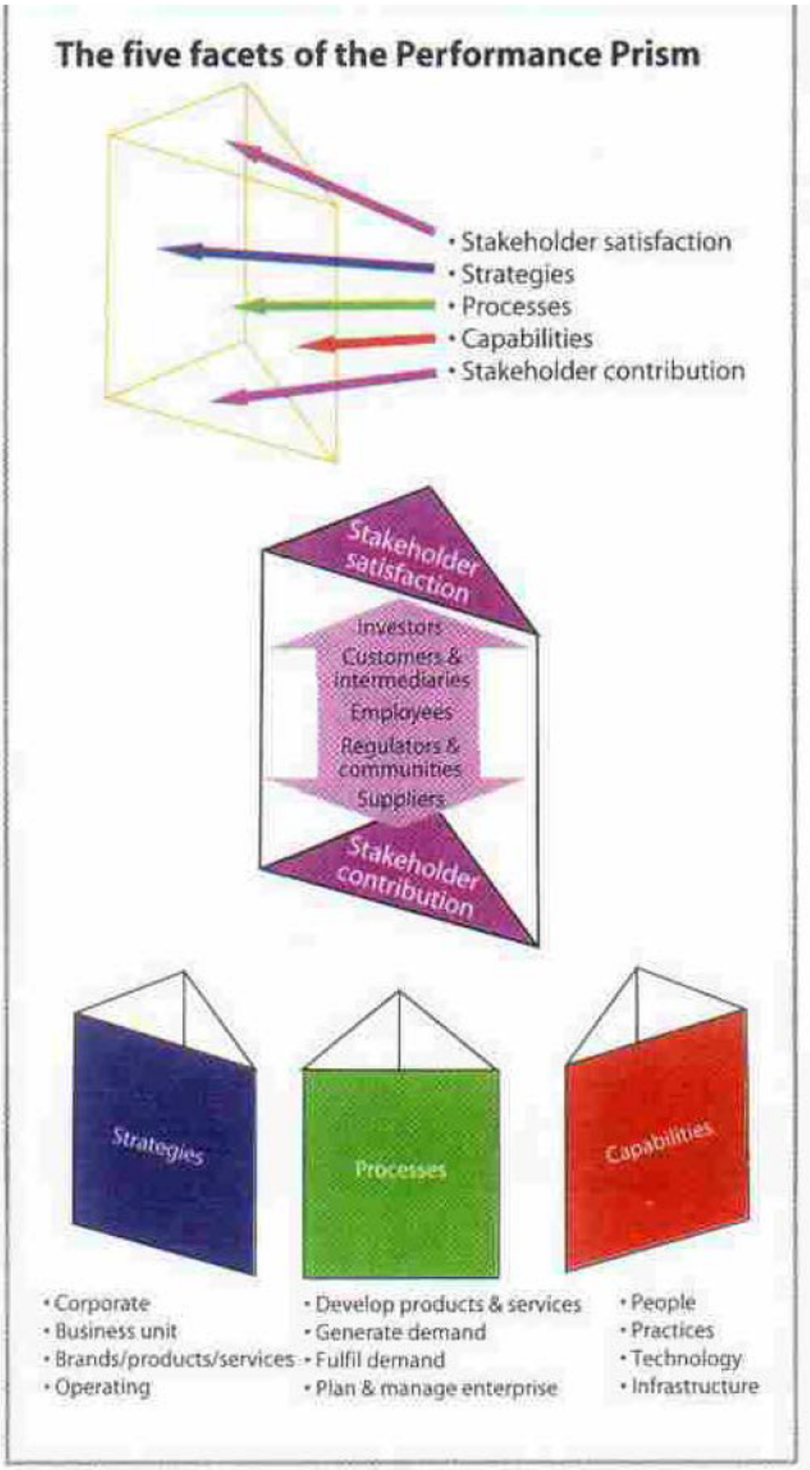


Figure 14: Illustration of the performance prism

Source: Adams and Neely (2002)

2.1.3 Comparing the two frameworks

The BSC is the oldest and most widely known performance-management system. It is used by many fortune-500 companies (Vouldis & Kokkinaki, 2011). The performance prism is a second-generation performance-measurement framework (Neely et al., 2001). It builds upon the balanced scorecard. The balanced scorecard combines different measurement topics into one framework. If your marketing department already measures customer performance and expectations, this is the standard you can start with. The performance prism offers less practical "how-to" knowledge (Vouldis & Kokkinaki, 2011). Neely et al. (2001) claim that the performance prism is not to be considered a static tool but should be used to look for the right questions. One of the key differentiators (and advantages) of the performance prism, according to Adams and Neely (2002) is that it includes more (all) stakeholders. This, however, is not entirely true. Kaplan and Norton (1996b), also considered stakeholders other than employers (part of the learning and growth perspective) and shareholders (part of the financial / internal business process perspective) when developing the BSC. This general idea is part of the BSC although they are not explicitly mentioned. However, Kaplan and Norton (1996b) also believe that not all stakeholders are entitled to a "seat" on the BSC.

The BSC should not be considered a static framework but more of a template (Kaplan and Norton, 1996b). It can include more or less than the four perspectives. Kaplan and Norton (1996b), however, question the viability of three perspectives.

Neely is one of the leading researchers in performance measurement but his performance prism does not appear to be widely used and there is hardly any research on its use. This is hardly surprising, as the key differentiator to the BSC, the inclusion of all stakeholders and five perspectives, was already considered by Kaplan and Norton when they were developing the BSC. Because neither framework is static, it seems appropriate to continue with the BSC as a basis for developing a framework for performance management in private real-estate funds.

2.1.4 Framework fit

Both performance-measurement solutions focus on performance at the business-unit level. Can investments in private real-estate funds be considered business units? There are a few fund-of-fund[5] fund managers according to whom investments in private real-estate funds are the main line of business. For many institutional investors, investments in private real-estate funds are only a proportion of their total investments. Most often, even these investments do not constitute the core business but are to support the core business (e.g., funding of pensions). Should the performance-measurement framework for investments in private real-estate vehicles be part of the company's overall performance-measurement framework? Ittner and Larcker (2003) find that just pushing down a performance-measurement framework does not lead to acceptance at the middle management level. Those pushed-down performance-measurement frameworks lead to non-acceptance and to useless measures if they do not reflect their division objectives/strategies. So even without knowing the strategy/performance-measurement framework of the company, it would make sense to develop a performance framework for investments in private real-estate funds independent of the company's overall performance-measurement framework. Further research could be conducted to examine how this framework fits into the company-wide performance framework.

[5] A fund-of-fund is a fund that invests in other (real estate) funds.

Several case studies have been done on the use and implementation of the BSC (e.g., Ahn, 2001; Papalexandris et al., 2005 for further references). The majority of the feedback indicates that the BSC is a good and helpful tool. Most comments have been on the practical aspects of the implementation. Ahn (2001) notes that Kaplan and Norton do not include a suggestion about how to come up with the four perspectives. Implementing a balanced scorecard is time consuming (Ahn, 2001; Papalexandris et al., 2005), and Ahn (2001) discourages copying the BSC from another company as this might lead to setting up a BSC that does not truly fit the company. Nørreklit (2003) notes that the BSC does not have its roots in the organisation and therefore questions its use as a management tool. Hoque (2014) identifies many studies which show how to evaluate the BSC as a decision-making and strategy-evaluating tool.

Neither BSC nor the performance prism are static frameworks. As the BSC is the more popular and older framework, much can be found on its application in different fields apart from the company that derives all the income from sales to customers. Bitici et al. (2012) state that performance-measurement frameworks such as the BSC or the performance prism are focused on a single organization. At least for the BSC, this is not entirely true. Research (see below) has been done on either developing a BSC or testing a BSC for joint ventures or partnering. Partnering is a management concept in the construction industry, which evolved in the 1980s in the USA (Hong et al. 2012). The concept of partnering, although extensively researched, is understood slightly differently by each author (Nyström, 2005). According to the Construction Industry Institute (2011), *partnering* is defined as "A long-term commitment between two or more organizations as in an alliance, or it may be applied to a shorter period such as the duration of a project. The purpose of partnering is to achieve specific business objectives by maximizing the effectiveness of each participant's resources”. There are some similarities to the relationship between fund managers and investors.

Migliorato et al. (1996) present a case study within the oil industry and show the use of the BSC in this context. The standard BSC model is used for this, and it does not address the specific issues in joint ventures as the other studies do.

Roessl et al. (2008) develop a BSC for the first stage of a joint venture: the identification of the partner and launching the vehicle. Their BSC is depicted in Figure 14. Both the labels and the perspectives differ from those of corporate BSC.

Lo et al. (2006) develop a BSC for the next stage of partnering: evaluating the partnership. Their BSC is depicted in Figure 15. Labels and perspectives also differ from the corporate BSC. The components of each perspective were derived by conducting a literature review on the strategic objectives of partnering projects and then testing the importance of those strategic objectives for partnering. For each perspective, the three most importance objectives are the following:

> *Benefits*: Reduce disputes, reduce project costs and reduce project time.
>
> *Attitudes of project stakeholders*: top-level commitment, mutual trust and open communication.
>
> *Attitudes enhance process*: Emphasis on partnering experience and culture in selection of partners, issue elevation, problem-resolution process and team-building exercises.

Strategic learning and growth: Employee's morale, improve leadership skills and employee awareness of strategy.

The perspectives are ranked as follows: 1. attitudes of project stakeholders, 2. benefits, 3. strategic learning and growth and 4. attitude-enhancement process.

Their study was conducted in the Hong Kong construction industry. Although there are cultural differences between Hong Kong and Germany, the perspectives can be used as a starting point for further analysis. The strategic goal that was named as the most important is mutual trust and commitment. Trust is the basis for all relationships; one would also expect to find a similar preference in Germany.

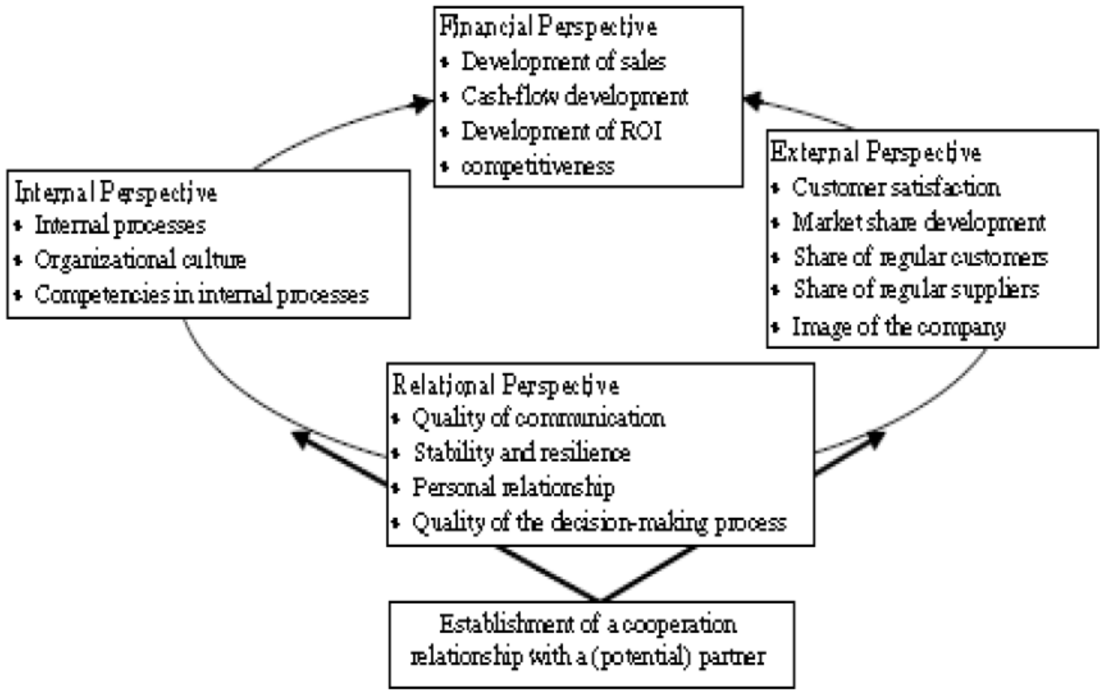


Figure 15: BSC for the first stage

Source: Roessl et al. (2008)

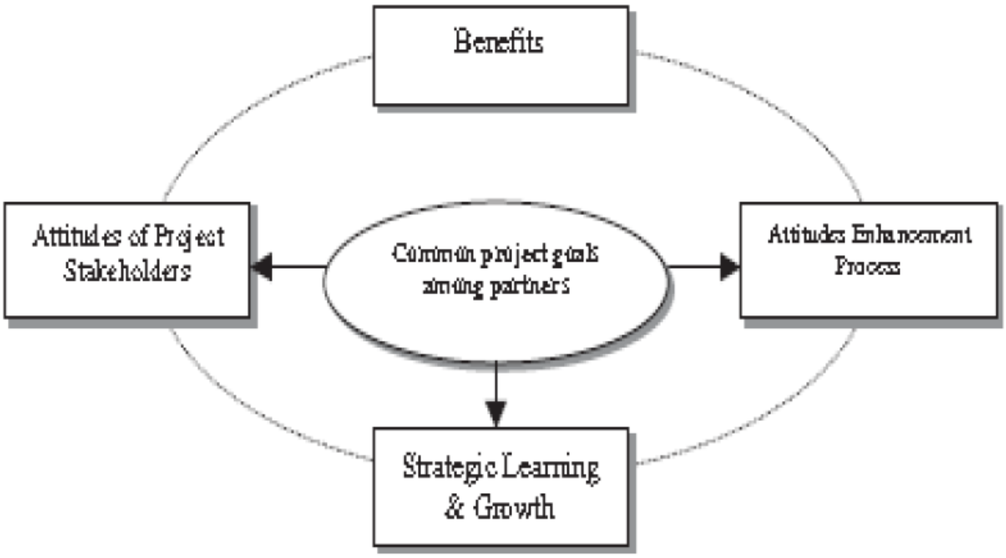


Figure 16: BSC for the second stage

Source: Lo et al. (2006)

In 2010, Kaplan and Norton, together with Bjarne Rugelsjoen, published research on using the balanced scorecard for managing strategic alliances. Their starting point was a case study of a 50/50 joint venture between Solvay (a pharmaceutical company) and Quintiles, one of Solvay's suppliers. When their joint venture started to work less well after some years of successful cooperation, they used the BSC framework to create an alliance scorecard, focusing on four perspectives: 1. employees and organization, 2. business process, 3. customer value, and 4. stakeholder outcomes.

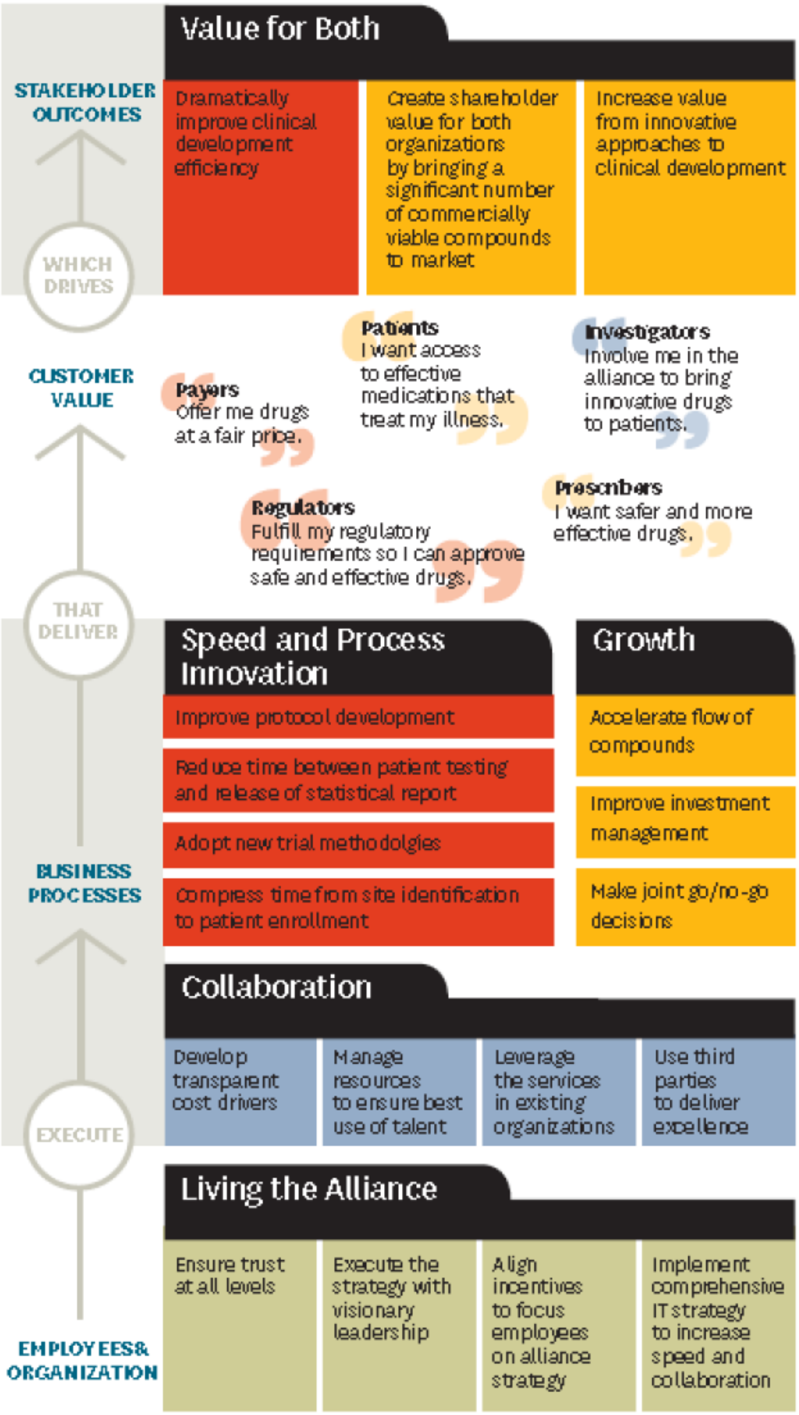


Figure 17: Alliance scorecard

Source: Kaplan et al. (2010)

2.1.5 Conclusion

The literature on performance measurement is so extensive that a full review appears to be impossible. Most of the literature has focused on corporations and only a little on joint ventures or partnerships. Performance measurement in private real-estate funds has not been addressed so far. Therefore, there is a gap in the research. Research also shows that the BSC is a flexible framework, that it has been successfully used in contexts other than the corporate world and that using it as a basic shelf has been done before and could set the basis for a performance-measurement framework in private real-estate funds. The following chapter will explore what performance is and what drives performance for non-listed real-estate funds.

2.2 Performance: finding a definition

The Oxford Advanced Learner's Dictionary (OUP, 2013) defines *performance* as:

1. the act of performing a play, concert or some other form of entertainment
2. the way a person performs in a play, concert, etc.
3. how well or badly you do something; how well or badly something works
4. the act or process of performing a task, an action etc.
5. an act that involves a lot of effort or trouble, sometimes when it not necessary

Performance covers a wide range of meanings, from the mere effect of doing something such as the stage performance of an actor to a judgment about the actor's performance or judgment about something in general. The word is used in many contexts: from day-to-day usage, through the arts, to business.

Otley (1999) states that *performance* is recognised as "an ambiguous term". When searching a well-known database such as *Business Source Complete* there are more than

750,000 hits spanning the years 1888 until the present. Neely (1999) attempts to find a common definition of *performance*. This study agrees that *performance* is a loosely used term. Otley (1999) suggests working first with a definition of *performance*: "[F]or an organisation to perform well means it is successfully reaching its objectives". This is a good working hypothesis to start with. Applying this to real-estate funds would imply the following: That a fund performs well suggests that it successfully reaches its targets. As a starting point, this preliminary definition suggests examining the reason for investments into real-estate funds before concluding about its targets at a later stage.

How does the concept of risk interlink with performance? Risk is the possibility of loss. It could also mean the possibility of not reaching its targets. Therefore, all risk characteristics need to be included to complete the picture. Fuerst and Matysiak (2013) suggest that the focus of further research should be on the risk factors.

For investments in real-estate funds, *performance* should for the moment be taken to mean achieving the promised return on the investment. These aspects are analysed further later in this thesis. At this point, it is important to note that the objectives for making investments in real-estate funds are broad; therefore, performance for real-estate funds will have to be measured by more than one aspect. The next part of this thesis focuses at the literature on performance measurement.

2.3 Performance measurement in private real-estate funds

Pfnür and Armonat (2001) interviewed institutional investors in real estate in Germany about reporting and risk and portfolio management for their real-estate investments. The focus was on direct real-estate investments. Real-estate-investment risks were seldom controlled and not all institutions reviewed the performance of their investments. In particular, capital-market-oriented methods were not used as they were not considered valid. The real-estate investments were often controlled intuitively by considering the quality of the property and its location.

No study could be found that focuses on those issues for real-estate investment funds.

Aggarwal (1993) observes that financial managers rely on qualitative judgements and subjective assessments. A recent study by Amenc et al. (2011) surveyed 293 investment-management practitioners from different European countries on measuring performance. The sample they ended up with was fairly diversified by country, background, hierarchy and size. Real estate is part of investment management and all investment-management practitioners measure absolute performance. The methods vary but the Sharpe Ratio[6] is mostly used. The picture is much more diversified with relative performance. Some do not use it with the exception of comparing the performance of an investment to the risk-free return rate. One reason for this is a lack of appropriate benchmarks.

One of the conclusions from the Amenc et al. (2011) paper is that more sophisticated methods should be used to analyse performance. The research focused on the whole investment-management business and not just real estate. They understood more complex mathematical calculations by using more sophisticated methods, which were summarized as capital-market-oriented methods above. Also, these methods seem not to be in use in the wider investment community, although there is no hint that they are considered

[6] Definition from Investopedia: "A ratio developed by Nobel laureate William F. Sharpe to measure risk-adjusted performance. The Sharpe ratio is calculated by subtracting the risk-free rate - such as that of the 10-year U.S. Treasury bond - from the rate of return for a portfolio and dividing the result by the standard deviation of the portfolio returns."

worthless, as argued by Pfnür and Armonat (2001). Investors in general investment-management practice use simpler and less-sophisticated methods, such as the multifactor model used in the study by Fuerst and Matysiak (2009). Gläser (2016) suggests that investors only focus on return aspects.

All the above research concentrates on financial indicators and attribution analysis and on the characteristics of real estate. Companies do not consider it sufficient merely to consider financial indicators, according to performance-measurement researchers (e.g., Kaplan& Norton, 1992; Neely, 1995). Investors choose to invest in real-estate funds to gain access to specialist knowledge, to outsource some functions and to expand into new markets and investments outside of their regulatory frameworks. It therefore appears appropriate to include other factors in a performance-management framework.

Goya and Wahal (2008) researched the investment/divestment decisions of plan sponsors. They note that "the raison d'être of a plan sponsor is then twofold: (1) to conduct asset allocation and (2) to hire managers to deliver benchmarked returns, monitor, and if necessary, fire investment managers" (p. 1807). As explained above in the discussion of fund structure, firing due to the nature of investments is not so easy; thus, the emphasis in this thesis is on monitoring.

Monitoring in this sense can be understood as follows: "…more than measuring or observing the behaviour of the agent. It includes efforts on the part of the principal to 'control' the behaviour of the agent through budget restrictions, compensation policies, operational rules, etc." (Jensen & Meckling, 1976 as cited in Sharma, 1997, p. 762).

Monitoring entails a much broader definition than pure performance measurement as an institutional investor must look beyond pure facts and numbers, but it is a starting point.

Monitoring can also include an investor exercising influence on a manager (Hartzell and Starks, 2000). Ennis and Burik (1991) note that institutional investors are more actively involved in real-estate investments than other asset classes. It appears reasonable to assume that monitoring takes time and does not just include financial aspects. Performance measurement in this context should enable investors to monitor the fund they have invested it. Therefore, the performance measurement framework should provide the fundamental basis for monitoring. The next section of this thesis focuses on what drives performance.

2.3.1 Performance Drivers

Andonov et al. (2012) suggest that investments in real-estate funds make sense if they add value. Several studies have focused on discovering what drives the performance of private real-estate funds, as is evaluated further below. The process of discovering this is called performance attribution. Here, the investment return is divided into components to understand what drove the return (Geltner, 2003). This requires some prior understanding of what drives performance but is nevertheless focused on the return itself. It is important for an investor to consider other aspects as well as what the fund manager can influence.

2.3.1.1 Performance persistence

One of the earliest publications on performance persistence in private real-estate funds is the 2005 article by Hahn et al. They report a short-term correlation between past performance and future performance, although this did not hold up in the long run. The situation reversed and the winners became losers and vice versa. Successful people might leave to set up their own firms. Less-successful funds that are still in the business after years might have learned their lessons by replacing people and/or adapting the strategy. Gläser (2016) confirms a short-term correlation for German special funds.

Tomperi (2009) also concludes that past performance is an indicator of future performance, but this holds up only when the focus in on the quality of investments rather than on increasing the size of the fund.

Bond and Mitchell (2009) report evidence for performance persistence even in the long run, but only in a limited number of funds and in correlation to the general market. They also suggest that performance persistence might be attributable to the artificial smoothing of property valuations.

Aarts and Baum (2013) report evidence for performance persistence. The evidence is strong for follow-on funds, but less so for the longer run. This is consistent with research done on performance persistence for mutual funds. Timing is an indication that one should look at the people responsible for the past performance and should make sure that they stay. Alcook et al. (2013) suggest that management does not deliver excess returns which cannot be explained by the underlying market. This is true for the general investment market. There is no evidence that fund managers can out-perform the market on average. Obviously, there are well-known exceptions (e.g. Warren Buffett). But as the next paragraph illustrates, why should real estate fund managers be any different?

2.3.1.2 Alpha

Alpha is the major performance measurement in both practice and the scientific literature (Wilkens and Scholz, 1999). *Alpha* refers to performance over (or below) the market (index).

Baum and Farrelly (2009) suggest that empirical studies have not found strong evidence for alpha in property-fund investments. Baum et al. (2011) found some alpha generated through fund investments, but only by concentrating on specific items. They also conclude that funds under-perform in general. Alcook et al. (2013) suggest that funds under-perform systematically, as measured by Jensen's alpha. In the absence of Alpha, one can question the benefit of investing in active real-estate strategies; according to Brounen et al. (2007b), it could destroy values because of the high transaction costs. Their focus is on market timing, which is just one strategy used for creating added value for investors. Another strategy is to enhance the value of real estate itself by leasing a property or repositioning it.

2.3.1.3 Property Level

Geltner (2003) proposes the analysis of investment manager performance with respect to the following criteria:

1. property selection
2. execution of acquisition transaction
3. operational management
4. execution of disposition transaction

These criteria relate to the performance of direct real estate and could be used as proxies for real estate.

Brounen et al. (2007b) suggest similar categories.

Operational Management

- contractual lease (vis à vis) market lease rates
- term of lease agreement
- (risk) of tenant default
- re-letting rate

- occupancy rate (vs. market)
- void (vs. market)
- maintenance costs,
- remarketing costs
- reconfiguration costs
- renovation costs

Many factors are named, but it is unclear which are dominant.

2.3.1.4 Structure

Structure in the context of real estate funds means segments of the market. Out-performance at this level can be achieved by allocating more to out-performing sectors and markets (Baum et al., 2011). Building age is also important (Farrelly, 2012).

Allocation to specific countries and/or sectors is identified as an important factor for a real-estate fund. Fisher and Hartzell (2016) have analysed this issue. Funds that focused on office and those funds that had high development exposure underperformed. Farrely and Stevenson (2016) propose that regional concentration has a negative effect upon the performance, so a fund with a broader geographic spread should perform better.

Fuerst and Matysiak (2013) suggest that we consider contagion effects between countries, as examined by Marçal et al. (2011). Mansley et al. (2018) suggest that single country funds outperform multi contry funds.

2.3.1.5 Stock

Stock in the context of real estate funds refers to the choice of the individual assets. Out-performance can be achieved here either by making smart investment or divestment decisions or by being a good asset manager (Baum et al., 2011). Farrely (2012) defines it as the quality of the asset and income stream. Location is important in real estate. Pai and Geltner (2007) report performance differences between Tier I and Tier III locations and between the lengths of the rental contracts (short vs. long).

Some illustrations of strategies:

Investment/divestment strategy: London, England. Office property which was bought in the aftermath of the GFC - 2009 at an attractive price. Sold in autumn of 2015 – before the Brexit vote.

Good Asset Management: B-Class building next to new office development which lacks amenities – redevelopment building for retail/doctor's use – higher rental payments and full occupancy after completion.

Length of rental contract: Regional German city – office building value without rental contract is equal to value of land (e.g. € 5 million) – with 10-year lease to a DAX company of € 50 million.

2.3.1.6 Leverage

Baum and Farrelly (2009) and Farrelly (2012) state that it is generally accepted that leverage increases risk. Leverage itself only increases beta. However, skills in financial engineering may add alpha. Baum et al. (2011, 2012) suggest that leverage may not be a suitable long-term strategy. Alcook et al. (2013) also suggest this. Fuerst et al. (2013) report evidence of negative impact, but they attribute this to the over-representativeness of certain funds. They even suggest that in a weak market environment the use of leverage is negative. They do not find evidence for skills in financial engineering. Farrell (2012) suggests that leverage beyond 40% does not offer attractive risk-return adjusted returns. Morri and Perrini (2017) suggest something similar – the effect of leverage depends upon the investment style of the fund.

The amount of leverage is important, as is the term (i.e. whether it is a fixed or floating rate and how it is secured—cross-collateralization vs. using just the asset for collaterization) (Farrelly 2012). Gläser (2016), on the other hand, reports a positive relationship of leverage with property performance. Delfim and Hoesli (2016) also advise that leverage should be kept at a moderate level and that interest rates have a negative impact on excess return.

2.3.1.7 Fees/Fund Management Costs

Managing real estate requires many resources: property managers, asset managers, fund managers, lawyers, tax advisors, accountants, auditors, architects, handymen etc. These people cost money and reduce the return of the investment. Fees have a negative effect on return (Baum & Farrelly, 2009; Morri & Perini, 2017) and can have a large impact on performance (Clayton et al., 2013).

Fees are generally paid as a percentage of assets under management – which itself can be the basis of a conflict of interest, as the performance of a portfolio is only indirectly considered (Ziering & Worzala, 1996). Performance fees are due in addition to lower asset-management fees.

Performance fees may reward the manager for risk-taking instead of for skills (Baum et al., 2011). Both investors and regulators appear to have an eye on fees (Brounen, 2014).

Already in 2005, Hahn et al. stressed the importance of investors to monitor fees and other expenses.

In a paper that is rather positive about investing into non-listed real-estate funds, Inrev (2014) points out that fee structures have changed because of the crisis and that more alignment should exist. It is not only the level of fees that should be in the focus but also how they are structured. They might induce a behaviour that was not intended (see the comment on performance fees above). Gläser (2016) suggests that the effect of performance-related fees is mixed: it can be positive, negative or neutral.

McAllister et al. (2008) notice that UK agents receive an introduction fee of up to 1% of the price paid or an asset, but only if the asset is bought by the client. This suggests that there can be a strong incentive for the agent to be more optimistic about the asset so that the client might pay more. A similar fee structure is included in many real-estate funds, such that the fund manager receives an acquisition fee of approximately 1% of the price paid, but only if the property is bought (Inrev, 2014b).

2.3.1.8 Fund Size

Hahn et al. (2009) and Fisher and Hartzell (2016) suggest that fund size and geographic focus have no impact. Tomperi (2009), Fuerst et al. (2013) and Andonov et al. (2012) also see a positive link between fund size and returns. Maturity is one explanation given by Fuerst and Matysiak (2013) for this phenomenon. A possible J-curve[7] effect is cited

[7] The J-curve effect describes the phenomena of low or negative returns at the beginning of an investment in real estate or more commonly known in private equity fund due to high capital expenditure in assets and structuring costs (Fuerst et al. 2013).

for the smaller funds. Fuerst et al. (2013) also mention the J-curve effect. In addition, they raise the interesting question of whether large funds are better or if they attract more capital because of good performance. This is only an issue of importance to open-ended funds. For closed-ended funds, the expected equity would be a better characteristic. However, further research is needed to see whether a positive relationship exists.

2.3.1.9 Liquidity

With open-ended funds, the investor can redeem with notice one to several times a year. Depending on the size of the redemption, the fund manager may have to sell an asset. This may or may not occur in a timely manner depending on the cycle of the market and the notice period, among other things. For closed-ended funds, if an investor wants to exit early, the only way is to sell its participation to another co-investor or a third party. Secondary markets are rather thin (Fuerst and Matysiak, 2013); therefore, the time and cost required to sell the assets can be considerable. Pricing of secondary funds is difficult. (See also Kutsch, 2010).

Stein (2013) suggests that the possibility to trade in and out of an open-ended fund might have a substantial effect on performance. For an open-ended fund, it appears to be key to manage liquidity effectively. To satisfy redemption requests, open-ended funds might hold a larger amount of cash than they require to operate the fund itself.

2.3.1.10 Accounting policy

Reporting standards of non-listed real-estate funds differ (Brounen et al., 2007a). Some regulated entities in Germany, for example, must follow German accounting rules for regulatory reasons (KAGB). In Luxembourg, one has the choice of accounting standards: Lux Gaap or IFRS. In the UK, this will diminish in the future, as smaller entities will be required to follow IFRS standards. In Germany, IFRS might not be the reporting standard of choice for regulated vehicles, because they might have to do two sets of accounting for regulatory reasons. Funds depend upon their domicile; therefore, reporting stands might show different results for accounting reasons. This will lead to different perceptions about returns.

Some of the issues with different accounting standards are differences in market-to-market valuation of hedging instruments (Farrelly, 2012), as this may not be required in all accounting standards, or if the investment is held until maturity of the hedging instrument or longer with no effect on cash flow.

Another difference could be the treatment of costs that are associated with the acquisition of properties. Whereas the costs are amortized in some standards, in others they are charged to the profit-and-loss statement, and in still others they are amortized over five years. Sometimes there is the possibility of alternating between different options.

2.3.1.11 Valuation

The real market value of a property is known only when a willing buyer and seller conclude a sales and purchase agreement and a property is sold. Since this cannot be done as often as an estimate of fair value is needed, an appraisal for fair value is used as an estimate.

Many methods are used to appraise a property, and there are many reasons why an appraisal may be needed. Pagourtzi et al. (2003) gives a good overview of valuation techniques, but the precise techniques are less relevant here. Webb (1994) suggests that appraisals rarely forecast the actual sales price exactly, but it may not differ greatly. Matysiak and Wang (1995) suggest that there is a 70% chance that your sale is within + or – 20% of the appraisal, thereby suggesting a larger difference. Matysiak and Wang (1995) and Webb (1994) suggest that appraisals lag real market values: In a down market they overestimate, and in an upward market they underestimate the value of the property. Diaz III and Wolverton (1998) suggest that appraisal value tends to be based on previous appraisals made for the property. They also suggest that this appears to be less influenced by pressures from the owners than by the process itself. Investors still seem to have a different opinion. Stein (2013) suggests that substantial revaluations of properties hurt investor trust.

2.3.1.12 Access to expert management

Access to expert management was named by Kutsch (2010) as a key reason to invest in private real-estate funds. No research was identified which explicitly explores this issue. The research related to Alpha could be a proxy. Another proxy could be specialisation (Fuerst et al., 2013). Gläser (2016) suggests that active management and continuation of personnel are also important aspects as are local presence and partners.

Devaney and Scofield (2017) suggest that foreigners pay more for properties (but they also appear to receive more when they sell). Therefore, it appears that having a presence close to the property (or not) will have an influence on prices. Sanderson (2014) suggest that good service as a landlord to your tenant can improve the performance of the property. Those two studies therefore confirm local presence and active management as performance drivers.

2.3.1.13 Investors

Gläser (2016) also suggests that the relationships and interests of investors are important to the performance of funds. The strategy performs better when investors and managers have the same idea about a fund.

2.3.1.14 Other Aspects

First-time funds perform better than later funds (Tomperi, 2009). Although past performance is important, too long a track record might decrease the chances of being successful again. While it is of interest to note that it might be better to take a newcomer than a veteran, this aspect is much more important when one makes an investment decision than when monitoring an investment. Farrely and Stevenson (2016) challenge this point. Their explanation is that there are rarely any real new first-time funds, but most of the time teams that have left other managers.

Donner (2010) suggests that, in the real-estate industry, 'gut feeling' is used as a decision-making aid. This is not surprising as gut feeling is quite often based on experience but Donner was surprised about the openness with which this was expressed.

Hoesli and MacGregor (2000) advocate the importance of using relative performance measurement in property portfolio management. They suggest using benchmarks which contain funds of comparable sizes and strategies. However, Brounen et al. (2007b) suggest that it might be difficult to measure performance in private real estate, as it lacks a passive strategy benchmark. Ten years later, benchmarks have started to evolve to show some longer ranking histories, but Gläser (2016) nevertheless suggests that investors (and fund managers) rarely use them.

Funds started during bad economic times perform better than investments made during good economic times (Tomperi, 2009). This conforms to the generally accepted hypothesis that timing is important. Farrelly & Stevenson (2016) confirm a negative relationship between performance and capital market conditions.

As many private equity funds are now AIFs, the requirements have increased with respect to organisation, reporting and oversight (Inrev, 2014a). Therefore, an investor might partly rely on this by choosing a regulated investment vehicle.

2.3.1.15 Trust

Trust is an issue related to the principal agent issues (see chapter 1). "Trust is a concept that is widely used in the academic and popular discourse on politics, economics and society, but is plagued by conceptual vagueness" (Vigoda-Gadot & Mizrah, 2014, p.3). PytlikZillig and Kimbrough (2016) confirm that there is no generally accepted view of the concept and definition of trust but Vaske (2016) notes that there have been some improvements in the area. According to Rousseau et al. (1998), trust has different meanings depending on the research angle and discipline. Research on trust has focused on individual trust between people (Vigoda-Gabot & Mizrahi, 2014). According to PytlikZillig and Kimbrough (2016), some researchers consider trust in institutions as confidence rather than trust.

A definition of trust is needed as there is currently no commonly accepted definition.

In the present context, the concept of trust applies both to the individuals one deals with and to the institution or company. The concept is quite ambiguous: integrity is part of the equation, as is the idea of a long-term partnership in which both fund manager and investor enjoy benefits. For institutions, Vigoda-Gabot and Mizrahi (2014) suggest two alternatives to trust: reliability and trustworthiness. Trustworthiness relates to the preconditions of trust: “fairness, transparency and efficiency” (Ibidem, p. 4). There is less research on distrust (Vaske, 2016).

Both trustee and trustor are important in this context. The trustor should be a person who is able to trust other people and the trustee must also have the right traits (Hurly, 2006). A German investor will probably find that it is easier to trust a person of his age and nationality. The trustor’s actions might also be important: Is the trustee capable? Is his behaviour predictable and is there a good communication? (Hurley, 2006).

Investors invest in non-listed real-estate funds to gain access to expert management. Expert management is a way to prove capability. Capability also includes ability: sufficient staffing and proximity to the properties. Transparency is a form of communication and a sign of integrity. The focus point is on honest communication.

Trust is a reasonable response to alignment of interests (Hurley, 2006). The interests of fund managers and investors might not be completely aligned.

2.3.2 What drives performance in private real-estate funds?

The previous section focuses on studies of the reasons for the (good or bad) performance of real-estate funds. The performance of indirect real-estate funds is influenced by many factors. While real estate is surely a main driver, fees and leverage also appear to have a large influence and are still not the only factors that influence performance.

It is interesting to note that what an ideal fund manager should look like has never been the focus of previous research on funds.

Performance persistence (e.g., in marketing terms, the track record of senior management) has been discussed with mixed results. Both the legal structure of the fund and the corporate structure of the fund are important: Who are the shareholders and how strong is their commitment to the business? Is the fund manager able to raise new funds and have the ability to offer a future to clients, shareholders and employees? How important is the business/fund to the manager? Investors have stated that one reason to invest in real estate is to have access to expert management and this should be reflected by the fund manager. Can the manager identify, source and administer investments that are in line with the intended strategy, or are the investments lucky outcomes? Are investments made in a disciplined way and is the staffing right?

2.3.3 Combining the above

The previous subchapter examines different performance measurements frameworks and their strategic fit.

The previous sections of this chapter focus on performance drivers in real-estate funds and on performance measurement in private-equity real-estate funds.

Research (Inrev, 2016; Kaiser, 2004; Kutsch, 2010; Zemp, 2007) shows that people invest in real estate and real-estate funds for many reasons. It therefore seems appropriate to construct a framework focusing on many facets for performance measurement.

One suggestion is to use the basic framework from the balance scorecard and adapt the different dimensions so that they reflect the performance drivers identified so far.

The balance scorecard is a management tool that links strategy and short-term goals (Ahn 2001).

The balanced scorecard is “a set of measures that give top managers a fast but comprehensive view of the business” (Kaplan and Norton, 1992, p. 71). This is essentially what the performance framework for non-listed real estate aims to achieve. It should be a dashboard which gives the investors a fast but comprehensive view of the status of the real-estate fund in which they have invested.

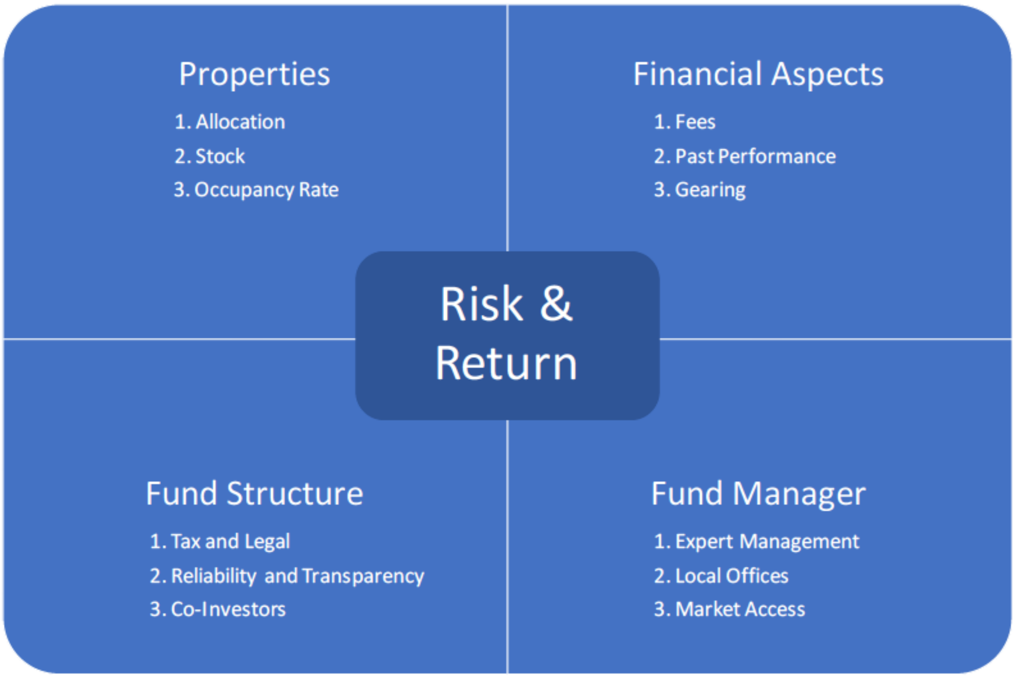
The original balance scorecard “includes financial measures that tell the results of actions already taken [and] ...operational measures that are the drivers of future financial performance” (Kaplan and Norton 1992, p.71). These measures are drivers for success (Roessl et al., 2008).

The current framework should also consist of financial and non-financial drivers.

Similar to Roessl et al. (2008), no comprehensive theory is available which explains the success of investments in private real-estate funds. According to Hoque (2014), little is known about the relationships and causality among the perspectives of the original balanced scorecard. Kaplan and Norton do not say much about how they came up with the perspectives. Hogue (2014) suggests that the different perspectives are logical conclusions which are not necessarily in a cause-and-effect relationship. According to Nørreklit (2000) logical and causal relations are used interchangingly in the framework. Roessl et al. (2008) suggest that each it “can only be interpreted on the basis of considerations of plausibility”(p.257).

Figure 18

Preliminary Framework



Braam and Nijssen (2004) suggest that the BSC tool applies to a wide range of uses and interpretations, resulting from the fact that Kaplan and Norton have gradually expanded the definition of the BSC. Whereas at the beginning it was focused on being a comprehensive system to measure the performance, strategy became more important in later revisions. According to Nørreklit (2000), the "balanced scorecard relies on the concept of strategy" (p.65). It lies at the heart of the model and for some it was makes the score card balanced. Here the concept of risk and return was chosen as the heart of the scorecard. The concept was chosen as it the basic concept of finance and investing. One could argue that return is past performance and therefore it is included twice but return here is a broader concept. It is the lifetime return: including past and the future and therefore unique. Strategy could have been chosen as well as had been and will be argued at different points in this thesis people chose to invest in non-listed real estate funds for different reasons. The primary aim of an investor is to add wealth. One could also say strategy compromises the objective of how to increase wealth. However, this is also included in risk and return. Risk and return are the concepts that guide investments for institutional investors (see also 1.1.1 above) and therefore got preference. Risk and return represent one of the options, and the exact "heart of the BSC" should be aligned to the objective of each organisation. In addition, Tenhunen et al. (n.d.) suggest that a strategy might be lacking in a smaller or medium sized organisation/company. The key idea however would be to "identify real estate strategies… that contribut[e] to the wealth of the firm and shareholder's value." (Lindholm & Gibler, 2006, p. 3). Senior Managers also should focus on increasing value at acceptable level of risks (Calandro and Lane, 2006). In addition, the BSC is not intended to serve as a risk BSC even though sometimes a reference to risk will be made. Calandro and Lane (2006) suggest that risk should be measured separately from performance.

Four dimensions were chosen for the theoretical framework as the original balanced scorecard includes four dimensions. Each dimension is divided into three sub-dimensions to account for different aspects. Kaplan and Norton recommend focusing on just a few factors: "Companies rarely suffer from having too few measures…. The balanced scorecard forces managers to focus on the handful of measures that are most critical" (Kaplan and Norton, 1992, p. 72/73). Chan and Chan (2004) agree that only a limited number of key performance indicators can be maintained for routine use. In addition, "data collection must be made as simple as possible" (p.2009).

The literature review above lays the groundwork for the categories, which are explained in more detail in the following.

As in the original BSC, one perspective is called *financial aspects*. The original BSC by Kaplan and Norton (1992) answers the following question: How do we look to our shareholders? It answers the following question in the context of private real-estate funds: How does the fund look financially to the investor? The following three sub-perspectives are chosen for the preliminary framework.

Fees: Are the fees appropriate? Fees are an important performance driver (Baum & Farrelly, 2009; Clayton et al., 2013; Ziering & Worzala, 1996) and investors are encouraged to monitor them (Hahn et al., 2005).

Past Performance: Is the performance okay? Past performance as an indicator for future performance (Aarts & Baum, 2013; Alcook et al. 2013; Bond & Mitchel, 2009; Gläser, 2016; Hahn et al., 2005; Tromperi, 2009).

Gearing: Is the level of gearing appropriate? Farrell (2012) suggests that the level of gearing should be lower than 40%. Others (Baum et al., 2011, 2012; Baum & Farrelly, 2009; Fuerst et al., 2012) hint that the leverage increases the risk of a fund.

The second perspective in the original BSC is the internal business perspective, which includes goals such as technology capability, manufacturing excellence and design productivity. It should answer the following question: What must we excel at? For real-estate funds, it is suggested that the perspective should label *properties* as their selection and management is the basis for the fund. Again, three sub-perspectives are suggested for the preliminary framework:

Allocation: Has the fund invested in the appropriate sectors or regions? Allocation choices in regions and/or sectors have an impact on performance (Baum et al., 2011; Farrelly, 2012).

Stock: Has the fund invested in the right assets? *Stock* refers to the choice of individual assets (Baum et al., 2011; Farrelly, 2012).

Occupancy Rate: It the property well let? Farrelly (2012) defines it as the quality of asset and income stream.

Roessl et al. (2008) constructed a BSC for cooperation evaluation in which they replaced the innovation and learning perspective with the relational perspective. This perspective "comprises the assumed quality of the relationship between the SME and its partner" (Roessl et al. (2008), p. 270. In the preliminary framework for real-estate funds, the perspective is labelled *fund structure* as it has a similar focus.

Tax and Legal: Is the tax and legal structure appropriate for the investor? Kutsch (2010) suggests that, in the past, potential tax benefits were a reason to invest. For some German investors, the legal regime is important; for others (or the same) the tax regime is less important (see Subchapter 1.1.2).

Reliability and Transparency: Can I trust my partner? Trust forms the basis of any relationship, and transparency is a measurable form of trust. Since the partner is an organisation, reliability is chosen. Is there an alignment of interest?

Co-Investors: Do my fellow investors have similar interests? Gläser (2016) suggests that the relationship and interests of investors are important to the performance of a fund.

The last perspective is the customer perspective. It answers the following question: How do costumers see us? In the present framework, this perspective is re-labelled *fund manager*, and the attached question is this: How is the fund manager seen? Alternatively, from the perspective of the fund manager, how does the client see us? Here, three sub-perspectives were chosen.

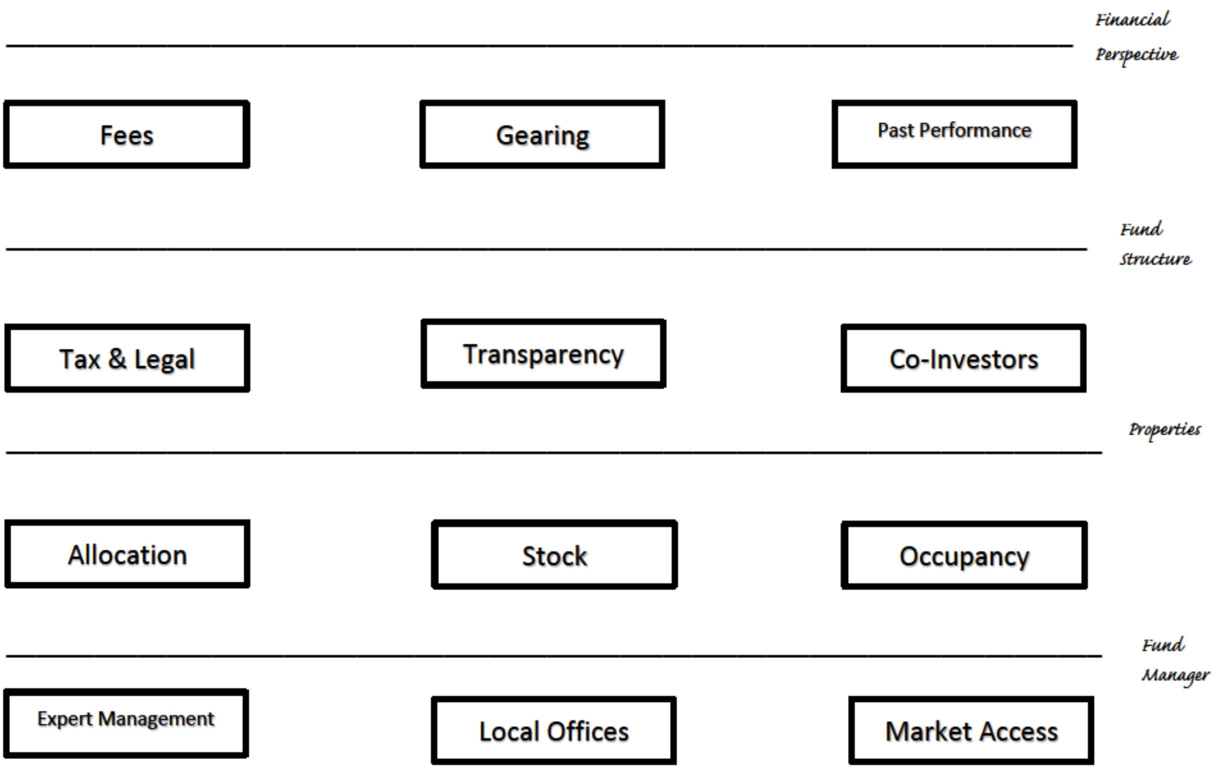
Expert Management: Is the personnel qualified? Investors invest in real-estate funds to gain access to expert management.

Local Offices: Real estate is immobile. Proximity to the tenant as well as the property itself appears to be important.

Market Access: How well are the properties managed? The importance of operational management is suggested by Geltner (2003) and Brounen (2007b).

Risk can especially be seen from non-financial measures (Palermo, 2011).

Kaplan and Norton (2000) suggest that one should use a strategy map to see whether the balanced scorecard is fulfilling its purpose. In the present context it would mean that the fund investment will achieve the expected outcome.



The fund manager is put at the bottom of this map, because his work has an immediate influence on the choice of properties and where to invest as well as how well these properties are occupied. One could have expected that properties would be at the bottom, as they constitute the basis of the fund, but they were put in second as the fund manager has an influence. The fund structure was put above this, but it could also entangle both categories. Tax & legal rules have an impact on the result and co-investors might have an impact on decisions on property level. Transparency is needed so that the investor (but also the fund manager himself) can understand the status of the fund and any decision that was made. Any outcome from the properties is directly affected by the level of gearing and past performance serves as an indication of future performance. Co- Investors may influence any decision that was made. There is a cause and effect relation-ship between some of the aspects, but not between all of them.

2.4 Conclusion

Performance measurement is a field that has been extensively researched but it is still dominated by only a few researchers. Most research on performance management has focused on the application within an organisation and few researchers have looked at performance measurement in joint ventures and similar structures.

In contrast to performance management in general, performance of non-listed real-estate funds is a field that has not been extensively researched.

Based on the literature review, the following gaps were identified:

- The needs of investors (Baum et al., 2011) with respect to performance in private real-estate funds have not been the focus of research. Research into private real-estate funds and performance has focused on attribution analysis. Gaps in understanding return dynamics in real-estate portfolios exist (Clayton et al., 2013).
- A definition needs to be developed for performance of private real-estate funds.
- The desirable characteristics of a performance-measurement framework for private real-estate funds must be further identified. Some characteristics have already been addressed, but they might be revisited following a definition of performance measurement.

The gaps in the literature support the aim of the research and the research questions, as outlined in Chapter 1.

An important assumption is that the requirements for developing performance measures are significantly different for investments in private real-estate funds than they are for organizations. If not, the perspectives of the BSC framework or performance prism framework could be applied to this. However, as research into performance measurement for joint ventures shows, the perspectives should be adapted and there is a gap here.

Another assumption is that looking at financial indicators is not sufficient. This is evidenced as investors consider other factors apart from past performance when deciding to invest in a new fund.

3 Methodology

3.1 Introduction

This chapter explains how the research will be conducted, starting with the research philosophy.

A research methodology provides the general orientation for how the research should be carried out. 6[8] and Bellamy (2012) define *methodology* as a way to move from empirical findings to theory or the adequacy of theory. Interestingly, this definition clarifies that methodology is an interactive process. The researcher first structures the research but then must check to see if it enables him or her to answer the research question. It is iterative, because it might change several times the further the work progresses. For this paper, *methodology* and *research strategy* have the same meaning. Method concerns how data is collected (the "tools") (Denscombe 2010, p. 10).

3.2 Research Philosophy and Approach

The research philosophy (ontology and epistemology) forms the basis of the study and may also be called a research paradigm (Flowers, 2009). Research philosophy is concerned with how we develop knowledge and what constitutes this knowledge (Saunders et al., 2012). The main research philosophies are positivism, realism, interpretivism and pragmatism. However, the problem with these definitions as each position is not always called the same by each author (Flowers, 2009) and some are

[8] Professor Perri 6 is a noted British social scientist. He changed his name from David Ashworth to Perri 6 in 1983. Whilst not an academic at the time, many years later he said he was amused by the notion of "6, P" appearing in academic papers. Source: Wikipedia (2018) He is currently a professor a Queen Mary University of London.

contradictory (Mkansi & Acheampong, 2012). Another issue is the variations in positions: e.g., positivism and post-positivism.

Ontology is how we view reality (Easterby-Smith et al., 2012; Sobh & Perry, 2005). The author follows *realism* as defined by Easterby-Smith et al. (2012), in which it is accepted that there are many "truths" and that they depend on the viewpoint of the observer. The epistemology (how to inquire) associated with realism is constructivism: Reality is determined by people and their social interactions rather than by external factors. Research should focus on how people think and communicate (Easterby-Smith et al., 2012). It is important for the researcher to understand the human person.

Positivism is derived from the natural sciences (Flowers, 2009) and the focus is on neutrality (objectivity) and facts. Research should be conducted through objective methods (Easterby-Smith et al., 2012) where the researcher acts as a natural scientist and places the emphasis on quantitative data (Saunders et al., 2012). However, it should not be seen as synonymous with science (Bryman & Bell, 2011).

Interpretivism is concerned with subjective meanings and the reasons behind them. Reality is determined by people and their social interactions rather than by external factors. Research should focus on how people think and communicate (Easterby-Smith et al., 2012) and is associated with qualitative research (Flowers, 2009). It is important for the researcher to understand the human being and understand the world from the point of view of the research subjects (Saunders et al., 2012).

Pragmatism focuses on the practical. It could involve a positivist position but at the same time (on a different issue) an interpretivist position (Saunders et al., 2009). The research question is what influences the position (Saunders et al., 2012). Pragmatism is more concerned with the outcome of the research than with the precedent conditions (Creswell, 2013).

The author's research philosophy lies somewhere between positivism and interpretivism and might be called *pragmatism*. The problem was identified before the research started; this could be referred to as a post-positivism position (Creswell, 2013; Phillips & Burbules, 2000). The first set of research questions was developed based upon the author's own experience and knowledge. The approach could therefore also be labelled deductive in contrast to the position of inductivism, which says that the data should be gathered before (Creswell, 2013) the questions/problems are formulated.

The author rejects the positivist's view that the researcher should remain completely neutral and objective when doing the research. Instead, the author supports the idea of the development of a hermeneutic cycle as a way of doing research. Here, the study starts with certain knowledge, assumptions (*Pre-understanding,* according to Gummesson 2000) and beliefs that lead to a pre-understanding of the problem and the direction of research. When conducting the research, the researcher gains knowledge and insight throughout the process. At each stage of the process, the researcher has acquired a new form of pre-understanding.

According to Easterby-Smith (2012), theory and generation are interactive processes.

The author has worked for two investors in private real-estate funds about than 10 years. She therefore has some prior knowledge of the topic.

The present study started with the literature review which re-focused the research questions. The next step was complemented by the knowledge and insights gained through interviews. The researcher therefore built up knowledge and understanding at each stage.

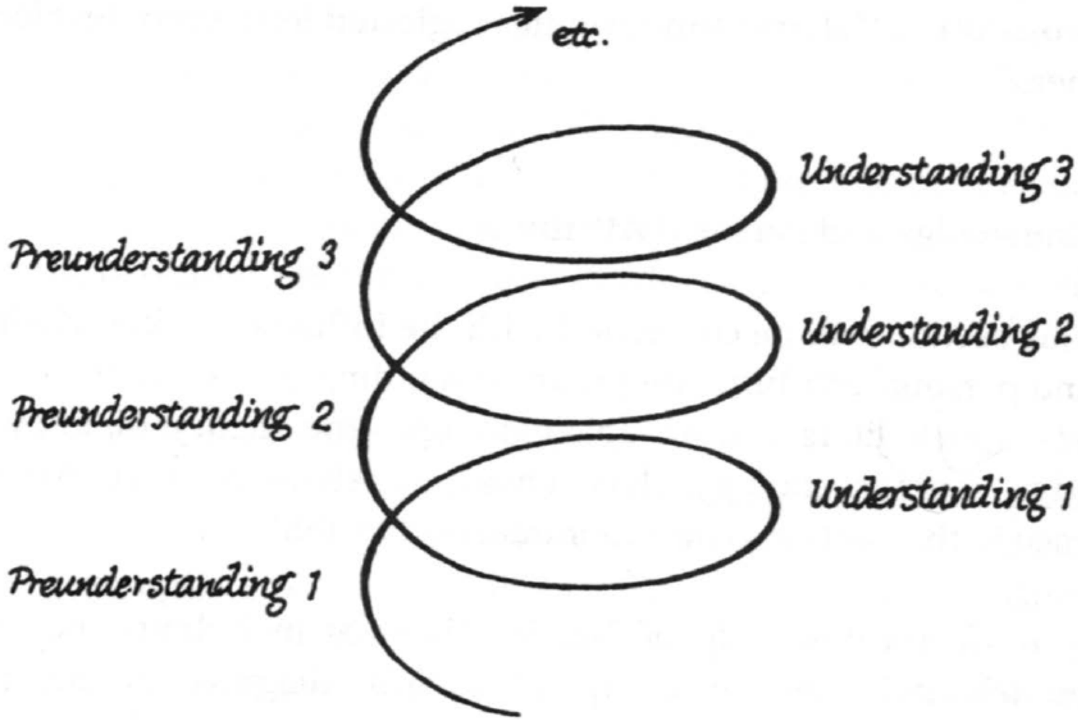


Figure 19: The Hermeneutic Spiral

Source: Gummesson (2000)

Given the lack of existing research into performance measurement for private real-estate funds, the author believes it is best to directly ask fund managers and investors and use open-ended questions to allow the interviewees to add more than pure facts. This contradicts the positivist approach and is more in line with an interpretivist approach.

The author also believes that the research problem often dictates the methods rather than the other way around.

Both the research problem and the research questions might dictate the use of different methods. Flyvbjerg (2010) and Marshould (1996) share the view that the method used should depend upon the problem and its issues. Mkansi and Acheampong (2012) acknowledge that there is an ongoing debate concerning the relationship between methods and philosophy. Even if you adhere to a certain philosophy, this should not keep you from utilising any methodology or method. Few PhD students (Mkansi & Archeampong, 2012) have a firm philosophical stance.

The author does not follow a “whatever works position“ (Bryman, 2006, p. 97) but believes that “research methods should be appropriate to the research questions” (Bryman et al., 2008 p. 265). Miles and Hubermann (1994) embrace any method that produces a “clear, verifiable, credible (qualitative) meaning” (p. 3).

Seale (2010) argues: “I do not think [] researchers wanting to produce good quality work need to be over-concerned with the problem of philosophical foundations, or the lack of them” (p.386).

Consequently, the research philosophy used here lies between positivism and interpretivism and is guided by the demands of the research problem. Therefore, it should be classified as pragmatic. This is supported by Easterby-Smith et al. (2012), who associate pragmatism with learning from real life and a balance of reflection and observation.

The research approach is abductive, as outlined before. It is intended to collect data that is detailed and rich and that can be combined into a conceptual performance-measurement framework which can then be tested and revised as necessary.

The research approach is the basis for the research strategy which is addressed in the following subchapter.

3.3 Research purpose, design and strategy

The research strategy is the general plan for how a study is to be conducted (Saunders et al., 2012). The purpose of this study is to explore how German investors measure performance for private real-estate funds, to assess the status quo and to make suggestions concerning how this could be improved. The literature review reveals that no study has ever been done on performance measurement by German investors in indirect real estate and that, consequently, no framework exists. The purpose of the study is therefore exploratory.

A research design is a plan for collecting, analysing and interpreting data (6 & Bellamy, 2012). It is the link between data collection and conclusions (Rowley, 2002) and resembles strategy and an explanation of methods. In this thesis it is used to focus on methods.

The research design is an embedded mixed-method research. Embedded research design is used when one methodology supports the other (Saunders et al., 2012). The reason for a mixed method approach is that the two methods should complement the other and support the interpretation. One research question is best answered by a questionnaire. The data should be collected through semi-structured interviews which contain a mixture of closed-ended and open-ended questions and a questionnaire. This is called a concurrent embedded design (Saunders et al., 2012).

Bryman (2006) points out that some authors would not consider it a mixed-method approach as only one research instrument is used. However, in his research example, 27% of the authors only used one instrument yet professed to using a mixed-methods approach.

This study aims to determine the current practice and to use the knowledge gained to construct a performance-management framework that can be used across the industry – or at least in the author's own organisation.

The research strategy should usually be in place before considering the methods to be used. Methods are secondary to paradigms (Saunders et al., 2009). Some methods are associated with certain strategies (Denscombe, 2010). A relationship exists between strategy and method; the choice of strategy influences the choice of method and vice versa.

According to Gerring (2007), all research that is not purely quantitative is considered case-study research. A case-study approach "is a study of the singular, the particular, and the unique" (Simons, 2009, p. 3). Yin (2009, p.18) defines a case study as an "empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context". Secondary aspects are the use of different (multiple) sources of evidence and prior knowledge or concept. A common understanding is that case-study research leads to an in depth understanding of an issue and different data-collection techniques are used to achieve this (Creswell, 2013). According to Gibbert et al. (2008), a key differentiator of the case-study approach compared to other approaches is that "case studies seek to study phenomena in their contexts, rather than independent of context" (p.1466). Denscombe (2003) identifies research as a case study if it is studied within its natural setting. A case can be any unit "in which the researcher is interested" (Silverman, 2010, p. 138). What will be analysed should be defined beforehand and should be determined by the research purpose (Rowley, 2002). It might be an organisation, a person or a group but it also might be a project, a community or a decision-making process (Creswell, 2013). The case-study approach is appropriate if a researcher wants to conduct a modest research project in his or her workplace or in a limited number of organizations (Rowley, 2002). For the present topic, the unit of analysis (a case) could be an investor (the company). As a condition for being a case, “the unit of analysis must provide sufficient breadth and depth” (Darke et al., 1998, p. 280). Multiple persons should be interviewed for each single entity.

The author believes that this study is more in line with what Lillis and Mundy (2005) call a ‘cross-sectional field-study approach’, but the line is blurry.

3.4 Research data

Data for the research was gathered by way of semi-structured interviews with market participants. Aggarwal (1993) expresses the opinion that information gathered from market participants may be unreliable and flawed. However, only by asking market participants what they do can one of the research questions be answered. Expert interviews provide one possible way to conduct exploratory studies, according to Saunders et al. (2009). Hiermangsperger and Greindl (n.d.) suggest that qualitative interviews are usually used if the subject area lacks literature. If possible, the interviews should be conducted face-to-face; if this is not possible, they should be conducted via the telephone. Semi-structured interviews are chosen, as the author expects to benefit from being able to switch the order of questions and from the opportunity to add questions and omit questions. An additional consideration in this respect has been the background and experience of the interview partners. As this has been quite diverse, a structured interview would have been almost impossible (Barribal & While, 2003). Semi-structured interviews, according to Easterby-Smith et al. (2009), enhance the reliability of the study as the replies are more personal. They work well when a researcher has some prior knowledge of the areas that need to be covered (Hancock, 1998).

Barriball & While (1994) suggest that semi-structured interviews could represent a major challenge when one wants to attain credibility for the research. Oppenheim (1992) suggests including two questions, that address the same issue in one questionnaire to test reliability, however Oppenheim also comments that where non-factual questions are involved "it becomes almost impossible to assess reliability" (p.147) in this way. Sets of questions should be asked instead. As can be seen further below, a research question was often addressed by various questions in the interview guideline. Oppenheim (1992) suggests that the answers to factual questions should be cross-checked via external resources, but for non-factual questions this might represent a challenge. Denzin (1989) suggests that validity and reliability can be assured by ensuring that participants and interviewer have the same understanding of a word. The interview guideline contains a question that addresses the understanding of performance – this is an example of the strategies applied to ensure equivalence of meanings. However, words do not necessarily have the same meaning for everybody (Oppenheim, 1992; Barriball & While, 1994).

The interviews were conducted in German. Issues associated with this are explained in the next chapter.

Asher & Reese (2007) suggest that when asking questions not only the words itself matter, but also that the intonation could lead to bias in questions. Partington (2001) empathises the importance of empathy and rapport. The author believes that as an insider, she had rapport with the interview partners. As an insider she might also be more subject to interviewer bias and subjectivity. As Oppenheim (1992) notes "the interviewer selects, and selection may reflect bias. Sometimes, she only hears what she expects or wants to hear" (p.116).

The interview started with an explanation of the research idea and its aspects; quite often, this involved repetition, as the research idea was laid out when the participants were asked if they wanted to participate. Following this, some basic statistical information was gathered. Usually, an attempt was made to fill out this information beforehand from publicly available sources (e.g., the company's financial statements) so that only certain aspects had to be filled in during the interview and that that information which was gathered beforehand were part of the transcript that was send over to the participants. The question concerning the definition of *performance* was intended to serve three purposes: to see whether it would be feasible to find a short definition of *performance* in the context of a real-estate fund, to put performance measurement into context with the understanding of performance by the participant and to serve as an ice breaker. Feedback from the pre-tests suggested that it would be better to start with the factors and then focus on the definition of performance and so the question regarding performance was not used as an opening question every time.

The interview guide looks rather structured and could be mistaken for a structured interview. However, if possible, the interview guides were not distributed to the interviewees beforehand. Furthermore, the author was open to new information and one specific question in the interview guide (the last one) asked for this. In addition, not all the questions were asked of all participants: e.g., the question of whether the organisation has a performance-measurement framework is only relevant to investors who are investing on their own account.

All interviews were scheduled for an hour and were not recorded but transcribed. The transcripts were sent as soon as practicable after the interviews to the participants for verification. The pre-test and request for participation suggested that people feared that they might share sensitive information. Therefore, the decision was taken not to record the interviews. This is also the reason why no additional information concerning the participants is included in the thesis.

The study has four objectives:

1. to explore whether a common definition of *performance* can be provided for private real-estate funds
2. to explore how German institutional investors, measure the performance of their investments in private real-estate funds
3. to identify factors and characteristics that are of importance to investors in private real-estate funds
4. to critically evaluate the status quo of performance measurement and to determine how the status quo can be improved

The first three objectives are addressed in the interview guide; the fourth objective is a result of the analyses of the answers.

The following pages provide more detailed information about the interview guide and the reasoning behind the questions asked. Every question has a purpose.

The interview guide was carefully constructed however it cannot completely be ruled out that some questions might not be considered biased or that the questionnaire itself might be considered biased. The questions are asked in a specific order from general to more specific as suggested by Oppenheim (1992) and ending with a complete open question. However as mentioned below the questions were not always asked in that order, therefore the impact might not be significant.

Part A. Introduction

Question 1: Short description of the company (sector, volume of investments or assets under management)

> *Intention*: The question aimed to serve as an icebreaker and to get the conversation started.
>
> *Objective*: To find out more out about the experience, background of the organisation and investment volumes.
>
> *Link to research objectives*: There is no direct link but knowing information about the background could lead to more understanding.
>
> *Link to literature*: Andonov et al., 2012; Kutsch, 2010 – Differences between smaller and larger investors could exist. Oppenheim (1992) suggest that one should put these questions at the end of the agenda to avoid frustration – the question was generally not addressed in the interview but was part of the transcript which was send to the interview partner for verification. The information was researched beforehand.

Question 2: What is your understanding of performance/performance measurement in real-estate funds?

> *Intention*: To set the scene and to understand what markets participants consider important.
>
> *Objective*: To generate a common definition and understanding of performance in real estate funds.

Link to research objective: Understanding what market participants consider performance is a first step in understanding how they measure performance (*Research objective 2*). It also serves to answer research objective 1.

Link to literature: Performance is "an ambiguous term" (Otley, 1999); similar Neely (1999)

Part B: Factors that affect the performance

While the introduction aimed to set the scene, and provide the researcher with some background information, all the questions in part B relate to answering the second research objective. Market participants were asked what they considered important (Question 1) or detrimental (Question 2) and were asked for real world examples of both (Question 3).

The links to literature are the various authors in subchapter 2.3 who address different kind of drivers for positive and negative performance.

Part C: Current performance measurement system

Question 1: Can you offer a brief explanation of how you monitor performance of your real-estate funds?

Intention: The open question should invite participants to speak freely about what their performance measurement system looks like.

Objective: To get an understanding of the performance measurement system.

Link to research objective: Understanding how investors measure performance is directly linked to the second research objective (Research objective 2).

Link to literature: No research that addresses this issue had been identified.

Question 2: During the holding phase of an investment, are any of the following tasks performed by you?

Intention: To broaden the possibilities of what could include performance measurement, focusing on some selected tasks.

Objective: To understand the relevance of certain tasks and to evaluate whether these could become part of what constitutes a performance measurement system.

Link to research objectives: To get a better understanding of the way performance is measured by investors (Research objective 3).

Link to literature: No research that addresses this issue has been identified.

The following questions aim to get a better understanding of specific areas of performance measurement. The general objective is twofold: The first is to focus on more detailed areas and the second is to connect part B and C and the literature. If participants consider a factor important, do they also monitor the factor? The questions are split into four areas: property related, fund manager, non-real-estate factors and relational issues (e.g. trust).

Question 3: Which real-estate performance indicators are monitored regularly by you?

Intention: To learn about key performance indicators for real-estate which are monitored.

Objective: To find out precisely which factors with a link to real-estate are monitored by investors.

Link to research objective: To get a better understanding of the factors that are monitored (Research objective 2) and also what is considered important (Research objective 3).

Link to literature: No KPIs relating to measuring real estate performance where part of the literature review.

Questions 4: Do you regularly review the fund manager? If yes, which factors do you focus on?

Intention: To learn whether the fund manager is reviewed and which factors are monitored.

Objective: To find out precisely which factors relating to the fund managers are monitored by investors.

Link to research objective: To get a better understanding of the factors that are monitored (Research objective 2) and also what is considered important (Research objective 3).

Link to literature: Access to expert management has been named as a reason for investors to invest in non-listed real estate funds, but not exactly what is understood by that.

Questions 5: Which of the following factors are regularly monitored by you?

Intention: To learn whether the fund manager is reviewed and which factors are monitored.

Objective: To find out precisely which factors in relation to the fund manager are monitored by investors.

Link to research objective: To get a better understanding of the factors that are monitored (Research objective 2) and also what is considered important (Research objective 3).

Link to literature: Past performance (Aarts & Baum, 2013; Bond & Mitchel, 2010; Gläser et al., 2016; Hahn et al, 2015; Tomper, 2009), Fees (Baum & Farrelly, 2009; Clayton et al. 2013; Morri & Perini, 2017; Ziering & Worzalla, 1996), Gearing (Alcook et al., 2013; Baum et al., 2011, 2012; Baum & Farrelly, 2008; Fuerst et al., 2012; Morri & Perini, 2017) were explicitly named as performance drivers.

Questions 6 & 7: How do you consider your relationships with fund managers and/or fellow investors? Does the relationship have an influence on your performance measurement framework?

Intention: To learn how relationships are viewed by investors.

Objective: To find out whether the relational perspective could have any impact on the way performance is measured? e.g. if there is trust, less is measured.

Link to research objective: To get a better understanding of the factors that are monitored (Research objective 1) and also what is considered important. (Research objective 3).

Link to literature: Alignment of interest (Hurley, 2006; Katz& Rosen, 1994)

Questions 8: What role do benchmarks play?

Intention: To learn how benchmarks are used by market participants.

Objective: To find out whether benchmarks are used in performance measurement.

Link to research objective: To get a better understanding of the factors that are monitored (Research objective 2) and also what is considered important (Research objective 3).

Link to literature: Relative Performance (Brounen et al., 2007b; Gläser, 2016; Hoesli & MacGregor, 2000)

Questions 9: What are your requirements for a performance measurement framework?

Intention: To learn about the needs of market participants.

Objective: To find out what is important in performance measurement from the point of view of market participants?

Link to research objective: Together with answers and analysis of the other questions, this should lay the ground for a performance measurement framework.

Link to literature: None

The last question (*Part D*) is a question designed to invite generic responses and to make sure that nothing in relation to the topic has been missed.

Not only interviews were used to develop the framework, but other sources are included as well. The original idea had been to use action research, as the main aim (to lay the basis of a performance measurement framework) demands for an iterative approach. For action research, it would have been essential that the same people would participate in the research over various periods and given the fact that most of the interview partners were senior people in the industry this was just not a feasible road to follow. Therefore, the panel of experts as well as the case study were introduced.

The panel of experts are market participants with different background who had not been part of the original interviews. Here, the issues that were faced in developing a performance measurement framework was discussed and thereby introducing one layer of reflection.

As a third step and also to satisfy the requirement of a professional doctorate to show the practical application as well as to have another layer of reflection, a case study is introduced. Here two funds that had a similar vintage and investment focus were assessed using the framework which as a result was adapted one last time. The funds were two funds that were part of a portfolio of real estate funds that the author was responsible for.

3.5 Sampling

Sampling in qualitative research is defined as the selection of specific data sources from which data are collected to address the research objective (Gentles et al., 2015).

Sampling techniques are distinguished at the first level between random and non-random sampling. Random sampling involves taking a representative example of the whole population at random (Saunders et al., 2009) so that sample is equal to a statistically relevant, representative portion. *Non-random sampling* refers to any other mode of sampling.

Saunders et al. (2012) point out that a sampling frame is one of the prerequisites of probability sampling. A sampling frame requires knowledge of the (whole) population. The focus of this study is on private real-estate funds and so the population is comprised of investors in private real-estate funds. As the word *private* suggests, information regarding such investments is not public knowledge but there are some ways that the population could be estimated.

One source is the membership directory of INREV, which lists 12 institutional investors from Germany (as of 07.03.2018). Smaller investors might be discouraged from joining, as the membership is voluntary, the language of communication is English, and it usually costs €10.000 plus VAT per year.

Another source appears in the form of lists of participants at conferences.

Kleine et al. (2012) surveyed 123 institutional investors, of which 95% invest in real estate. They do not claim to have covered the population of institutional investors.

Many institutional investors are financial companies—such as professional pension schemes or insurance companies—that are regulated by the Bafin (a German regulator of financial products). This could help a researcher identify possible parties, but it would not indicate who is investing in private real-estate funds and, as the word *many* implies, not all are regulated by the Bafin.

It seems reasonable to assume that it will be difficult to identify the whole population of institutional investors in private real-estate funds; therefore, choosing a non-random approach appears to be more feasible. But this is not the only reason. The study is a qualitative study, and random sampling is considered inappropriate for qualitative studies by some authors (e.g., Marshall, 1996).

The sample strategy that was to be employed is purposeful selection. Purposeful selection is defined as: "particular settings, persons, or activities are selected deliberately to provide information that is particularly relevant to our questions and goals, and that can't be gotten as well from other choices" (Maxwell, 2013, p. 97). This is the most common sampling technique used in qualitative samples (Marshall, 1996). Gently et al. (2015) suggest that, when considering applying purposeful selection as a sampling strategy, one should elaborate on the specific meaning and not merely refer to purposeful selection. Patton (1990) introduces 16 different strategies of purposeful sampling. Fifteen refer to specific strategies, and the sixteenth is a mixed strategy combining different strategies. This is done here.

Before explaining the strategy further, it appears worthwhile to point out some general criteria.

The purpose is to have information-rich cases (Patton, 1990). To achieve this goal, it is best to target only active investors, fund managers and consultants. This may be a positive bias, as market participants who have decided not to invest in or offer products in this asset class are thereby excluded. The intention is to explore what market participants are doing, and this can only be gathered from investors who are invested. It is also good to have a mixture of institutions, hierarchy levels, assets under management and experiences.

Ziering and Worzala (1997) observe differences between larger and smaller pension funds (as measured by assets under management) in levels of in-house real-estate capacities.

The number of market participants that were interviewed was rather small, in line with the number of INREV members and with other qualitative studies in real estate (e.g., Kutsch, 2010; McAllister et al., 2008; Öhman et al. 2010).

Table 2 suggests an allocation to types of institutional investors that invest in alternatives. This split of investors was compared to lists of investors in five core, private real-estate funds. This suggests that, at least in those funds, investors are mainly pension schemes (professional, corporate, church and state) and insurances companies, some of which involve endowments, family offices or wealth management. Some of these investors use consultants or multi-managers. Table 2 does not represent an accurate statistic of the population and therefore it was not the intention to have a sample that represents the table.

Diefenbach (2008) suggests that professionals and senior managers are often aware of the danger of saying the "wrong things" (p.881) especially when the topic is sensitive which in turn might lead to more answers that are in line with official language. Although the topic is considered highly sensitive by some of the interview partners, many different views were expressed.

The decision made when selecting the cases was to follow the principle of achieving a maximum of structural variation (Kruse, 2014) so that cases would complement each other. This complementation also occurred within an organisation upon interviewing both a controller and an investment manager, as each had a different perspective. But once again, a mixture of different types should be achieved: corporate pensions, professional pension, small and large funds and different hierarchies. Other investors should come from different backgrounds: e.g., insurance companies, endowments and multi-managers. The interview phase was intentionally spread out over a long period to better achieve this.

The interviews were conducted with market participants and are considered expert interviews:

"An expert has special „expert knowledge" which is related to a special professional field. […]

Expert interviews are about a person's special knowledge and experiences which result from the actions, responsibilities, obligations of the specific functional status within an organisation/institution.

Researchers are not interested in individual biographies, not single cases, but in the expert as a representative of an organisation/institution, insofar as he/she (re-)presents the (re)solutions or decision-making structures. “(Littig, 2013, p. 11-13).

Data was gathered on each of the organisations from their websites, annual reports, and case study reports. The individual interviewees were chosen based on their being active in the non-listed real estate funds field (participation in professional networks, seminars, workshops etc.) as well as professional contacts via investments in the field.

In chapter four some more statistics on the organisations and interview partners are shown to illustrate the sample.

Specific information about each of the interview partners or its organisations is not disclosed, due to the wish of interview partners to stay anonymous, but below please find a more elaborate rationale for choosing the interview partners:

1. As the focus is on Germany: the interview partners were all market participants with ties to Germany: either being German institutional investors, advising German institutional investors or having German institutional investors as clients.
2. The interview partners must have had some years of experience in the area of non-listed funds. The minimum was set at three years, but generally the experience was much longer.
3. In addition: different hierarchy levels were chosen as well as different positions.

4. The actual job of each interview partner must be relevant to the study: e.g. involved with client communication, fund or portfolio management or investing or supervising this.

While best effort was made to a have diverse set of interviewees, one can never exclude a bias because of the sample. The author does not claim that the sample is representative of the industry, however, it presents a good representation of market participants and therefore of different experiences. The best way to measure representativeness would have been to sum up the AUM of the interview partners and then compare this to the total industry figures. As it was explained in chapter 1, it is a. difficult to estimate the total amounts that are invested into real estate and b. to define the applicable market. In addition, the sample method does not aim to be representative.

The author believes that the number of interviews is sufficient for the research. This is supported in the literature by Gummesson (2000) and Yin (2009). Marshall (1996) considers a sample size appropriate if it "adequately answers the research question" (p.523). Perry (1998) recommends six to ten cases and 30 to 50 interviews for a PhD Thesis. Case-study research should contain four to 10 cases, or 25-50 units in a single case study (Gentles et al., 2015). At the same time, Perry (1998) notes that in smaller businesses it might be difficult to get hold on to more than one interview. In this case, he suggests adding interview partners from the context, such as consultants or advisors. Diefenbach (2008) is of the opinion that "most case studies provide only anecdotal evidence" (p.888), which would make the number of cases even less relevant. The purpose of the study is to create something new – or one could say to generate a new theory. According to Gummesson (2000), it is more important to have accurate evidence than many samples. Perry (1998) has a similar view. Yin (2009) also emphasises that theories are generated from just a single case study and that therefore a limited number of samples can be used to expand knowledge and create something new. Yin (2009) calls this generalization: *analytical generalization*. Here, a pre-developed theory is used as a guideline, and findings from research are compared to this. The more cases that support the theory, the more support it gets. This way of generalizing fits well within the intended study, as the pre-developed theory is equal to pre-understanding. The aim of this study is to understand what is done and for this reason it is better to concentrate on a few cases in depth instead of millions (Hancock, 1998).

The idea of theoretical saturation (Gummesson, 2000) was kept in mind. *Theoretical saturation* points to the idea that no new knowledge can be gathered by conducting additional interviews. Edwards and Holland (2013) consider this the real benchmark in a qualitative study. Instead of achieving a sample that is representative of the whole universe, the sample should be representative of opinions and views. The author believes that this goal is most likely achieved by using purposeful sampling, as she believes that diverse backgrounds will most likely lead to diverse opinions and views. Many authors consider saturation the criterion for sample size (see Gentles et al., 2015, p. 1782).

3.6 Methods and Procedures

The semi-structured interviews consist of a mixture of open-ended and closed-ended questions. The closed-ended questions lead to quantitative data whereas the open-ended questions lead to qualitative data. The author considers the open-ended questions to be especially important for this kind of research as they help to increase the understanding of the topic and the choices made. The open ended questions provided with a variety of answers.

The interviews were all conducted over a period of several months between 2016 and 2017. A pre-test of the interviews aimed to check whether the allotted time was sufficient and whether the questions were comprehensible. In addition, a focus was on achieving a balance in the phrasing of the questions. The pre-test did not generally include a pilot on the coding and quantifying of the responses as suggested by Oppenheim (1992).

Some of the question interview guide were corrected as a result of the pre-test. This correction was made on different levels. On the first level, the order and the numbering of questions was changed. On the second level, questions where rephrased when the meaning was not clear or based on the advice that it might be better to condense some of the questions. On the third level, new questions (or sub-points) were included: e.g. the question that relates to benchmarks is a result of a pre-test. The topic had previously been identified in the literature but was not included at that point. A major change happened after the pre-test when the author realised that the interview guide contained a bias towards the performance of the fund manager. A new version of the questionnaire was then produced, which reduced the closed-ended questions in favour of more open-ended questions with the aim of providing a more balanced view of the different factors. How investors value the importance of these major factors was included as a sub-question to the last question. The modified interview guide was then forwarded again to the pre-test participants, who provided their feedback; however, this led to only minor changes. The general style of interviews was informal and in the form of an open dialogue. The intention was that the interviews should feel like a conversation rather than an interview.

Quite often during the pre-test the question was raised: what the intention of the question is and what kind of answers one does expect. As a result, questions where simplified or rephrased as well as the awareness for sensitive question raised.

The interview guide which was used before the pre-test is included in Appendix II. The final version is included in Appendix III. Appendix IV includes some alternative questions that were asked.

Some interviews were made in person, others via the phone. It was expected before the research started that most interviews would be held in person.

Some precautions were made to safeguard the quality of data and the research.

A good interviewer listens to the responses, records what is being said and maintains the status of the raw data (Savenye & Robinson, 1996). Sobh and Perry (2006) consider this an additional evidence-and-quality safeguard.

To test the validity of her conclusions, the author used the following strategies: triangulation, feedback and “rich-data”. Validity points to the truth contained in our statements (6 & Bellamy 2012).

Triangulation usually refers to the use of different data-collection techniques (Saunders et. al, 2009). It has been used as a synonym for mixed methods (Sobh & Perry 2006). Diefenbach (2008) applies it broadly to anything different: it could be anything from different interviewers, over different sources to various documents. Here, an interview guide which includes a questionnaire is used. However, the questionnaire only addresses one research question, so it might not be considered a real triangulation. Maxwell (2013) and Herr and Anderson (2005) also include different sources as a method of triangulation. The author has interviewed different market participants from institutional investors over consultants to fund managers. Triangulation offers a richer picture (6 & Bellamy, 2012).

It also helps to reduce any bias (Young et al., 2018). Feedback from market participants on the framework was also used.

The interviews should lead to “rich-data” (Bryman, 2006). This rich-data is preserved as a first step in the form of interview transcripts. Transcripts were sent to interviewees for cross-checking (*Respondent Validation*) (Gibbs, 2007). Memos written in addition to the transcript add to this “rich- data” as reactions and a first analysis took place almost immediately after the interview and well before the actual analysis of the data. This strategy is encouraged by many qualitative researchers (Oppenheim, 1992; Savenye & Robin, 1996).

Ethical considerations

All interviewees were contacted either by phone, personally or by email with a request to participate in the study and to describe the general idea of the study. The date of the interview was then confirmed via email or by phone and their consent to take part in the research was documented. Attention to body language and tone was made to avoid the possibility that people took part just because they felt obliged to. This problem was addressed if the researcher thought this was the case. This is not possible when the first contact is made via email, but people have time to think about an email request and might be less inclined to agree to take part if they do not want to. Names, institutions and answers are treated with confidentiality and privacy is guaranteed. Quotes are used such that they cannot be traced back to the original interviewee and permission was actively sought if doubt arose. This should apply to the interview phase as well as the final work.

3.7 Analysis

Analysis suggests that some transformation of the raw data will take place (Gibbs, 2007). The first task was to read mainly interview transcripts and memos, but also other documents. Some of the interview partners provided the author with additional documents, such as a review report and other documents. The analysis considered all the evidence, but it concentrated on the main aspect of the research. Open-ended questions can generate interesting information about less-important issues, and one must be careful not to get lost in these. It is also important to consider all major contrary interpretations or explanations (Yin, 2009).

According to Gibbs (2007), the analysis should start as the data is collected. This idea was applied as follows:

An interpretive memo was written after each interview at the same time as the translation – this is not equal to the transcript that each participant receives but includes a first analysis and details that might not be gathered from the transcript. After a few interviews the memos were used to identify themes and categories of data. A transcription was made and a summary of the interview was returned to each participant to verify the content. Some participants added more details, others actively confirmed the accuracy, and some did not comment at all.

The transcripts were then categorized (coding/thematically analysed), and connections were made. Coding is a process in which the researcher defines what the data is about (Gibbs, 2007). It is also a scientific interpretation (6 & Bellamy, 2012). The idea was to have a concept-driven coding system in place before the field work started (Miles & Hubermann, 1994). This was a collection of codes in a codebook based upon the literature review, the research questions and the author's own ideas. A hierarchy of codes (parents/children) could then be established. This codebook was not meant to be set in stone but was considered a guideline which could be amended during the research process. The final version of the codebook is included in Appendix V.

The technique of pattern matching was also used. Here, a pattern that is found in the empirical data is compared to a predicted pattern (or to the pre-understanding) (Yin, 2009). This aids in validating the study internally and generalizing the results if the patterns hold up (or are clearly not holding up).

The whole process is iterative as described by Hancock (1998). The transcripts were re-read after each step, as new knowledge might change one's perception of things read previously.

The author had some prior knowledge and experience on the subject. As such she might be subject to confirmation bias: "the seeking or interpreting of evidence that are partial to existing beliefs, expectations, or a hypothesis in hand" (Nickerson, 1998, p. 175). Nickerson (1998) also suggests that confirmation bias is a natural tendency of humans and that it is "pervasive and strong" (p.211). Hernandez and Preston (2012) suggests that disfluency can disturb the confirmation bias. Interviews made by a skilled interviewer might reduce the confirmation bias as well (Powell et al.. 2012). The analysis was made over several weeks and in addition further feedback was sought, the author believes that this helped to reduce confirmation bias. However, the author does not consider herself a skilled interviewer. In addition, "people have a tendency to overestimate the […] accuracy of their judgements" (Nickerson, 1998, p. 211), therefore the presence of confirmation bias cannot be rules out.

3.8 Conclusion

The purpose of the study is to construct a framework for performance measurement of private real-estate funds by German investors. The underlying research philosophy is pragmatism. The research was conducted within the community of investors in private real-estate funds in Germany, where the author is an insider. The research itself can either be considered as a case study or a cross-sectional field study in which the unit of analysis is German investors in real-estate funds. The focus of the research is exploratory and involves primary data collected via semi-structured interviews from a limited number of investors selected via purposeful sampling. Analysis began once an interview was done and includes coding, pattern matching and statistics (for quantitative data). In addition feedback was sought from a panel of experts and one case study was used to develop the framework further.

4 Presentation of Findings

This chapter presents the results of the empirical findings. Quotes from the interviews are included if they illustrate the argument. As most of the interviews were conducted in German, the quotes are translated from what was recorded.

The following section lays out the findings from the interviews and the analyses. It lays the groundwork for the framework, which is introduced in the next section.

First, a few general issues in relation to the interviews must be explained.

4.1 Language

This thesis is written in English but most interviews were conducted in German as the focus of the study is on the German market and the author is a German native. The first version of the interview guide was written in English and was then translated by the author into German. Further revisions of the interview guide were then made in German so that only the final version was translated back into English. One of the issues with this is that question might not considered exhaustive as words are less often repeated in the German language than in English or they might be considered ambiguous in English but not necessarily in German.

Some English words are also used in German so sometimes it might be better to use the English word instead of the German. For instance, having translated the word *performance* into German, it was decided to use the English word in the revisions of the guide instead, as *performance* is used in German as well.

4.2 Interview partners

The selection mechanism was explained previously. No names or further information concerning the organisation are shared within this thesis, to protect the anonymity of the interview partners. All interview partners are based either in Germany or have German investors as clients. Each interview partner was assigned a letter (*P*) and a number at random.

Investment and Pensions Europe (IPE, 2016) publishes a list of the Top 1000 Global Investors each year. It ranks investors per investable assets under management. Three investors have assets of more than €30 billion, 11 investors have more than €10 billion and 20 investors that have more than €5 billion in assets under management. The 1000th investor shows €4.6 billion so that many other investors should probably be lower than that. As the pre-test determined, investors are especially sensitive about assets under management. Therefore, a range of investment amounts is shown instead of showing the exact number of assets under management: Investors with more than €10 billion, investors between €5 and 10 billion, investors with investments between €5 and 1 billion and smaller investors. A similar division was made for the real-estate allocation.

The whole population of participants is as follows:

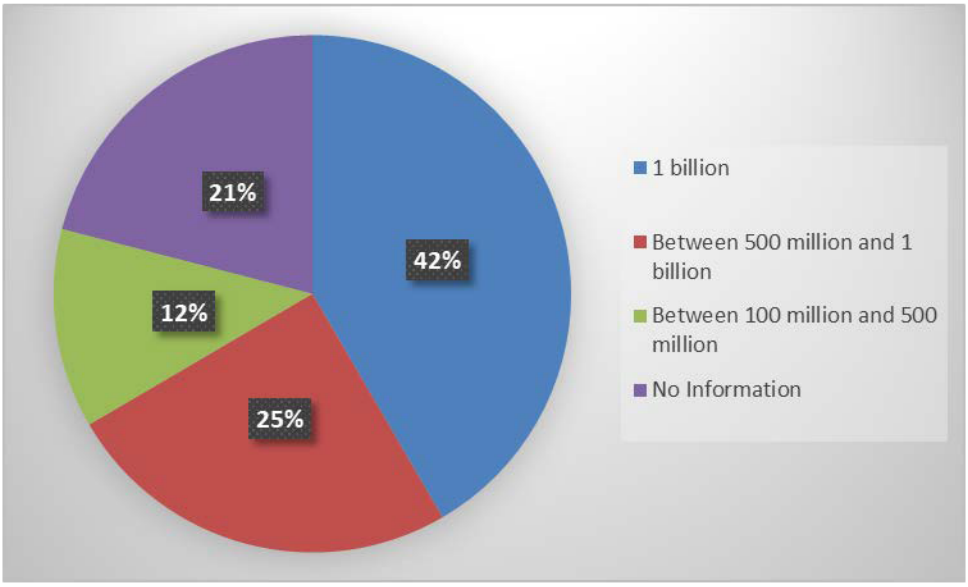


Figure 20: Population of respondents shown as real estate under management

The participants came from different backgrounds: fund manager, investors and consultants. All participants had several years of experience of investing in real estate and almost all had more than 10 years of experience in investing in real-estate funds.

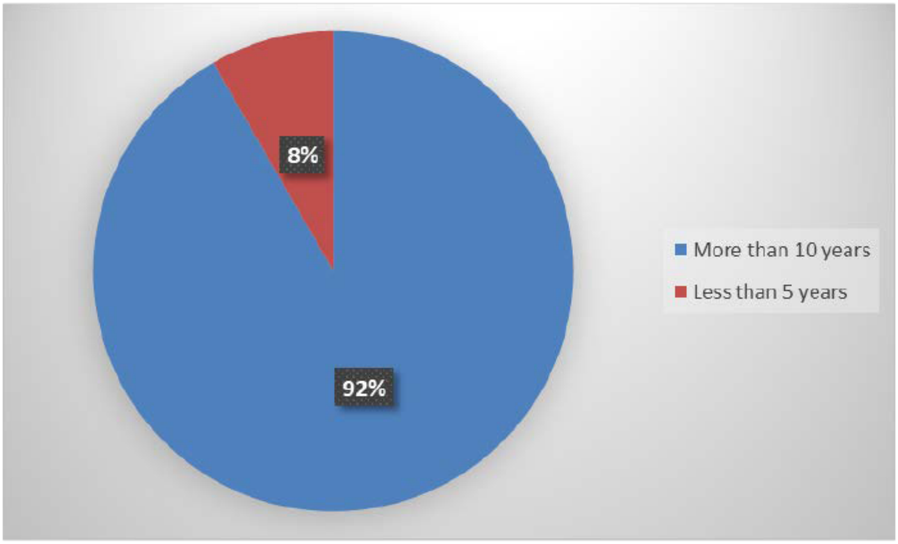


Figure 21: Population of Respondents per experience

With regards to hierarchy—portfolio managers (PM), vice presidents (VP) and managing directors (C)—the majority are vice-presidents.

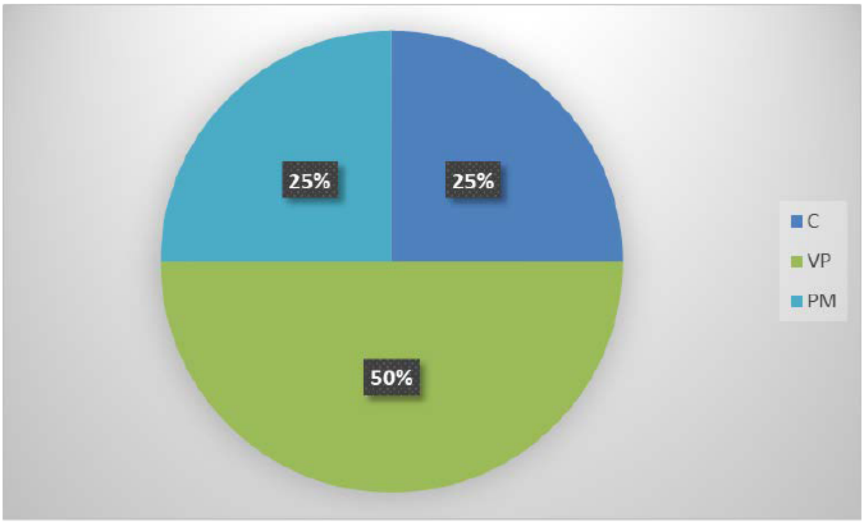


Figure 22: Population of Respondents per senior level

4.3 Findings

Study objective 1: Common Definition of *Performance*

Asking participants how they would define *performance* served as an ice breaker and enabled the researcher to see whether it would be possible to find a common definition of *performance*, as it is an "ambiguous term" (Otley, 1999). Participants were asked for a one-sentence definition, but some also added a broader definition.

Some participants focus on income return.

Performance means….

> persistence of distributions and a stable return. (VP#1)

> regular distributions in a reasonable amount; equity is paid back and overall IRR as promised. (VP#2)

Some participants distinguish between absolute and relative returns.

Performance means…

> *Performance* can be split into absolute performance and relative performance. Absolute performance means reaching the target set, and relative performance refers to the performance relative to similar funds. (C#1)
>
> We are in a competitive business. Our performance is constantly measured against a benchmark. Not only relative performance is important but also absolute performance. Investors look at the absolute number as well. (VP#5)
>
> A real-estate fund has achieved a good result if it has met the return promised to the client. In a broader sense, if it is better than the market. (C#2)

Some participants focus only on the absolute return and leave out vintage.

Performance means,

> fund achieves the target return that was communicated at signing irrespective of market performance. (VP#1)
>
> the investment did achieve the promised IRR (target return) over the term. (VP#3)
>
> We have a very precise definition of *performance*. Total return (taking into consideration any write-downs or write back) and any unrealised changes in hidden reserves about the average stock measured at market value for each investment. To 99%, the total result of the year is important. (PM#2)
>
> A real-estate fund performed well from my point of view if it achieved the promised return by adhering to the investment guidelines. (PM#3)

Focus on the client is a similar angle but with a different emphasis:

> A real-estate fund has achieved a good result if it has met the return promised to the client. (C#2)

Investors invest in real-estate funds for different reasons and it was expected that this would be reflected in the definition of *performance*. *Performance* has been identified as a loosely defined term (see Chapter 2.2 above).

There was expectation that some of the reasons why investors have chosen to invest in real estate funds would be reflected in the definition of *performance* and that it would be possible to arrive at a broader definition of *performance* than the interim version in Chapter 2.2. However, as one participant summarises it,

> To 99%, the total result of the year is important. (PM#2)

Performance appears to be associated with past performance and this entails some form of return measure. While some respondents volunteered specific return measurements such as IRR, the intention was to find a definition of *performance* and not of return measure. Farrelly and Stevenson (2016) as well as Fisher and Hartzell (2016) note that the IRR has some flaws, despite this, it appears to be still favoured in the investment community.

The statements reveal something of why investments in real-estate funds are made. Distributions appear to be important for some but not all participants. Relative past performance is relevant for some, while for others absolute performance is key.

The common element in the definition is past performance; but what exactly is understood by *past performance* appears to be slightly different. If a respondent has a focus on distribution, would this be covered merely by stating return? Alternatively, what if someone has a negative performance but this is still better than their peers?

At present, it is not feasible to find a new and narrower definition of *performance* in real-estate funds as the differences are there even in nuances and it will remain a loosely defined term. Therefore, the objective of the study to find a common definition of performance for private real estate funds cannot be achieved, apart from a loose definition (from above): a fund performs well suggests that it successfully reaches its targets. It is somewhat frustrating that a narrower definition cannot be achieved but the author believes the attempt to answer this objective is of high relevance to this study. It supports the inclusion of financial indicators in the scorecard as well putting return in the centre of the scorecard. In addition, it highlights one of the major themes from this research: performance has a different meaning for each investor.

Study Objective 3: Factors affecting Performance

The next unit of analysis focuses on the factors that affect performance and what participants consider important. The next part of this chapter focuses upon what they actually monitor. Several quantitative studies have indicated that different factors might affect the performance of private real-estate funds (see Chapter 2.2.2). The open-ended questions aim to determine whether market participants would provide additional explanatory variables.

> 75% of the result of a fund is controllable, and 25% of the result is determined by the market. (VP#2)

Past performance is an indicator of future performance and market participants support the previous finding that past performance is an indicator for future performance. While previous studies were torn between short and long-term effect, this point has not been addressed by market participants. Absolute and relative performance and components of income are recurring themes.

> IRR may serve as a starting point; especially for a core fund, income yield is important. (C#1)

> For a core fund, net operating income […] is important. (VP#1)

> Net operating income is a good factor, as it does not contain any value development. (C#2)

> TVPI or equity multiple are important factors. (VP#3)

> So once again, the factors depend on the kind of fund. (VP#1)

> Analysing the returns compared to an index, see where a fund has over-performed (or under-performed). (VP#5)

Past performance is the overall financial result, but buying, managing and selling properties are in the centre of private real estate. Important aspects in this context are structure, stock and the work done by the fund manager at the property level. Emphasis is put on constructing a balanced portfolio and making the right decision about when and what to buy. The occupancy or the vacancy rate is explicitly mentioned as a measure of property performance.

Portfolio construction is one of the important factors for fund performance. An example is to buy an empty building and a fully let building around the same time so that there is always some income. (C#1)

If the fund has a balanced risk profile and risk diversification then this is a good factor. (PM#2)

The quality of property and location and flexibility are important (possible to use it by third parties and other users). The timing of purchase and sales are important as well. (VP#2)

Also, a bad manager should be able to achieve a decent result with a very good property. (VP#2)

Principally, it is important that the fund manager has made a difference to the investments and has thereby added value. An example is taken from an investment in the residential sector in the USA. The target time to refurbish an apartment is six weeks and undercutting it leads to a faster re-letting. Significant undercutting of the time could be an indicator of efficient management. The budget should not overrun because of the lesser time need. (VP#3)

When renovations are done, keep an eye on CapEx budget. Is the budget adhered to, and is the fund manager doing what they had set out to do? (C#1)

For non-core investments, the manager provides transparency over the market, proof through regular reporting and says that he knows his market and that the rents achieved are in line with market rents and rents underwritten. (VP#1)

> The vacancy rate could be a benchmark for fund-management performance. Principally, one can distinguish between a vacancy rate that is the result for measures taken [e.g. refurbishment] and a vacancy that is the result of a lack of demand, and only the second is critical and can serve as a scale or benchmark. (VP#3)

> For core real estate […], the vacancy rate is important. Also, tenant retention is very important. So, the rate of renewals could be a factor to measure the quality of the property and the performance of the manager. (VP#1)

> Prudence in investment decisions. (C#1)

> Property-level factors such as level of occupancy. (VP#4)

However, what is not really addressed above is what is expected of the fund manager, what they do at property level or that there in an expectation that alpha will be generated through investments in non-listed real estate funds. Access to expert management has been named before as a reason for investing in non-listed real-estate funds.

> Investors primarily invest in real-estate fund to gain access to expert knowledge and management. (C#2)

A fund manager can influence income return much more than capital return, as a stable and increasing income return can be attributed to skills in leasing, releasing and controlling costs. Capital appreciation can also be a function of the general market.

> Quality of the real estate and the quality of partners, whereas this is not necessarily restricted to the fund manager, but also their service providers and co-investors

> that have similar interests and/or are willing to willing to solve issues cooperatively. Of similar importance in everything is certain continuity. (VP#2).

With the negative interest-rate environment, cash management in particular is becoming more important. This is important from different angles. An investor who has committed to a real-estate fund wants his money to be called and invested immediately. A fund manager sometimes gets a management fee on cash, but this also diminishes the fund's return~~s~~.

> Liquidity requirements in the funds can be an issue because open-ended funds in Germany must by law hold a certain minimum liquidity (5% after its obligations), and when a fund is closed (because of too many redemptions), it must hold the money from the real estate sales until the fund is reinstated, and this can have a significant effect on return. (C#2)

> In our open-ended fund, the money will only be drawn when an investment is about to be made in the next few weeks. Years ago, money was drawn when the investor signed up for the fund; now only a small percentage is drawn. Sometimes a deal will fall through at the very last minute. (VP#5)

> Cash is only drawn when needed and is distributed as soon as practical after a property is sold. (C#1)

The influence of liquidity on the performance of the fund was identified in the literature review and is confirmed by participants. Cash management also appears to have an influence on the performance of funds.

Leverage or gearing has been both a return enhancer and detrimental to the performance.

> In the case of leverage, one should not only look at one indicator but at several. So not only at LTV, but also at the loan structure (fixed or floating interest rates, covenants, terms etc.). (C#1)

> Also, the market development of interest rates can be important. (VP#2)

> Excessive gearing has been detrimental in my investment experience. In Japan, gearing was rather cheap in the 2000s, and an LTV of 80% for any property was not uncommon. Then the global financial crisis came in 2008, and all equity was wiped out, and the keys were handed back to the bank. (C#1)

> Excessive gearing is a factor I would consider detrimental. We have always employed a moderate level of gearing in our core funds. (VP#5)

> Gearing that is too high or recourse, but for German funds, recourse is often the only possibility. (VP#1)

According to Kutsch (2010), earning fees is one of the primary reasons insurance companies entered the market and became fund managers. For investors, fees represent costs and therefore have a strong effect on performance.

> German funds often have an acquisition and a disposition fee and when a property is sold, and then another one bought in fast order. You need to challenge that. (VP#3)

> Fees are not monitored regularly. They are negotiated before signing a fund. (VP#1)

> Fees influence the performance. We monitor them regularly. (PM#3)

Gläser (2016) suggest that benchmarks are becoming more readily available but that investors are not using them. Market participants appear to be sceptical about the topic.

> Relative performance is important, especially during the holding phase. During the advisory board meeting, the performance of the fund is not compared with benchmarks. The existing benchmarks have their weaknesses. Reasonable benchmarks do not yet exist. (C#2)

> For core funds, benchmarks are available, but they have some flaws: e.g., how to include development. For value-added funds, they are not widely available. The universe is usually not large enough if you look at vintage and comparable strategies. (C#1)

> We use the DIX for our direct holdings; for our fund investments, it is more important to compare with each other. (VP#2)

> Benchmarks play no role. However, an absolute performance target does exist: Bund plus 100%, which also depends upon your risk assessment. (VP#3)

> Benchmarks play no role when measuring performance for real-estate funds. However, they are important when an ALM is done. (VP#1)

> When measuring the performance of a fund, I would always suggest analysing the return compared to an index and then see where one has out-performed (or under-performed). If, for example, the index has a strong allocation to a region, this could explain differences in the performance. (VP#5)

The status of the real estate cycle and the timing of investments are ignored when only absolute return measures such as the IRR or equity multiple are used (Fisher & Hartzell, 2016). Farrelly and Stevenson (2016) also note that the IRR has some drawbacks.

Fund managers and investors might not always have the same objectives, but this might also apply to other investors.

> The investment market is becoming tighter, and investors have made a commitment to real estate. Interest rates are negative, pressure on investors (and then onto managers) to invest has increased, and as a result of this pressure, investments could be made that are a compromise. (VP#1)

> Co-investors that have similar interests and/or are willing to willing to solve issues cooperatively. Of similar importance in everything is certain continuity. (VP#2)

> The larger the fund, the less important are the co-investors. For small funds or co-investments, the co-investor is essential. (VP#3)

> The kind of questions changes over time as more insight is gained by the investors. (VP#4)

> Majority decisions against investors (51/49 results). (PM#2)

> Investor homogeneity is an important factor. In one of the last club deals we made, the seed investor made it clear that he only wanted to have investors with a similar investment horizon—preferably other investors who are subject to the investment ordinance. (C#2)

> We have had good and bad experiences with fund managers and investors. The bad experiences are among the reasons we no longer invest in real-estate funds. (PM#2)

> A good relationship with the manager leads us to look more thoroughly on what they are doing. (VP#1)

Responsible investing does not appear to be a major concern for investors. Also, it appears to be an interesting proxy for measuring both the quality of the building and the quality of the fund manager.

> Responsible investing appears to be an entry point. Investors will only start considering investing with us if you are green, but then the topic is almost never mentioned again. (VP#5)

> Responsible investing is perhaps a hygienic factor. (C#2)

> GRESB targets and ranking could be a good indicator as well. It is not only an indicator for quality buildings but also an indicator for efficient management. (C#1)

> Green buildings are newer buildings and therefore attract more tenants. (VP#5)

The factors depend upon the personal experience of the participants and could cover very different aspects.

> The fund manager is expected to anticipate market movement. (VP#1)

Greed by managers and co-investors [can be detrimental to the performance of a fund] if [people] are not satisfied when a good return was achieved and because of that, for example, miss the right time to sell. (VP#2)

What do you mean "when" a fund performed? I think *if* is the right word. (PM#1)

Market developments. (PM#2)

Market turmoil. (C#2)

Change in laws e.g., introduction of housing regulation in Germany (*Mietpreisbremse*). (PM#2)

Changes in personnel. (C#1)

Currency exposure, hedging strategy, proper analysis and implementation. (C#1)

Building must fit into the [investment] market. (PM#2)

Political risks are not to be underestimated. A couple years ago we wanted to invest in Turkey due to the good prospects for the country; then an insider, however, recommended that we not invest because of political developments. (VP#5)

When renovations are done, keep an eye on the budget. (C#1)

Capital market conditions are monitored as well. (C#1)

Taxes – we had investments in funds which had to be restructured by 2/3. (PM#2)

A strategy for alternative use should be in place for every investment. (PM#2)

Accounting policies, valuation or fund size was not mentioned by any participant.

Many factors appear to be important to market participants in explaining the success or failure of private real estate funds. The challenge here is to extract factors that could play a role in many funds and can be measurable at the same time. There is also the impression that factors might be subject to time, as already noted by Kutsch (2010). For example, Geo-political risks appear to be of general concern - *The Global Risk Report 2018* of the World Economic Forum names it as a major concern for experts worldwide.

The fund should have the following characteristics: the fund manager should possess expert knowledge, have few changes in personnel and should invest in a prudent way. Market developments should be watched by the manager. The portfolio should be balanced, and the properties be flexible. A low vacancy rate is important as well as green buildings. Gearing should be moderate. Cash management and budget adherence are also important. A currency hedging strategy should be in place, if relevant. Investors should be homogenous, and investors and fund managers should be interested in a mutual long-term business relationship.

Objective 2: Understanding the current Performance System

The first part of the interview guideline defined performance and concentrated upon the factors that influence it. The middle part of the guideline focused on how performance for non-listed real-estate funds is measured. An open-ended question and a closed-ended question listed different tasks. Investors do the following:

> Once a year a fund report is made. The fund report will be updated for every fund meeting. (VP#1)

> On a regular basis, we monitor the IRR and cash flows. (VP#2)

> An external service provider prepares a quarterly performance report. (VP#3)

> We prepare everything internally. Semi-annually and annually (i.e., half year and year); previously it was reported on a quarterly basis. We give this report to our board of directors and our investment committee. (PM#2)

> Twice a year, a fund review is done, focusing on the real estate portfolio and the fund manager. (PM#3)

Fund managers also have their own perception of what investors do:

> Many investors just focus on past performance. (C#2)

> Lots of information is requested from us, but lots of information is already provided by us. However, who asks what and when varies significantly. (VP#4)

> The reasons for performance are now being analysed more. A difference is perceived by investors, multi-managers and consultants. A multi-manager is perceived as stricter and more distanced, usually has more capacities and can therefore ask more detailed questions. The consultant offers high hurdles before a fund is signed, but then there is confidence and fewer questions. Sometimes the consultant must show the client that he is a tough dog. (C#2)

> The questions asked might be different depending on whether the investment manager is transparent or not. The kind of question also changes over time as more insight is gained by the investors. (C#1)

Moreover, they provide the following:

> Investors receive a very detailed reporting set, and advisory-board meetings take place twice a year and are scheduled for half a day. Lots of material is covered during those meeting. Very many questions are asked, but reporting has evolved over 30 plus years, and the company is still improving. Apart from the advisory board meetings and regular reporting, review meetings take place. (VP#5)

> Reporting is changing over time so that what investors need, will become part of the reporting package over time. (C#1)

Performance measurement was always considered to be more than just reporting and an additional closed question was added to hint at other specific tasks: Participation in advisory committees, site visits, reading/analysis of reports and networking with co-investors or managers.

All investors engage in these activities, however, there are some differences in how often they are done and by whom. Reports are read by all for every investment. Site visits and advisory committees are visited most of the time by all investors; some visit all advisory committees. This difference could be due to the size of investment (number of funds) or because of some pre-defined criteria exist or sometimes just due to lack of time. Advisory committee meetings often take place twice a year, involve travel and are therefore time consuming. Stand-alone site visits are made before a co-investment or if something important happens, but usually they are part of the advisory committee meeting.

Most investors network with other investors and managers and it is seen as an important source of information. This networking could be done by attending a conference or a fair, spending time after a meeting or bilateral talk. There was general agreement that much implicit information gets picked up during networking. While many investors do not explicitly monitor the fund manager during the holding phase of the investment, information about the manager is often transported through these informal channels.

No clear picture has emerged about who does what. Some investors have a dedicated allocation of funds to a portfolio or asset manager but for others, the head of the department attends.

A general overview of the fund performance-management system is given above and the following section is dedicated to different aspects of the performance-management framework.

This section aims to provide an overview of which factors are monitored by investors.

Table 3

Factors that are monitored by investors

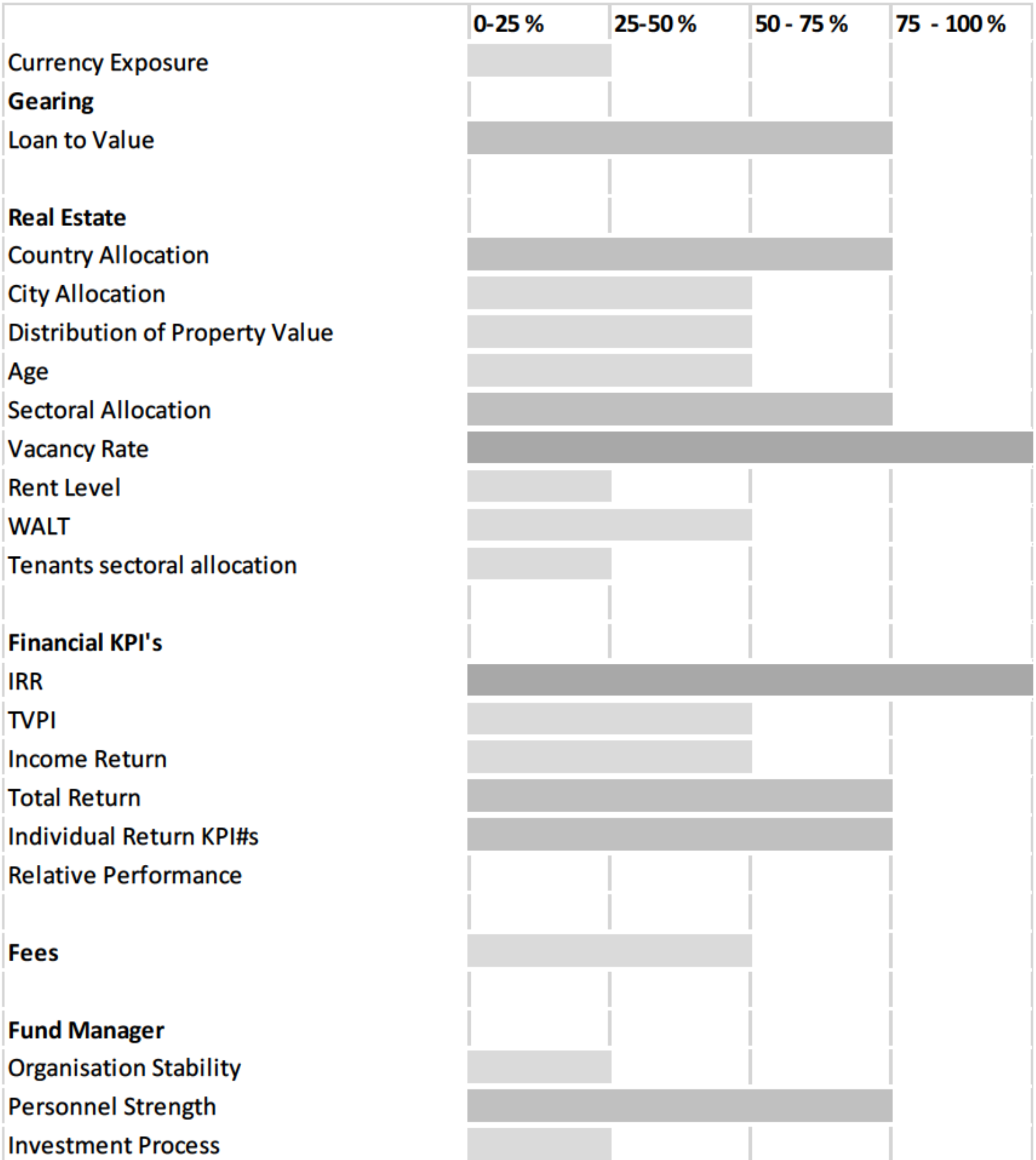


Table 4 shows several factors that are monitored by investors. Table 5 compares these factors to those identified during the literature review.

Table 4

Comparison of evidence and literature review

☑	**Currency Exposure**
	Gearing
✔	Loan to Value
	Properties
✔	Country Allocation
✅	City Allocation
☑	Distribution of Property Value
✔	Age
✔	Sectoral Allocation
✅	Vacancy Rate
✅	Rent Level
☑	WALT
☑	Tenants sectoral allocation
	Financial KPI's
✅	IRR
✅	TVPI
✅	Income Return
✅	Total Return
✅	Individual Return KPI#s
✔	Relative Performance
✔	**Fees**
✔	**Fund Manager**
☑	Organisation Stability
✔	Personnel Strength
☑	Investment Process
	Additional Factors
new	Co-Investors
new	Fund Size
new	Liquidity
new	Accounting Policy
new	Valuation
new	Timing
new	Local Presence

The factors and that were identified during the literature review as monitored by investors are indicated by a black tick (✅). The factors that investors monitor but are not identified in the literature are shown by a cross (☑). Factors that are monitored but are not explicitly mentioned in the literature review are shown by a white tick (✔). The factors that are monitored are not necessarily the factors that were identified as influencing the performance of real estate. Factors that were identified during the literature review but are not monitored appear at the end of the table. Some of these factors were also considered important by the participants.

Factors that are monitored but were not previously identified by the literature review include the following:

Currencies

No study could be identified that relates currencies and real-estate funds, but there is plenty of literature on currencies and international trade and finance. Most of the research has concentrated on the point of view of a U.S. investor (Soenen and Lindvall 1992, Schmittmann 2010). Hamza et al. (2007) note that there are effects of currencies on the performance of the portfolio for an equity portfolio. However, whether these are positive, negative or neutral depends upon the time horizon and the movement of the exchange rate. Froot (1993) suggests that the real exchange rate should stay constant over several years. Hedging real-estate investments in foreign currencies appears to make sense in the short run but makes less sense in the long run because of purchasing power parity. If hedging could be made free of costs, then it will always be useful. It is unclear what *long run* means for real-estate investments or for stocks. Froot (1993) suggests five to eight years for bonds. Schmittman (2010) points out that the effect of currency movements depends upon the home currency but less on the horizon, whereas his research is focused upon the shorter period (less than five years).

From the perspective of a Euro investor, currencies might have an effect only if investments are made outside of the euro zone and if the euro is not a functional currency for real-estate transactions and rental agreements (e.g. in Poland). Depending upon the investments made, currencies might be important for the individual investor, fund or data set.

Properties: Other Aspects

Structure and stock are named as performance drivers. *Structure* refers to the general allocation (sectoral or regional) and *stock* to the choice and management of the individual assets. Country allocation (Baum et al. 2011), age (Farrelly 2012) and sectoral allocation (Baum et al. 2011) are explicitly mentioned but allocation to cities and property values are not. City allocation could be seen as a derivative from both structure and stock, but the distribution of property values is new, although both make sense. As Hoesli and MacGregor (2000) note, "The traditional approach to property portfolio management was to look for 'good' buildings, however, defined, regardless of the impact on the structure and in the absence of an analysis of fund return and risk. However, an investment in an individual building which may appear 'good' in its own right need not be good in a portfolio context" (p.190). Baum (2015) suggests there is some evidence that larger lot size is more sensitive to changes in the economy and investment market.

De Quinsonas et al. (2013) suggest that weighted-average lease terms (WALTs) are key drivers for real-estate performance. The exact impact, however, depends upon the region and the point in the real-estate cycle. In a country like Germany, a lease term of five-plus years has a positive effect on performance. If vacancies are shrinking and higher rents are expected in the short term, then a shorter WALT could also have a positive effect.

No study was identified that addressed the influence of a tenant's industry on performance. However, it could be an indicator that an industry is suffering (e.g. the financial industry after the GFC).

On the other hand, De Quinsonas et al. (2013) suggest that a tenant's credit rating has an impact on performance. In France, especially, they observe a strong correlation between the credit rating and the likelihood of performance.

Financial KPIs

Past performance was identified as an indicator of performance during the literature review. No specific indicator is named and this is indicated by a white hook. De Quinsonas (2013) states that "income is the principal foundation of real-estate investment returns" (p.3). This underpins the notion of using the income return as one of the performance measures. Baum (2015) suggests that the return measures also depend upon the period they cover and may be country specific.

Baum (2015) considers IRR as a return measure of the future. The author agrees that this might be a return measure for a future return when the period that is measured ends in the future, but the understanding of the author is that most participants consider the IRR to be a return measure which ends at a past reporting date. (P#2, 3, 4, 6 and 10 explicitly refer to the IRR as return measure for performance review.)

Income returns (NOI/fund value at the beginning of the period), capital returns (change in value/fund value at the beginning of the period) and total returns (the sum of income return and capital return) are return measures of the past (Baum, 2015). TVPI stands for total value to paid-in capital and is an equity multiple. It neglects the value of time and has little value in the long run (Baum, 2015).

Fund Manager

Fuerst et al. (2013) and Kutsch (2010) suggest that access to expert management is an important reason why people invest in private real-estate funds but little has been said in this context about what this means.

This discussion leads to the next question: Which are the critical success factors? Are these monitored? The answer to this is that it depends. Real estate is hard to divide. Each property exists only once. While many properties might have similar characteristics, there are some limitations. Furthermore, real-estate funds also appear to be unique and the factors that impact the performance are complex. This complexity arises from the fund structure, the kind of investments that are made, the gearing, the cash management, the fund manager, the co-investors and the fees. And there are many sub-categories to these factors.

Let us first go back to some of the other factors that were mentioned during the interviews as important to the performance of a real-estate fund.

> Tenant retention – the rate of renewals. (VP#1)

This is an interesting factor for performance measurement as it could serve as the basis for some of the quality of the building and of the fund manager. One can assume that a tenant likes to stay in a good building. For a fund manager, this could be a sign that he is doing a good job. However, tenants leave for different reasons and many have nothing to do with the property itself or the fund manager; therefore, using tenant retention as a factor for measuring performance might underscore the quality of the building or the work of the fund manager.

Other participants suggested that green buildings are relevant to measuring performance:

> Green buildings are newer buildings and therefore attract more tenants. (VP#5)

> Following GRESB[9] targets – not only an indicator for the quality of the building, but also an indicator for efficient management (e.g., energy consumption, quality of the income, investment focus). (C#1)

This factor could be seen like tenant retention: It could be an indicator of the quality of the buildings and of the work done by the fund manager. Building quality depends upon the quality of the building and on the aesthetics, practicability and location. In a very central location of a European city, new buildings are rare; therefore, a building might be very good and attractive to tenants but not be a green building (in the sense that it has a certificate such as BREEAM or LEED).

Cash management is another item which seems to have an influence on performance.

Apart from fixed factors, investors appear to make many *ad-hoc* inquires.

> Some of the facts provided might lead to other questions: For example, if AUM increases, questions could be asked that relate to the plan to increase staffing. Alternatively, if a property is not performing, a detailed account of activities related to the property might be done. (VP#4)

[9] The Global ESG Benchmark for Real Assets

> An explicit review of the fund manager takes place when something special happens. (PM#2)

> We explicitly review the fund manager when a new fund is signed (or when the commitment to an existing fund is increased). (VP#3)

The visible performance measurement appears to focus on a limited number of aspects. Many more factors were mentioned by the participants than appear to be monitored. Therefore, the visible aspect of performance measurement appears to be smaller than the invisible part. Donner (2010) suggests that, in the real-estate industry, "gut feeling" is used as a decision-making aid. This could be one explanation. Another has been voiced by some participants:

> The factors depend upon the kind of fund. (VP#1)

> …it depends upon the kind of investments. (VP#3)

It could therefore be the case that these factors are relevant to most funds but not necessarily those that have the most influence on an individual basis.

Conclusion

This chapter presented the empirical findings and intended to answer three of four study objectives.

Performance remains a loosely defined term. While there appears to be a general understanding that it refers primarily to past performance, the exact definitions vary. Some focus on income return, some on total return irrespective of the vintage and others distinguish between absolute and relative performance, which in turns leads to the role of benchmarks. Attempting to answer this question is important in the present context but narrowing down the definition is difficult as the types of funds and the interests of the investors are diverse.

The literature review reveals that many factors drive the performance of private real-estate funds. This is a finding that has been confirmed by empirical evidence. Given the open-ended nature of questions, it is not surprising that not all factors were confirmed and that the number of factors mentioned varies between market participants. This certainly reflects the different experiences of the participants. The complexity of the topic as discussed before also surfaces here. Types of funds and factors are so abundant that it is challenging to add new factors. They could be a crucial point for an individual fund but might not be important at all to another fund.

The study explicitly focuses on real estate private equity funds as the aim is to answer the real-life problem of an investor that invests in many funds. It is challenging to have a framework for performance measurement that on the one hand covers all kinds of funds and on the other hand has "original factors". The route chosen by investors so far is to acknowledge this by focusing on a few obvious factors depending upon their own needs.

The next chapter focuses on the impact of the findings on performance measurement framework and whether it will be possible to narrow it down.

5 Discussion of Findings

The previous chapter explores the first three objectives and this chapter focuses upon the fourth objective:

> *What are the similarities and differences in the performance-measurement approaches, and is there common ground for a performance-measurement framework?*

None of the participants suggested that the performance-measurement system is used for strategic purposes or to support decision making. As a result, the author concludes that investors view the performance-measurement system somewhat narrowly, as a reporting system. The performance reports are quite often forwarded to senior management for information purposes and these systems are clearly intended to perform some of the functions that are associated with performance measurement in the appraisal of the past performance of a fund and portfolio. However, they lack the sophisticated methods demanded by Amenc et al. (2011). This conclusion is supported by the fact that the dominant factor in performance measurement seems to be past performance. Past return, is short term in focus when the focus should be on factors that matter in the future. This rather narrow focus appears to be more in line with the understanding of Baum (2015), who suggests that performance measurement focuses on the past and that portfolio analysis and portfolio strategy are disciplines which cover the present and the future. For most participants, however, portfolio analysis is at least part of the regular performance-measurement framework. Therefore it is suggested that the aim of the performance measurement framework is to focus on the past and the future.

The framework that was developed in Chapter 2 did not include a learning perspective. However, the case study in this chapter shows there are elements in the framework from which the investor learns something about the future performance of the fund. None of the participants mentioned that there was a learning element involved in the way they measured performance; this supports the approach taken. On the other hand, would it not make sense for both fund manager and investor to learn from the past and adapt to the future?

There are notable differences in scope and frequency in performance measurement. At one company the reporting was reviewed by an external consultant and touched upon many points that were previously identified but another organisation only considered IRR and cash flows. While one organization may have a more structured approach, the other may be less structured. Difference is evident when comparing which factors are considered important to how structured the approach is. This study adds to the findings reported in the literature and should enable the construction of a more sophisticated performance-measurement framework.

The empirical evidence hints that no sophisticated framework exists but the participants all suggest different criteria and appear to have a thorough understanding of the subject area. If an explicit choice is made it might therefore be possible that the performance review is not used for strategic purposes - those strategic decisions may be made by different means. As a result, further research is needed to explore how strategic choices are made.

However, these are just some of the aims of performance measurement. Even when one invests in a closed-ended fund and the decision is made for the investor to stay in a fund until maturity, the performance review should still provide the investor with some additional information and provide hints on areas which areas the investor needs to address with the fund manager. As stated in subsection 2.3, investors are expected to monitor their investments and the investor needs information to do this. Another interpretation is that the performance review is made in an invisible way; only what is relevant to many funds or is seen as relevant by a superior is part of the current performance framework. The research was conducted to discover something tangible but there also appears to be intangible elements.

Kutsch (2010) suggests that the main drivers for investing in funds are: (a) to gain access to otherwise inaccessible assets and management and (b) the potential to enhance returns through gearing. While market participants confirm the former, gearing is seen more sceptically today. Excessive gearing is said by some to be detrimental to a portfolio.

The main findings of the research so far are the following:

1. When evaluating the performance of a real-estate fund, the dominant factor is return.
2. Different investors have different ideas about which return figure is important: income return, total return, IRR, or absolute and relative performance. Absolute return appears to be more important than relative return.
3. The quality of the property and the skills of the fund manager are both considered important, but what is considered more important depends upon the experience of the investor.

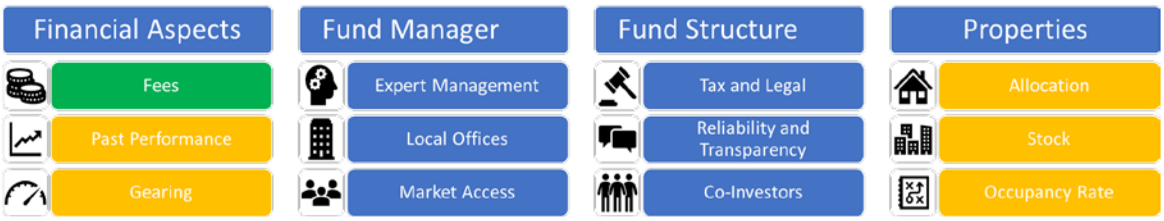
4. Co-investors and the fund structure are also considered important, but here the preferences also differ.
5. Fees are also considered important to the outcome of the fund but are not part of a regular review. They are important to consider before an investment is made.

To address the final research question—whether a common ground exists for a performance-measurement framework for investors in real-estate funds—it may be best to start again by using the performance-measurement concept as developed in chapter 2 and then to adjust the framework with the findings from the previous chapter.

As the focus here is on the individual factors, the heart of the framework "risk and return" are left out, but will be included in the framework after the discussion.

Table 5

Preliminary Framework



Note. Amber = All or many participants confirmed that those sub-perspectives are part of their performance-measurement framework and the sub-perspectives are considered confirmed.

Green = Some participants confirmed that those perspectives are part of their performance-measurement framework and the sub-perspectives require additional discussion.

Blue = Requires additional discussion.

Table 5 shows the preliminary framework again. The sub-perspectives that were part of the preliminary framework and were confirmed by empirical evidence are highlighted in yellow and blue.

In order to show that the factors are supported by empirical evidence for each of the factor one reply from 4.3 is selected that the author considers most relevant to support the argument or the factor.

Past performance

Most relevant reply from the interviews to support keeping past performance as part of the framework:

We have a very precise definition of *performance*. Total return (taking into consideration any write-downs or write back) and any unrealised changes in hidden reserves about the average stock measured at market value for each investment. To 99%, the total result of the year is important. (PM#2)

Gearing

Most relevant reply from the interviews to support keeping gearing as part of the framework:

> Excessive gearing has been detrimental in my investment experience. In Japan, gearing was rather cheap in the 2000s, and an LTV of 80% for any property was not uncommon. Then the global financial crisis came in 2008, and all equity was wiped out, and the keys were handed back to the bank. (C#1)

Allocation

Most relevant reply from the interviews to support keeping allocation as part of the framework:

> Portfolio construction is one of the important factors for fund performance. An example is to buy an empty building and a fully let building around the same time so that there is always some income. (C#1)

Stock

Most relevant reply from the interviews to support keeping stock as part of the framework:

> Also, a bad manager should be able to achieve a decent result with a very good property. (VP#2)

Occupancy rate[10]

[10] Occupancy rate and vacancy do not have the same meaning, but do show the same: the percentage of the property that is let and not let.

Most relevant reply from the interviews to support keeping occupancy rate as part of the framework:

The vacancy rate could be a benchmark for fund-management performance. Principally, one can distinguish between a vacancy rate that is the result for measures taken [e.g. refurbishment] and a vacancy that is the result of a lack of demand, and only the second is critical and can serve as a scale or benchmark. (VP#3)

Fees

Fees were considered an important driver of performance in the literature review and were also confirmed as a performance driver by many participants. However, almost no one appears to monitor fees regularly. Those who considered fees important but did not monitor them regularly said that fees are negotiated before signing up for a fund and it is difficult to change them afterwards. Even if this is true, it is only part of the story. Fees are agreed upon by the fund manager beforehand, but not with all the other parties who are involved. Buying a property usually requires the use of consultants and advisors. Not all functions needed to manage a property are done in-house; some of the administrative functions might be outsourced. Fees, therefore, might be too narrow and it might be advisable to also include costs in the sub-perspective fees.

Most relevant reply from the interviews to support keeping fees as part of the framework:

German funds often have an acquisition and a disposition fee and when a property is sold, and then another one bought in fast order. You need to challenge that. (VP#3)

Fund Manager

Investors acknowledge the importance of a good fund manager and conduct thorough due diligence before investing in a fund, but once an investment is made, the fund manager is less important. One reason investors might not monitor the fund manager during the holding phase is that, now that they know him, they feel no need for oversight. Why, then, is the fund manager re-evaluated when a new investment is made? Some investors regularly review the fund managers who report on questions that are regularly asked by investors and that relate to their respective organisations. Empirical evidence confirms the importance of the fund manager for the performance of the fund but it gives little guidance which aspects of the role might be relevant and the importance placed on the fund manager varies. Still, it is recommended to keep the fund-manager perspective and its sub-perspectives as they were and to subject these to a practice test.

Most relevant reply from the interviews:

> Principally, it is important that the fund manager has made a difference to the investments and has thereby added value. An example is taken from an investment in the residential sector in the USA. The target time to refurbish an apartment is six weeks and undercutting it leads to a faster re-letting. Significant undercutting of the time could be an indicator of efficient management. The budget should not overrun because of the lesser time need. (VP#3)

Fund Structure

The next perspective was fund structure. This was ranked as less important by participants. The literature review provided details about the complex regulatory perspective of institutional investors, which does not affect each investor to the same degree.

A regulated investor such as a smaller insurance company must adhere to German regulation such as the *Anlageverordnung* at any time and also report on this regularly. In addition, it was mentioned that even medium-sized investors have set up separate vehicles to be able to invest in a wider range of investment funds and therefore to some degree avoid the topic of regulatory issues. For this reason, the law item appears to be more important for some investors than others and is, therefore, questionable in a general framework.

> Most relevant reply from the interviews:
>
> Also, when it is essential that the fund could be bought by an insurance company, many investors now have special purpose vehicles, so that alternatives do exist. (VP #2)

The part of the literature review that explicitly addressed performance drivers for real estate funds did not point to taxes. Taxes were named as important drivers of performance by some participants, but not as part of the regular fund review. Taxes appeared to be more of an *ad hoc* item that is reviewed if there is a reason, such as a change in tax rules in Germany or abroad (location of the properties). Taxes appear to be important but the question remains as to what could regularly be reviewed and how. The solution could be to leave taxes in as a sub-perspective but let each organisation decide individually what is important and, if possible, leave it to the tax and legal departments of the investor for completion.

Most relevant reply from the interviews:

Taxes – we had investments in funds which had to be restructured by 2/3. (PM#2)

Trust forms the basis for all relations and can change how we interact with each other. One could expect that the level of trust in an investment relationship has a positive impact on the performance review of the investor - the more they trust, the fewer questions are asked. However, nobody has confirmed this and one could say that the effect of the relationship on performance review is the opposite - the more trust exists, the more questions are asked. Trust quite often goes with greater understanding and the more one understands a fund and its properties, the more one can ask informed questions. No one in the study reported not trusting a fund manager; thus, trust as a sub-perspective does not appear likely to be regularly reviewed. The same would be true if reliability is used instead of trust.

Transparency, on the other hand, could definitely be reviewed. The quality of reporting has improved over the last ten years and fund managers report that they continuously improve their reporting. There is, therefore, a need for more transparency and more information.

Most relevant reply from the interviews:

> The questions asked might be different depending on whether the investment manager is transparent or not. The kind of question also changes over time as more insight is gained by the investors. (C#1)

Several participants noted the importance of co-investors for the success of a real estate fund. This is considered to be a clear success factor but no one monitors co-investors during the holding phase. When signing up for a fund one might determine who else is investing, depending upon when one enters. In an open-ended fund, a new investor could always enter. Even if someone is the last investor to sign up for a closed-ended fund and knows all the other investors to be "like-minded" people, strategies might change; therefore, investors who were previously like-minded and cooperative might behave differently. The author believes this could be an important factor and, although it is unmonitored, it should be kept in the framework.

Most relevant reply from the interviews:

> The larger the fund, the less important are the co-investors. For small funds or co-investments, the co-investor is essential. (VP#3)

Properties

The last perspective concerns properties; all three sub-perspectives are already monitored by many participants. Since investment strategies are not alike, one question is whether the occupancy rate is a feasible sub-perspective as this might not be relevant for funds that have a value-add or development focus. WALT can provide an alternative to the occupancy rate and is an item that might influence future performance.

Some sub-perspectives from the preliminary framework were confirmed but others are still questionable. What about other factors? Currencies have been identified as a performance driver but they are not relevant to every fund—and maybe not even to every investor. Currencies should be part of the fund-structure perspective and may be considered an alternative to either transparency or tax and legal.

One of the assumptions for a framework is that merely concentrating on financial indicators is not sufficient. The focus is on past performance but it is evident that market participants share the assumption that one should not concentrate on financial indicators alone. A clear need for a common framework could not be identified but there is clearly interest in this topic and so the topic is relevant. It is therefore necessary to adapt the perspectives of the balanced scorecard to the needs of private real estate funds.

The foregoing discussion suggests the following framework. It is still called preliminary, as it will be subject to an initial validation in the next subchapter.

Figure 23

Preliminary Framework - Version 2

5.1 Initial Validation

5.1.1 Part One: Panel of Experts

The performance-measurement framework from Chapter 2 is adapted to a new preliminary framework earlier in this chapter. Experts sought feedback on the interim result. These three experts worked in different senior positions for one fund manager, with AUM in real estate of more than €5 billion and worldwide investments and clients. The three market participants were not interviewed beforehand and when the sessions took place they lasted between one and two hours.

The sessions were generally structured around a discussion of what an investor would monitor in non-listed real estate. The primary focus was on the framework for performance measurement and the secondary focus was on data collection. The guiding principles were the conversion from theory to practice and how the findings could be applied in 'real life'.

This chapter has a thematic model approach and will highlight the major themes that arose from the discussions. It focuses on three aspects: (a) confirmation, (b) discussion, and (c) additional points.

1. Confirmation. As seen in Chapter 4, market participants consider fees as important, but only a few appear to monitor these regularly. It was, therefore, suggested to expand the sub-perspective from fees to fees *and* costs. That this expansion is valid, is illustrated below.

Expert:	'The investor should have the possibility to look at the costs of each SPV. So, the investor can assess whether the benefits outweigh the costs.'
Researcher:	'This is certainly of interest, but how can you assess the benefits?'
Expert:	'You will have to ask the fund manager for each special purpose vehicle (SPV), but generally speaking an SPV could offer you two possibilities: reduced liability and tax efficiency.'
Researcher:	'The first one is easily verified, but I think tax efficiency will be more difficult to evaluate.'
Expert:	'Well, you just need compare the taxes in the case of direct holding to if the investment is held via an SPV.'
Researcher:	'I understand your point, but you would stop at the fund level?'
Expert:	'Yes, we do not know about the specific rules of each investor'

Researcher: ‘That is perfectly understandable, but the investor might want to look at the total tax burden [taxes at the fund plus taxes to be upon sale, receipt of distribution at investor level].’

Expert: ‘Fair point, maybe a more general overview of fees and costs makes more sense.’

It goes without saying—past performance should be part of the framework. The question that has not been answered yet regards return measures:

Expert: ‘What kind of return do you think investors want to look at?’

Researcher: ‘I think it very much depends upon objectives of the investor. For some investors, income return is the dominant driver, for others it is total return or IRR. What would you suggest?’

Expert: ‘This is also my impression. I think one should collect the raw data. Then one could calculate any kind of return and one can sure the return is calculated correctly.’

2. Discussion. This first discussion between expert and researcher under subsection 1 also illustrates the sub-perspective on taxes. Taxes are a rather complex issue. On the one hand, there are taxes by the fund; on the other hand, there are taxes that the investor must pay. While both are relevant, it would be more difficult to include both and the priority should be fund-level taxes. There should also be some measure of what would be expected for a certain type of fund. Investing in a private REIT should deliver almost 0% taxes at the fund level but standard tax rates at the level of the investor. This, therefore, appears to be a rather subjective sub-perspective which each investor must consider individually.

Moving on to the subject of fund managers it is no surprise that the influence of the fund manager on the performance is met with agreement. How exactly this influence could be measured, however, is subject to discussion.

Expert:	'Expert management, how do you want to measure this?'
Researcher:	'That is a good question and so far, I have no real answer to this. One could look at degrees or working experience, but also these things do not tell something how good people are.'
Expert:	'It appears to be highly subjective.'

This suggests some judgment is needed when evaluating the performance of the manager. Who could do this? Most probably the investor. Another question was: If investors are currently not monitoring fund managers, what would make the investors begin monitoring?

Another idea was to include a review of a fund manager performed by an external party. This appears only to be feasible if the costs are shared by many investors and then only if they are negligible. Asking the fund manager to pay for a rating might not be helpful and the review might not be considered independent. In addition, who could really do this? Scope Ratings[11] was named as one option, but here, the manager usually pays, so the most feasible alternative would be to focus on a few measurable points.

[11] www.scoperatings.com

As an interim conclusion, expert management is relevant but difficult to assess. Expert management was not the only topic that faced a measurement issue, illustrated by the following conversation on transparency.

Expert:	'Investors are looking for more transparency, but I am really interested to know how you think it can be measured?'
Researcher:	'I have been thinking about this as well. At the moment, I also do not have a real answer. I am thinking about looking at what kind of data and information that is made public, presentations are sent before a meeting (a week before) or when meeting transcripts are made available.'
Expert:	'Those are valid points. But how can you put this in one indicator?'
Researcher:	'I have to think about one.'

No answers to the question of a single indicator were found during the sessions. The next sub-perspective of co-investors was also discussed.

Expert 1:	'When we raise a fund, we try to have "like-minded" investors in the fund. But people and objectives change over the life of the fund.'
Expert 2:	'This again would be subjective judgement.'

While there is general agreement of the importance of having investors who are like-minded, having a template which includes some characteristics of other investors might not increase the trust between investors. So, either one replaces it as a category or includes just the type of investor (e.g., pension, insurance).

3. Additional points. Additional points were also raised during the discussions.

Regulatory reporting as part of the performance framework? One suggestion from the experts was that the framework should include a status report that confirms how the fund fulfils the regulatory requirements of investors. It was also a common understanding that there is no need for investors to review the situation on a regular basis. Investors which are subject to regulatory requirements need to report some statistics to a regulator, but this is not connected to any performance driver. One has to report, for example, at which banks cash is held.

Experts:	'Investors always ask us for regulatory reporting. I think this should be part of the framework.'
Researcher:	'I understand that regulatory reporting is needed by regulated investors. But those investors that are regulated did not mention it as part of their performance framework. Besides, my understanding is that regulatory reporting has only little to do with performance factors.'
Experts:	'Yes, that is true. There is no real link between success factors and what is to be included in the regulatory reporting. We do the reporting and send it over to the investors.'

Properties. All the proposed sub-perspectives were considered relevant and nothing significant was added in the discussions. However, the experts agreed that it was possible to gather much more detailed information from other funds and that a fund manager could provide more information. They also showed some practical examples.

5. **Summary.** The outcome of the discussion is summarized in the following table.

Table 6

Summary – Panel of Experts

Subperspective	Feedback	Comments	Aktion
Fees & Costs	Confirmation	Discussion on specific cases	Keep
Gearing	Confirmation	Including measures beyond LTV is an option	Keep
Past Performance	Confirmation	Use raw data, investor specific	Keep
Expert Management	Diskussion	How to evaluate?	?
Local Offices	Confirmation	Could be solved digitally	Keep
Market Access	Confirmation	Off-market deals	Keep
Sectoral Allocation	Confirmation	None specific, more information on properties would be easily attainable.	Keep
Regional Allocation	Confirmation	None specific, more information on properties would be easily attainable.	Keep
Occupany Rate	Confirmation	None specific, more information on properties would be easily attainable.	Keep
Transparency	Diskussion	How to measure?	?
Taxes	Diskussion	Difficult to measure	?
Co-Investors	Diskussion	Difficult to measure	?

Note. More information on gearing and properties would be easily available from funds in addition to the table data according to the panel of experts.

The author believes that the discussions support the general idea of the framework and most of the sub-perspectives although it might be challenging to transition the framework from theory to practice. The next subchapter will develop this further.

5.1.2 Case Study: Applying the Framework

The framework was tested with respect to two funds, following up on the initial validation. Both are Euro-denominated core funds, have a 10+ year history and invest in European commercial real estate. Fund 1 uses RICS valuation standards and quarterly valuation. Fund 2 uses the German valuation system and its properties are valued on a yearly basis.

The starting point is once again the preceding preliminary framework. In the previous subchapter, some question marks were put after some of the sub-perspectives.

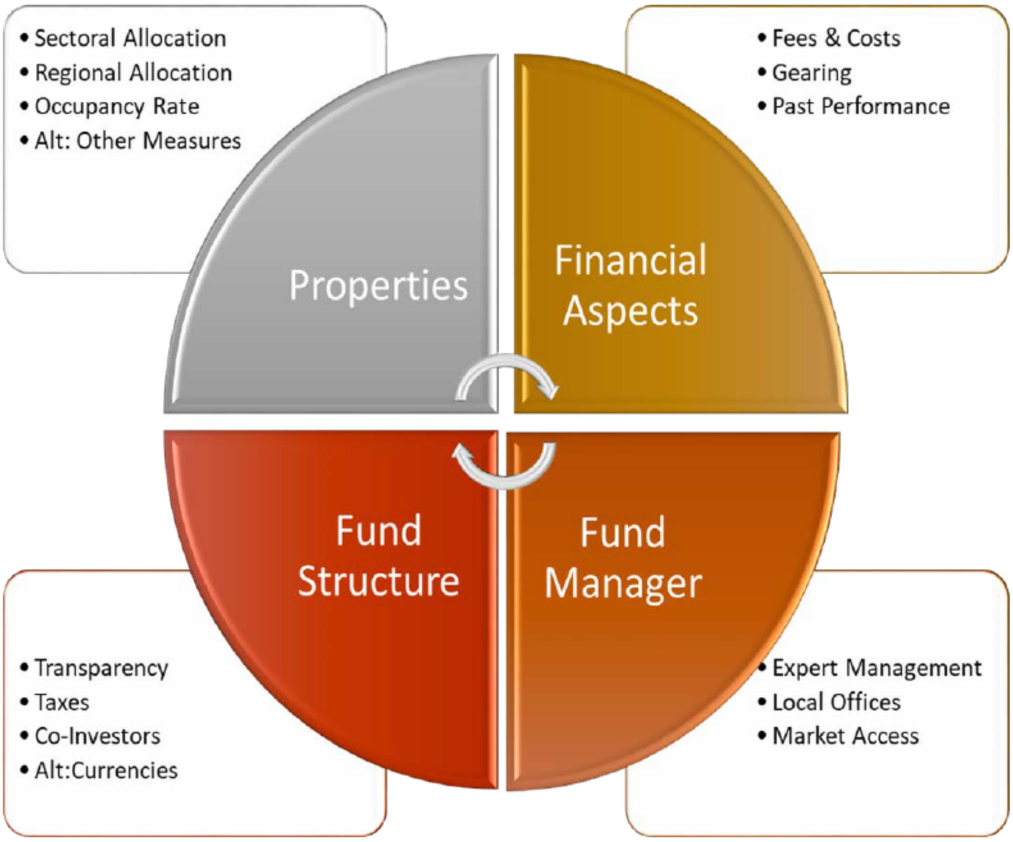


Figure 24: Preliminary framework.

What is missing from figure 24, are risk and return. So, the first step here will be to answer the question, what are the intentions with respect to the investments. The discussion has to start with an understanding for performance. The author can relate best to the following statement:

> Performance means "persistence of distributions and a stable return. "(VP#1)

So, the hypothetical investor would be looking for a fund that has regular distributions that are consistent each year and in addition a steady increase in value of the properties. Risk is broadly covered by the investment strategy Core. This classification gives also some hints about expected returns. Core returns as per chapter 1.1.3 are 3-5 % income return and 4-6% total return.

Some changes will be introduced to the framework as a result of the preceding discussion. All information from the funds—mainly quarterly reports and presentations from the advisory boards—were read in preparation for establishing the framework. The author put the preliminary framework next to these documents. The information on sub-perspectives for properties and financial aspects could all be easily obtained from the documents. However, for the fund manager and fund structure perspectives, a side step is needed: First a proxy or a replacement is required and then the fund manager may need to be called up.

The case study starts with the fund manager perspective. The first sub-perspective in this category is expert management. Staff turnover and full-time equivalents (FTEs) are suggested as a proxy for expert management because, assuming the investor conducted an initial due diligence before investing in the fund, the manager would have made sure that the people associated with the fund would have the required expertise. A concentration on changes therefore appears reasonable. Some staff turnover is normal and good but if too many people leave this could be a sign that something is not working well. FTEs approximates the number of people who are working for the fund. The statistic is used because, quite often, staff are not allocated completely to one fund. For example, if an asset manager is responsible for investments in one city, that manager's responsibility would most likely include more than just the properties of one fund. The number of FTEs must be appropriate to the number of properties managed and an understanding of the composition of the team is necessary. This does not necessarily indicate whether the people who are hired are experts in their fields but it should at least allow the investor to start asking questions if more properties are bought or if somebody leaves the team every year. The suggested proxies are based upon the authors own experience and therefore represent the position of the author.

Tenant retention is suggested as a proxy for market access. The number of off-market deals was suggested as an indicator for market access in the previous chapter. Those two funds have already built up a portfolio and there are only a few investments or disinvestments in a year; in this case, an indicator that focuses on the existing buildings appears to be more relevant. Both green buildings and tenant retention were suggested as indicators of the performance of the manager and of the quality of the building. Tenant retention is favoured as this may include a wider range of properties. A property build in the 1600's in Italy might not be able to receive a decent green building certificate, but nevertheless may attract tenants and also support green thinking. The reason being that the property is in the centre of the city and accessible via public transportation or walking and shops and restaurants are in walking distance where reducing the need to use a car. The walls could be rather thick therefore eliminating the need for an air conditioning.

The information in relation to the fund manager had to be obtained from the fund manager and was not included in the standard reporting.

The intention was to concentrate on (preferably) one performance indicator. This was not possible for two sub-perspectives (i.e., transparency and taxes) and for those two, the status quo is merely described. The sub-perspective of co-investors is replaced with the sub-perspective of currencies. In addition, since two separate benchmarks apply to each fund, this was included in the financial aspects perspective.

The framework for Fund 1 is displayed in Figure 25:

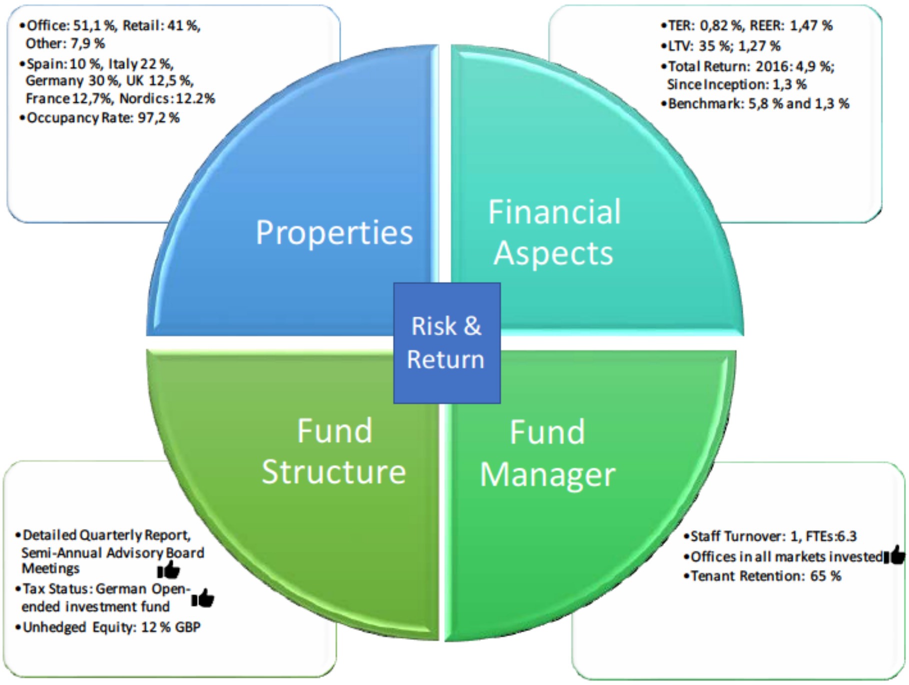


Figure 25: Framework for Fund 1

The framework for Fund 2 is displayed in Figure 26:

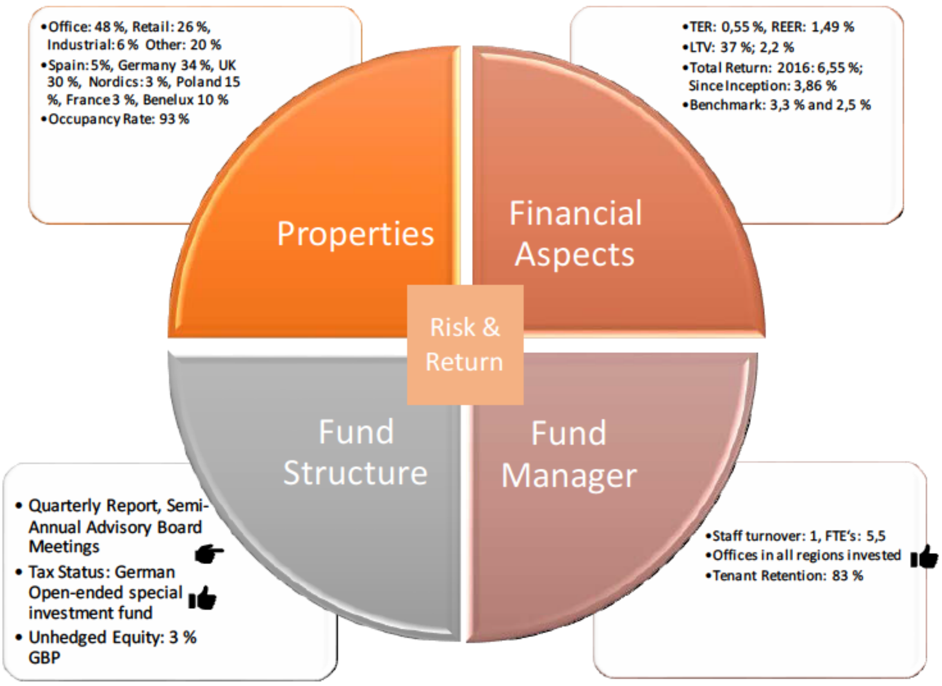


Figure 26: Framework for Fund 2.

A comparison of the two funds reveals several points. First, both funds are diversified. Fund 1 concentrates on fewer countries and fewer sectors. Fund 2 is primarily invested in the UK and Germany, although it is invested in more countries in total. One could also use a chart to compare them to the intention they had in addition to these numbers (compare strategic allocation with actual allocation). With a strong allocation of 30 % to the UK and the uncertainty of BREXIT and its consequences ahead, the performance of Fund 2 is expected to be less secure than that of Fund 1.

The occupancy rate of Fund 1 is quite high. With 97% rented, there is an expectation that there will not be many properties with rental issues. Fund 2 also has a high occupancy, but there is still some room for improvement, and it may include some properties which have some issues i.e. a non-voluntary occupancy rate of less than 90 %. One the hand this might hint at the possibility for an improving performance and on the other hand this might also be an indication that there are some properties might have some issues.

The performance of Fund 1 was less than its benchmark but more than the Fund 2 benchmark in 2016. For Fund 1, the benchmark is the Inrev index, which includes properties which are invested in Europe. Fund 2's benchmark is the IPD/MSCI special fund index: an index of *Spezialfonds* (special funds) which are invested in European real estate. Two separate indices were selected to illustrate the difficulty of selecting the right benchmark.

Two ratios from INREV are used for fees: total-expense ratio (TER) and real estate expense ratio (REER). TER is expressed as a percentage of GAV. REER includes the TER figures plus all property-related expenses and may also include professional fees from lawyers and tax advisors. In REER terms, both funds are similar; in TER terms, Fund 1 is more expensive than Fund 2.

The quality of reporting and meetings is used as a proxy for transparency. Fund 1 provides for a very detailed quarterly reporting and one half-day of meetings twice a year. Fund 2 provides a less detailed quarterly reporting and its meetings last one quarter-day twice a year. The transparency of Fund 1 is therefore rated higher than Fund 2.

The focus for taxes was on applicable tax rules which do not say anything about the efficiency of the fund structure or the fit of the fund for the investor; the rules merely explain the tax status according to German law, which may satisfy some tax compliance considerations. However, this indicator does not satisfy the intention of the framework.

The next sub-perspective relates to currencies. The exact indicator is a portion of unhedged equity. Fund 1 has a rather large exposure to GBP, which is not hedged, and since the numbers refer to 2016, it certainly had an impact on the performance.[12] Between June 2016 and December 2016, the GBP lost around 10% against the Euro. In comparison, Fund 2 has a much smaller unhedged portion as it hedges most of its exposure. Fund 1 saw about 1% lower performance than Fund 2 in 2016 because of its GBP investments and non-hedging.

[12] In June 2016, a referendum in the UK was held and 51.9% of voters favoured the exit of the UK from the European Union. The GBP dropped by 8% in the days following the referendum (Exchange rate on June 20: 1 GBP = €1,30; June 30: 1 GBP = €1,20; December 31, 2016: 1 GBP = €1,17).

The last perspective is the fund-manager perspective. Both funds have offices in all markets in which they have invested. Both had one change in their respective teams. Fund 1 employs 1.2 fewer FTEs than Fund 2 and has more than 80% tenant retention compared to the 65% of Fund 2.

Both funds have done quite well in the past. They have a lower gearing of 35% and 37%, respectively. Fund 1 is already paying less interest than Fund 2. Giving the current low interest environment, there appears to be room for improvement in the performance of Fund 2 when the loans comes up for renewal. The fees are comparable (REER of 1,47 % and 1,49 % respectively). Fund 1 is well let and has a high rate of renewals. Fund 2 has a lower rate of renewals and more space to let which could improve the performance of the fund in the near term if the economy continues to grow. Currencies are an item to watch for in Fund 1 as it does not hedge, but if the GBP rebounds, it could also improve the performance of Fund 1.

Focussing on past performance would have clearly given preference to Fund 2 because in 2016—and, indeed, since inception—the performance was better than that of Fund 1. As the preceding analysis shows, however, the framework provides the investor with a richer and fuller picture and can help the investor make a more informed judgement about the fund and its future performance. Both funds can be expected to perform well in the coming years. The author would choose Fund 1 over Fund 2 but would ideally keep both funds.

With regards to risk and return both funds satisfy the general criteria: A core fund (see 1.1.3) has a leverage of less than 40 % and might have some redevelopment or exposure to non-income producing assets. The leverage of both funds is below 40 % and both have neither development projects nor exposure to non-income producing assets. The total return is within the range of a core fund for Fund 1 and even exceeds the range for Fund 2. The framework does not contain any indicator for distributions, and it does not tell you how persistent the return is. A figure for return since inception has been included, but that also does tell you about persistence. One could add distributions as return and also show the return for a longer period: e.g. the last five years. A risk could be that then the focus is too much again on performance. But one could exchange the return since inception with the average or median return over the last five years. For an investor that has a focus on stability and distribution Fund 1 might be more promising since the vacancy rate is much lower than that of Fund 2.

5.1.3 Adaptation of the Framework

The framework was subjected to an initial valuation, first by a group of experts and then through a case study. The framework developed as part of this study is believed to be a valid tool for better measuring the performance of investments in non-listed real estate funds.

From the initial validation, some changes to the preliminary framework are suggested.

In the fund manager perspective, expert management is replaced with adequate expertise and market access is replaced with tenant retention. In the fund structure perspective, liquidity replaces co-investors. Both the literature review and empirical evidence suggest the importance of liquidity as the driver of performance. Liquidity can be easily measured and appears to influence the performance of non-listed real estate funds. Co-investors have clearly been identified as an influencing factor for the performance of non-listed real estate funds. However, it does not appear socially acceptable to rate your co-investors and this might be better done virtually. A rating of the fund manager is accepted.

Further research is suggested to identify more fitting indicators for taxes and transparency. A few more indicators should also be considered for some of the perspectives (e.g., past performance—one could add a benchmark to show relative performance and add different time horizons and performance metrics).

The aim of this study was to lay the basis for the framework. The author believes this has been achieved but that some additional research should be conducted to refine the framework.

The author believes that one of the most important results of this study is that a framework that fits the demands of both fund and investor might be preferable. It might only apply to the demands of the investor—or even only to some of its funds—instead of to a wide range of either funds or investors. So, the framework itself should inspire focus on more points than just financial indicators.

Further research might be fruitful to back-test the framework: For example, are the items included here sufficient to explain the performance of a non-listed real estate fund?

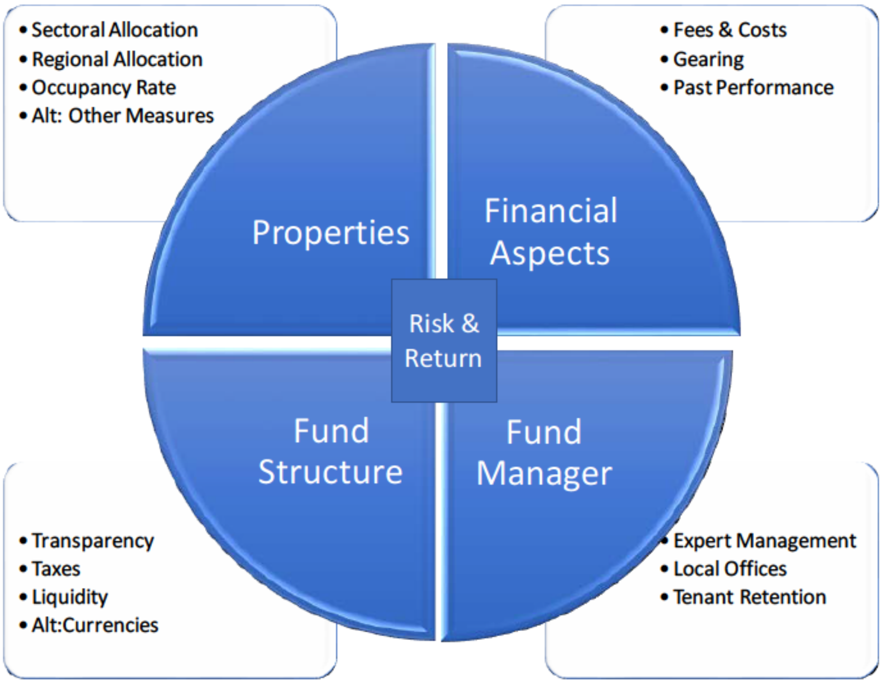


Figure 27: Performance-measurement framework.

The best possible use of the framework would be to incorporate it into a software package where information is uploaded directly by the fund managers. The information would then be validated by rules and calculations could be made automatically. An investor could also choose between different kinds of perspectives. The framework could then be shown in a dashboard and reporting activities could be accessed.

In addition, one could easily compare historical information, e.g. how the tenant retention has developed over the last five years and then compare it to other figures to find out if they are any correlations. One would expect for example that there could be a correlation between the number of people working for the fund and the tenant retention. It goes without saying that the information may be used to compare the performance of the funds' as well as serve as the basis for internal benchmarks.

With the framework being part of software package, it might be easy as well to have different frameworks for different kinds of funds. For a core fund, the rate of occupancy might be really important, while for a fund that develops property adherence to the budget or keeping the timeline might be more important.

5.2 Conclusion

Institutional investors appear to use performance measurement to look at past and present situations but not at the future. The framework presented has a major focus on the past and present but does include some elements that focus on the future. Some elements may invite further questions. For example, the occupancy rate gives the reader information about the past, present and future. A high occupancy rate, in combination with a high tenant retention rate, gives the reader the impression of a fund which will generate a calculable income return and at the same time create an expectation of moderate increase in value.

The framework contains some subjective elements. The model framework (5.1.2) makes some suggestions for alternatives. Tenant retention in combination with the occupancy rate casts quite a good light on the state of the portfolio and the work done but the solution for transparency and taxes appear less convincing. Additional research needs to be conducted to look for some more convincing alternatives. Nevertheless, the author believes that the current research should provide the basis for a more comprehensive understanding of the investments that one has made. The model framework for two core European funds explains this quite well and clarifies that properties and factors such as gearing and currencies may have a strong influence on the performance of a fund. It also shows the value of applying such a framework. Some participants are already using a multifactorial approach to performance measurement and for those participants the framework is nothing new.

The reports that were forwarded to the author were quite extensive and sometimes covered more aspects than were addressed by the framework. The framework might be useful as it focuses on a reduced number of items and only covers one page. Reducing the number of line items could expand the focus from past performance and thereby increase understanding of the subject matter. Less can sometimes be more.

6 Overall Conclusion

The final chapter presents a summary of the main conclusions in the light of the research objective.

The objective of this study was the exploration of the market for non-listed real estate funds with a focus on the requirements of institutional investors from Germany. The research aim was to gain a better understanding of the market for private real estate funds in general, determining what factors market participants value as performance drivers and contrasting these findings with earlier studies on this subject. An additional focus was to understand how the performance of non-listed real estate funds is measured and monitored by investors from Germany and to see whether it would be possible to lay the basis for a common framework for performance measurement.

The major investments made by institutional investors are bonds and equities although these are predated by real estate as an investment class. Real estate is lumpy, unique, and work-intensive. Funds have eased access to this asset class and investment rates have risen over the last two decades and now average around 10% of AUM. Corporate pension investors in Germany have a lower rate (around 5%) and occupational pensions are between 10% to 20%. The tax and legal framework for these investments in Germany is quite complex and so investors and fund managers must understand it well.

Performance is an ambiguous term and performance measurement is a broad field. There has been a great deal of research in this field but not on the topic of performance measurement for non-listed real estate funds. Several models for performance measurement exist. The balanced scorecard was considered the best template for the topic as it is widely used and has already been adapted to uses outside of organisations (e.g., to partnerships). Only a small number of studies have focused on performance drivers in non-listed real estate funds but several performance drivers for the performance of funds were identified during the literature review. They can be grouped into four categories: financial (i.e., leverage, fees/costs, past performance), access to expert management and the actual performance of experts (e.g., Are they creating alpha?), properties (i.e., allocation and stock), and other factors (e.g., communication, transparency, co-investors, valuations, and accounting rules).

Research from performance measurement in general and on performance drivers for non-listed real estate funds specifically was combined to provide a preliminary performance-measurement framework. The empirical findings from interviews with market participants were then used to refine and challenge the framework.

The Balanced Scorecard as suggested by Kaplan and Norton (1992) serves as the basis for the performance measurement framework, as (a) it is widely used, (b) has been applied in different environments e.g. partnering or joint ventures (Roessl et al., 2008; Lo et al. 2006) and (c) is multi-dimensional (Kaplan & Norton, 1993).

Kaplan and Norton (1992) suggest "to focus on a handful of measures that are most critical" (p.73) and "relying on one instrument can be fatal" (p.72). This focus has tremendously shaped the performance framework and suggests that the focus by market participants on past performance for measuring the performance of non-listed funds is too narrow. It has not been proven that the measures that are included in the framework are the most critical. As suggested before, that could be the objective of further research. The case study in section 5.2 however made clear the relevance of evaluating a non-listed real estate funds from many perspectives.

The literature review revealed that the success of non-listed funds depends upon many factors and this was confirmed by the empirical findings. Some of the factors are real estate specific (e.g. occupancy rate, timing, quality of asset management, timing of purchases and sales), or relate to financial decisions (e.g. gearing, level, but also terms and the effect of currencies on fund performance). Others relate more to the fund manager, the experience, location and people. Tax and legal aspects are also important although they are more important when one is considering investing in a fund and when there are changes in tax laws. Soft factors are of increasing importance, not only with respect to the relationship between fund manager and investor but also with respect to investors *vis a vis* each other. In addition, how do the people at the fund manager work together? Does the fund manager learn from past mistakes? Do the investors learn from past investments? Many factors are important when deciding to invest in a fund, such as access to expert management but past performance appears to be the dominant factor when evaluating the performance of a real estate fund.

Performance measurement includes some element of judgement or virtual performance measurement. This might explain the difference between the amount of paper or computer-based performance measurement and the thorough understanding of the factors that influence the performance of non-listed real estate funds by market participants. There are more differences than similarities between different kind of funds; therefore, the tangible part of the performance measurement review focuses on a few metrics. This is shown by focussing on a few standardized items during the performance review.

Furthermore, only factors that are measurable can be put into a framework and not all factors that might have an impact on performance are measurable. It has been suggested that a factor such as co-investors has an impact on the performance of a fund. One can write down the name of the company and the name of the person in charge, but what does that information mean? One could also include a rating of the company or the person in charge? How would people react to this knowledge? What are their interests? Who makes the decisions for the investor? And how could one control for differences?

Anecdotical evidence suggests that some investors would not invest into a fund, because insurance company X or Y is invested, which would support the theory that co-investors are important, but also that this an item which does not have to be part of a framework.

It was also noted that factors might be time sensitive. The level of gearing was the focus in previous studies (e.g., Alcook et al., 2013; Baum et al., 2011, 2012) but as a result of the global financial crisis, interest rates now appear to have a bigger influence on performance. The reason being that they are currently rather low, but there is an expectation that they could rise again in the near future. Also, geopolitics as a factor would most likely not have been named 10 years ago.

The findings are also consistent with previous research. However, the author stresses that the study was primarily concerned with factors that are measurable, and an explicit choice was made at the beginning not to only focus on specific types of real estate fund. During the research it became clear that many unique factors may influence the performance of a single fund. This is illustrated below in figure 26.

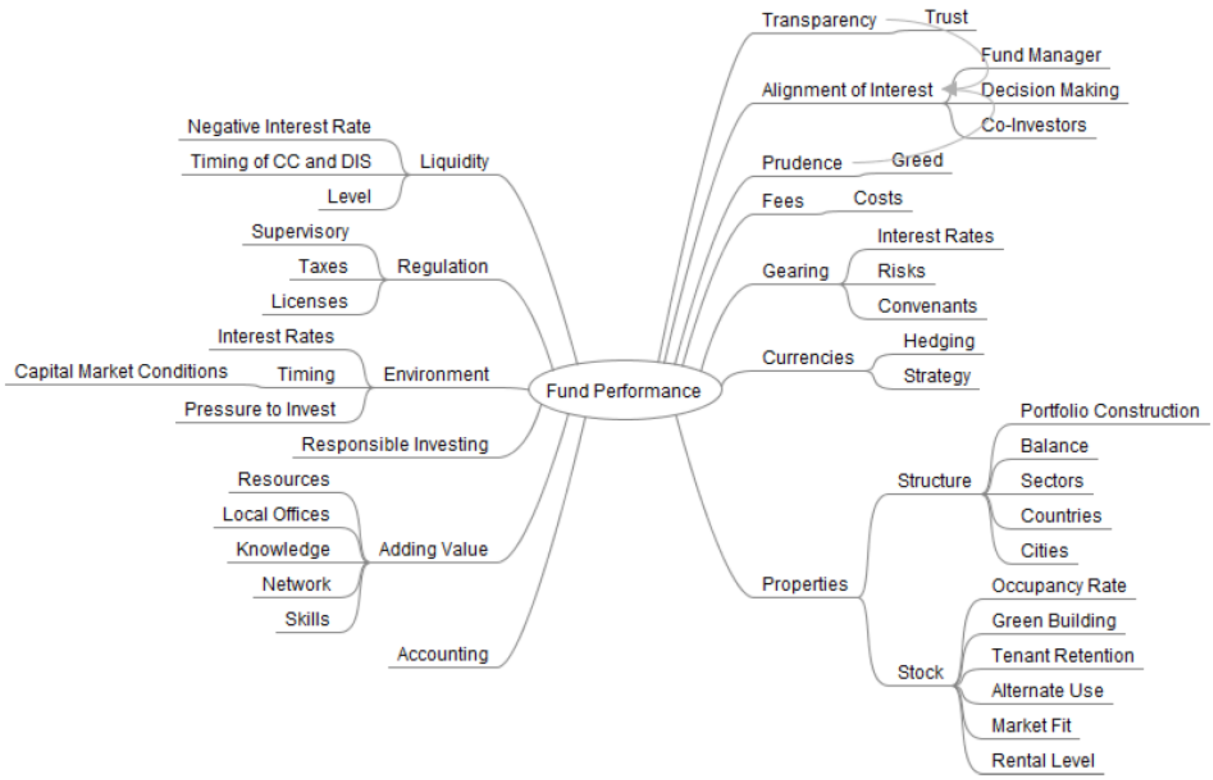


Figure 28: Factors influencing fund performance

This is a summary of the empirical evidence and the basis for the performance measurement framework. It illustrates perfectly that there are many factors that influence the fund performance. It also illustrates that the focus should only be on certain aspects to have a framework which applies to an undefined portfolio of real estate funds.

During the research it became clear that the content of the framework will be defined by the universe of real estate funds and the desired characteristics of private real-estate as a proxy performance was used. Figure 28 shows a summary of the empirical answers in this respect. Performance of non-listed funds is complex, and it means something different for each person and may also depend on the type of fund (e.g. value add vs. core fund).

Figure 29: Performance Summary

Performance should be seen in the light of return measures. When measuring performance, investors focus on past performance. The frequency of any performance measurement varies as does the timing. There is no standard. The major difference in the approaches lies in how systematically the approach is and how much of this is documented. There is no complete agreement on which factors are important and which factors are supposed to be monitored, but that was expected. The real differences lie more in the approach than on the factors themselves.

In addition, the requirements of each investor and the issues of each fund are different. There are two ways where one could improve the status quo: develop an industry standard and/or improve the quality of reporting.

Developing an industry standard. One of the outcomes of this research could have been that the framework could serve as a basis for an industry standard. However, the author concludes that this is not a feasible option as the non-listed fund's universe is too diverse as are the investor's preferences. The framework might work better as a construction kit or 'pick your own perspectives' instead of a fixed set of measures.

Improving the quality of reporting. Each fund reports differently. Investors could increase the demand for some standardized reporting even more to make it easier for investors to set up a standard performance measurement according to their personal requirements. An improved reporting could take care of the fund specifics as well the specifics of the investor as long as they are clear at the beginning.

For some investors the framework might not provide enough information, for others the focus could be different. The present thesis however shows that applying the framework improves the possibility to evaluate past, current and future performance compared to a singular focus on past performance. So, it introduces a finer method for evaluating performance.

The author had originally intended to conduct action research, as the nature of the research invited an iterative approach. Action research would have demanded to engage with the same people during various feedback loops and this was just not feasible as the times needed was more than that could be expected of by the majority of the participants. Therefore, a different approach was chosen: an iterative concept with interviews, panel of experts and a case study.

One of the strong points of this research is the focus on the under researched area of non-listed real estate funds in general and performance management specifically. The interviews were made with very experienced market participants. A weakness might be that the sample that made it to the thesis with 10 interviews is rather short. When adding the panel of experts, the number goes up to 13. There were more interviews done and feedback from various market participants was sought therefore the actual number is bigger. The industry is rather small and the sample shows many different backgrounds and roles. The author had talked about the outcome with different market participants before deciding to stop interviewing. Delfim and Hoesli (2016) also not that "studies on non-listed real estate fund (s)… are scarce and reflect the difficulty in gaining access to data and in controlling for the institutional setup of funds" (p.4).

The interviews did not reveal what they had intended to reveal. It was expected that a pattern of factors would emerge. However, the answers were very much diverse, possibility representing the different kind of experiences of the people interviewed and in addition and at the same time the different types of non-listed real estate funds. These diverse opinions lead however to a somewhat different sort of insight, so that nevertheless new knowledge was gained (more on this below). The present researcher is not alone with this. As Young et al., 2018 note about "30 % of […] the papers describe the inability of interviews to produce the data required "(p.17).

What did become clear that one has to focus on specific issues and also to differentiate between type of funds.

6.1 Contribution to Theory and Knowledge

The ultimate objective of a DBA dissertation is to provide an original contribution to theory, knowledge and practice. Prior research on non-listed real estate funds is shallow (see Chapter 1). Previous studies have often been quantitative studies with a different focus or were conducted more than 10 years ago. As Kutsch (2010) notes, the results of a survey are often specific to time and place. Therefore, apart from having a different focus, the present study is newer and reflects a different understanding of real estate funds. The thesis supports a better understanding of the market of non-listed funds.

No previous study was identified that addresses the question of performance measurement in non-listed real estate funds and the literature has not previously been reviewed from the perspective of performance measurement for non-listed real estate funds. As a result, the review and the summary of key performance indicators and performance-measurement approaches with a focus on non-listed real estate funds should be considered an *original contribution*.

The *study confirms* some of the findings of earlier research. It was therefore most interesting to see that current market participants confirmed these earlier findings and that they are still relevant. But it also broadens the understanding of factors that influence the performance of real estate funds. This represents an original contribution to the complexity of factors influencing the performance of non-listed real estate funds.

Soft factors are considered important to the performance of real estate funds as well. These include the avoidance of greed, the ability to cooperate with another and clear communication. While concepts like principal-agent issues have been widely discussed in various industries and are confirmed by earlier research, business partner issues have been studied far less. Gläser (2016) suggests that the relationship and motives of investors are important. While the importance as been pointed out in this thesis, the framework does not include measures for soft factors. The reason being that none had been identified during the empirical phase.

The impact of currency on fund performance and the effect of interest rates receives almost no attention in the existing literature on non-listed real estate funds. Only two studies were identified which specifically have addressed the topics: Delim and Hoesli (2016) and Graeme and Lee (2017). Both of these studies were published when the interviews were conducted or were just finished. The author believes that these studies represent an additional conformation of the sample size, as those quantitative studies confirm some of the findings of this research.

6.2 Contribution to Practice

This study develops a framework for performance measurement and this is novel for two reasons. First, it includes some success factors which had previously received little attention in the literature. Second, no other framework has been developed specifically to help investors measure the performance of non-listed real estate funds. So, it is the first academic work combining non-listed real estate funds and a scorecard.

This framework represents the first attempt to set up a comprehensive framework for non-listed real estate fund investments. Even during the practice test it became clear that some aspects were difficult to include in a standardized form, but this does not necessarily mean that they should be left out. Some factors are intangible, neither the suggested performance framework nor the performance measurement as currently conducted by investors, achieves in measuring these intangible factors. This could be an additional area of further research.

The case study of the framework provides some additional suggestions. Further research is needed to find a more comprehensive solution. In the end, the framework structure also depends upon the requirements of the investor. It might be better to have a flexible version depending upon the needs of the investor and the kind of investors instead of a fixed framework. For an investor that needs a regular distribution but has not invested outside the Euro zone, it might make more sense to include past distributions and a forecast for the future and leave out currencies. The focus has never been on generalization but always on transferability and the author believes that the present work has achieved this. This research has some practical implications.

It demonstrates how one could see the status quo of the fund as well its future chances and obstacles. The specific factor will be investor specific and might change over time.

6.3 Future Research

Further research needs to be conducted to see how the framework applies to the wider investment community. Given the limited focus of the study, it is acknowledged that the findings are not directly extendable elsewhere. Also, some less significant research questions were identified during the study which could warrant further research.

The empirical evidence did support the importance of the fund manager for a fund to perform but gave little guidance which aspects were considered important. Therefore, an in-depth study of what exactly is important in this respect might be an interesting topic to pursue.

Currencies was identified as a performance driver not found in the literature review on performance drivers of non-listed real estate funds. Since this topic only surfaced during the study, it was not included in the interview guide. It remains to be seen whether those participants who did not name currencies as a contributor (a) have no currency exposure,

(b) only invest in a fund that offers a complete hedge, (c) do a complete hedge for themselves, or (d) do not consider it a major contributor. This area appears to be an interesting research topic one could pursue.

After having finished the empirical part of the research project, an academic paper published by INREV was identified that addresses the issue of currencies on the performance of non-listed real estate funds. Graeme and Lee (2017) suggest that investing outside your home currency increases the volatility of the performance of the fund that you are investing in. Whether it will affect your actual performance depends upon the time horizon and the what is your home currency. “Currency effects can dominate real estate returns, turning good real estate returns into disappointments and vice versa. Getting FX right can be the difference between hitting or missing a return target.” (Graeme & Lee, 2017, p. 30). The sample of investors however appears to be experienced in managing currency risks.

The literature review revealed that fees are a major performance driver. Given this dominance, it was expected that fees would be reviewed regularly by investors. Fees are considered important, but the emphasis is on the phase before signing up for a fund. However, the topic could present different options for study. One route could be to explore the reasons why fees are not monitored after one has made a commitment to a fund. Another option might be to broaden the question focus on costs instead of fees. A third option could be to focus on the importance of fees in the current low-yield environment. If an investor is currently buying a property with an expected return of below 3%, fees and other costs should become more important.

Future research might also benefit from obstacles that were found during the research. They might consider focusing on specific types of funds which share some general characteristics. They might also focus on more specific issues, e.g. just addressing the question of fees for example, as this would allow a more in-depth analysis.

6.4 Conclusion

Both the literature review and empirical evidence suggest that factors driving the performance of real estate funds are complex, as are the experiences of the market participants. It is worthwhile to point out that investments made by the interview partners may not cover the whole set of non-listed real estate funds at any given time (Fisher & Hartzell, 2016). However, the diverse responses in Chapter 4 indicate that many different experiences are represented and that the number of interviews is sufficient for the purpose of this research.

A one-size-fits-all approach to the framework might only cover certain aspects and therefore, it could be seen as shallow and unoriginal. However, as could be seen in chapter four some additional innovative measures were discovered. If the aim is to have a framework that fits a portfolio of different real estate funds, then a framework can only cover aspects that will apply to many funds. For example, rules that regulate the residential sector are very important to a fund that is investing in housing in Germany, but geopolitical risks are less relevant (at the moment). On the other hand, geopolitical risks are much more important for a fund investing in Seoul, South Korea. Therefore, the question remains: How static should the framework be?

The thesis has shown that investors can gain by reviewing many factors apart from just return, as the factors will help to achieve the main goal: to add wealth. Therefore, the thesis is not only innovative and explorative by focussing on performance for non-listed funds, but also suggests an improved and finer method for evaluating the performance of non-listed funds.

In addition, it is acknowledged that organisations have different objectives and strategies (Lindholm & Leväinen, 2006) therefore it is not surprising that the framework for each organisation may be different. Each investor will have their own objectives for investing into non-listed real estate funds as well as their own allocation of funds which might or might not be similar.

One additional conclusion of this research is that it might be better to use the framework more as a guidance tool and add sub-perspectives depending on the needs of the investor and the characteristics of the fund. Irrespective of the answer, the present study clearly shows the benefit of having a multidimensional approach rather than just looking at return figures.

Lindholm and Gibler, 2006 suggest that "each firm should develop its unique performance measurement system to match its goals and strategies. What may be a key element of one firm's portfolio strategy may be irrelevant to [another firm]" (p.13). This finding from a different study with a different focus, summarizes one of the findings here as well. However, not only the focus of the firm is of importance, but also the focus and strategy of each fund investment, therefore calling for a unique performance measurement approach.

The aim of this study was to explore current practice and the desired characteristics of private real-estate funds and to develop the basis for a performance-measurement framework. This thesis does fulfil this aim.

The final framework is presented below as figure 27 again.

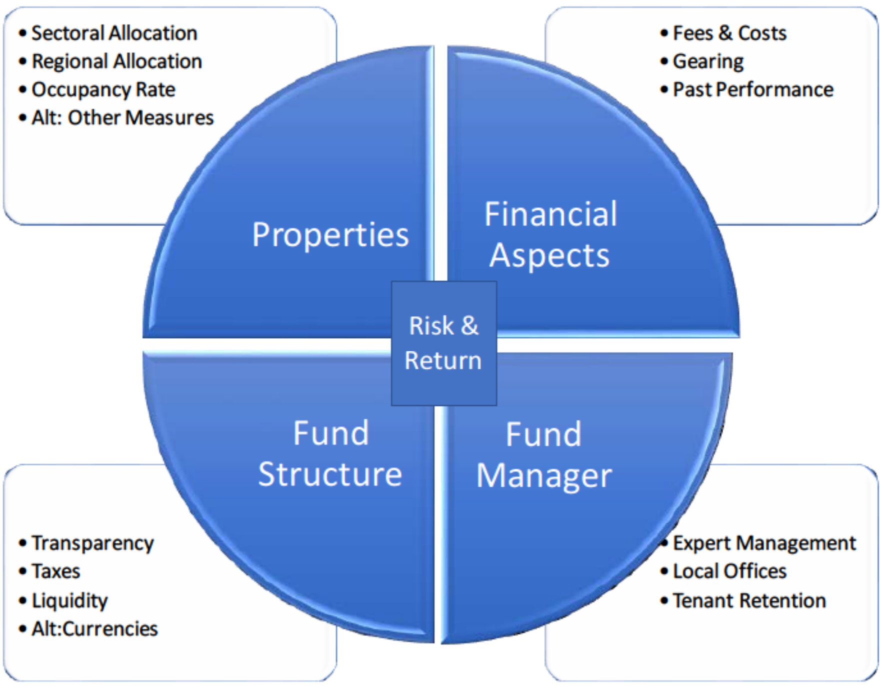


Figure 27: Performance measurement framework.

Summary of the findings

1. Factors that have an influence on the performance of a non-listed real estate fund depend upon the individual investment profile of the fund.
2. Which factors will be monitored and in what form is investor specific.
3. Less factors are monitored than were relevant when making an investment decision.
4. Fees are not necessarily monitored.
5. Some new performance drivers were identified (compared to the beginning of the empirical phase): currencies, interest rates, regulations.
6. Past performance is currently the dominant factor.
7. Gut feeling appears to be more important than paper.

Directions of future research:

1. Concentrate on specific aspects e.g. currencies or interest rates.
2. Use a sample of more similar funds, thereby allowing the researcher to concentrate on those things which are different.
3. The role of the fund manager as a performance driver: which aspects might be relevant and important.
4. Further enhance the categories of the framework: e.g. how to measure for taxes and transparency.
5. Apply the framework to the wider investment community and to back-test the framework.
6. Focus on investors from different countries – will the results be consistent.

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Appendix I

Real Estate Transparency Tiers

High	1. United Kingdom	2. Australia
	3. Canada	4. United States
	5. France	6. New Zealand
	7. Netherlands	8. Ireland
	9. Germany	10. Finland
Transparent	11. Singapore	12. Sweden
	13. Poland	14. Switzerland
	15. Hong Kong	16. Belgium
	17. Denmark	18. Norway
	19. Japan	20. Czech Republic
	21. Italy	22. Spain
	23. Taiwan	24. Austria
	25. South Africa	26. Hungary
	27. Portugal	28. Malaysia
	29. Slovakia	30. Romania
Semi	31. Israel	32. Mexico
	33. China Tier 1 Cities	34. Brazil Tier 1 Cities
	35. Luxembourg	36. India Tier 1 Cities
	37. Greece	38. Thailand
	39. India Tier 2 Cities	40. South Korea
	41. Botswana	42. Russia Tier 1 Cities
	43. Brazil Tier 2 Cities	44. Turkey
	45. Indonesia	46. Philippines
	47. Croatia	48. Dubai
	49. China Tier 1.5 Cities	50. Bulgaria
	51. Slovenia	52. India Tier 3 Cities
	53. Serbia	54. Russia Tier 2 Cities
	55. China Tier 2 Cities	56. Argentina
	57. Zambia	58. Mauritius
	59. Abu Dhabi	60. Cayman Islands
	61. Kenya	62. Chile
	63. Saudi Arabia	64. Peru
	65. Egypt	66. China Tier 3 Cities
	67. Bahrain	
Low	68. Vietnam	69. Sri Lanka
	70. Macau	71. Morocco
	72. Uruguay	73. Kuwait
	74. Qatar	75. Ukraine
	76. Puerto Rico	77. Iran
	78. Russia Tier 3 Cities	79. Jordan
	80. Rwanda	81. Costa Rica
	82. Bahamas	83. Nigeria
	84. Ecuador	85. Ghana
	86. Colombia	87. Kazakhstan
	88. Pakistan	
Opaque	89. Oman	90. Uganda
	91. Lebanon	92. Panama
	93. Tunisia	94. Ethiopia
	95. Myanmar	96. Algeria
	97. Angola	98. Dominican Republic
	99. Tanzania	100. Belarus
	101. Mozambique	102. Guatemala
	103. Iraq	104. Ivory Coast
	105. Venezuela	106. Senegal
	107. Djibouti	108. Honduras
	109. Libya	

Source: JLL (2016)

Appendix II

Interview guide (Version before Pre-Test)

Interview Guide									
1. Introduction		Q1	Explain purpose of research						
			Achieving a common understanding of the						
			idea of performance and performance measurement						
2. Experience		Q2	Type of organisation:						
		Q3	Investments in real estate funds are made since:						
		Q4	Job Position:						
		Q5	Number of private real investments funds:						
		Q6	Total AUM:						
		Q7	PERE as a % of total assets:						
				Anyotherrealestateinvestments?	Direct, REITS?				
				WhyPEREincomparisontodirectorREITs?					
				DifferenceinCountriesorSectors?					
				Inwhatkindofvehicles(legal)areyouinvested?					
				Whatkindofinvestmentprofile(e.g.trophyassets,nohotels...)					
3. Research Question	2		"What are the critical success factors in private real estate performance?"						
		Q8	Which factors do you consider a good indicator for fund performance?						
		Q9	For the main important factors, could you tell me an example why it is a good indicator?						
		Q10	Which factors do you consider as detrimental to real estate fund performance?						
		Q11	For the main factors, could you tell me an example why they are considered detrimentel?						
				FocusPoints	*Important*	*LessImportant*	*NotImportar*	*Detrimental*	*Notrelevant*
				Gearing					
				Fees					
				Return					
				Localpresence					
				Personnell					
				MarketAccess					
				CurrentManagement					
				Transactions					
				PropertySelection					
				Co-Investors					
				Tax&LegalAspects					
				Transparency/Trust					
4. Research Question	1		"How is the performance of private real estate funds measured by German						
			Institutional Investors?"						
		Q 12	Please explain how you monitor performance. What is the performance measurement framework of your organisation?						
			(Specific Factors, Processes etc.)						Open
		Q 13							
				Duringtheholdingphaseofaninvestmentwhichofthefollowingtasksdoyoudo:					
					Always	*Often*	*Sometimes*	*Seldom/Never*	Who(Position)?
				AttendAdvisoryBoardMeetings					
				orsimilar					
				Readquarterlyreports					
				Analysereportsorothers					
				Pleaseexplain					
				Whichofthefactorsdoyoumonitor?	*Yearly*	*Semi-Annual*	*AdHoc*	*Otherintervall*	Seldom/Never
				Gearing					
				Fees					
				Return					
				Localpresence					
				Personnell					
				MarketAccess					
				CurrentManagement					
				Transactions					
				PropertySelection					
				Co-Investors					
				Tax&LegalAspects					
				Transparency/Trust					
		Q 14	Are all funds treated the same or do you have some criteria when you differentiate (e.g. amount invested, type of fund etc)?						
		Q 15	How do you consider your relationships with your fund managers and/or fellow investors)?						
				Is there trust?					
				Do fellow investors try to influence or put pressure on the manager? Do they have a own agenda?					
		Q 16	Does the relationship have an influence on your performance measurement framework?						
5. Research Question	3		" What are the similarities and differences in the performance measurement approaches and is there a common ground for a performance measurement framework?"						
			Thefirstpartofthequestionistheresultofanalysingthequestionsabove,onlythesecondpartofthequestionisadressedbelow.						
		Q 17	What are your requirements for a performance measurement framework?						
				Isresponsibleinvestmentatopicforyou?Ifyes,howitisaddressed.					
6. Epilogue		Q 18	Any other ideas you want to share with me?						

Appendix III

Interview guide (Final Version)

A. Introduction

1. Short description of the company (sector, volume of investment or assets under management).
2. What is your understanding of performance/performance measurement in real-estate funds? How would you define *performance* in one sentence?

B. Factors that affect the performance

1. From your personal point of view and in your experience, which factors are good indicators of real-estate fund performance?
2. Which factors do you consider to be detrimental or counterproductive to real-estate fund performance?
3. Are there any examples from your experience as an investor that you could describe and want to share?

C. Current Performance-measurement system

1. Can you offer a brief explanation of how you monitor performance for your real-estate fund? Does your organisation have a performance-measurement framework that includes real-estate funds?
2. During the holding phase of an investment, are any of the following tasks performed by you or your colleagues?

	Always	Often	Sometimes	Seldom/Never	Who (Position)?
Participation in advisory board meetings or similar bodies					
Site visits					
Analyses and reports or other information (Examples)					
Networking with investors					

Networking with managers					

3. Which real-estate performance indicators are monitored regularly by you?
4. Do you regularly perform a review of the fund manager? If yes, which factors do you focus on?
5. Which of the following factors are regularly monitored by you?

	Annually	Semi-Annually	Ad Hoc	Other Interval	Seldom/Never	Important (Yes or No)
Return (Past Performance)						
Fees						
Gearing (of the fund)						
Development of equity						

6. How do you consider your relationships with fund managers and/or fellow investors?
7. Does the relationship have an influence on your performance-measurement framework?
8. Which role do benchmarks play?
9. What are your requirements for a performance-measurement framework?

D. General

Any other items that we missed and you would like to add?

Appendix IV

Some Alternative Questions

1. How important are benchmarks and relative performance to investors once the fund is signed (holding phase)?
2. How important is responsible investing for investors once the fund is signed (holding phase)?
3. What factors would you monitor if you were an investor?
4. What is your impression concerning which factors are monitored by investors?

List of Factors	Comments	Monitored
Gearing		☐
Fees		☐
Past Performance		☐
Tax and Legal Aspects		☐
Fund Manager: Specifics?		☐
Currencies		☐
Real Estate KPI: Specifics?		☐

5. Does it change over time or are differences in the nature of the investor or whether a consultant/multimanager is involved?
6. Does the reporting you provide to investors cover all the information that is monitored by your investors?

Appendix V

Codebook

Code	**Sub-Codes**					
Transparency	Openness	Structure				
Trust	Reliability	Responsible Investing	Alignment of Interest			
Expert Management	Skills	Knowledge	Qualification	Local Offices	Idea Generation	Adding Value
Abilities	Capabilities					
Past Performance	IRR	TWR	Income Return			
Absolute Performance	Persistence	Consistency				
Relative Performance	Benchmark					
Fees	Costs					
Environment	Pressure to Invest	Interest rates	Market timing			
Currencies	Hedging	Strategy				
Vacancy Rate	Occupancy Rate					
Structure	Sector	Region	Portfolio			
Stock	Green Building	Purchase Profile	Tenant Retention			
Regulation	Taxes	Laws				
Co-Investors	Alignment of Interest	Greed				