



Master Thesis

**The influence of the financial crisis on the
investment behaviour of German pension funds
regarding the Swedish real-estate market as an
investment location**

by

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Abstract

The financial crisis of 2007-2008 shock the financial markets worldwide and caused major losses for financial institutions and institutional investors. German pension funds need to invest their assets also during times of financial and economic downturns, regardless the uncertainty about the future development of the market situation. Real-estate is considered a safe investment for capital in times of high volatility within financial markets. German pension funds are looking for safe investment environments besides the local German real-estate market which is conglomerated with national and international investors. According to German pension funds, the Swedish real-estate market gained in importance as an investment location since the advance of the financial crisis. The market attracts German pension funds by its stable economic development, political stability and liquidity of the real-estate market. Office and retail properties in the Core segments of Stockholm, Gothenburg and Malmö are of their main interest. At the moment the German pension funds face the problem of a high Korna/Euro exchange rate which makes investments for German investors more expensive. Therefore yield levels decline for German investors and Swedish institutional investors, which follow conservative investment strategies, in most of the cases have a better position on closing property deals. The Swedish market provides an excellent investment environment for German pension funds and with a more favourable exchange ratio of Krona/Euro German investors are more likely to increase their investments in Swedish real-estate.

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1. Introduction

The first chapter will give a short introduction about the advance of the financial crisis, the effects on Europe and German pension funds as well as an assessment of Sweden which is considered as the "safe haven" for investors.

Financial crisis 2007-2008

In 2007 the financial system of the United States of America faced severe problems resulting from the burst of the real estate bubble. The outcome of this event can be seen as the origin of the global financial crisis. The following chapter gives a brief overview of the evolution of the crisis, its effects on Europe and the consequential problems for German pension funds to invest their assets.

US Monetary Policy

After the burst of the new economy bubble in 2000 the monetary policy in the US failed to arrange the interest rate on a well balanced level. Afraid of deflation the federal funds rate was held on a low level by the US Federal Reserve (FED) to push consumption and strengthen the US economy. The 3 month interest dropped from almost 7% to around 1% in 2003. As a consequence of this an increase in money supply could be observed from 2005-2007 (Holtemöller, 2009). In 2004 the FED gradually increased the interest rates again reaching a level of more than 5% in 2006.

Mortgage backed security market

A mortgage backed security (MBS) is an asset-backed security bond which is securitized by the claim on cash flow of mortgage loans. By this form of financing the credit granter can pass on the risk to the capital markets and therefore does not have to hold the assets in their balance sheets. MBS are transferred to the portfolios of institutional investors like pension funds or insurance companies, who buy the assets for their investment portfolios (Kelman, 2002).

Subprime loans

Low interest rates pushed the demand for consumer credit and mortgages. Default risk of the loans was passed on to the capital markets via MBS. Financial institutions had an incentive to issue more loans and therefore levered up their companies to a large degree.

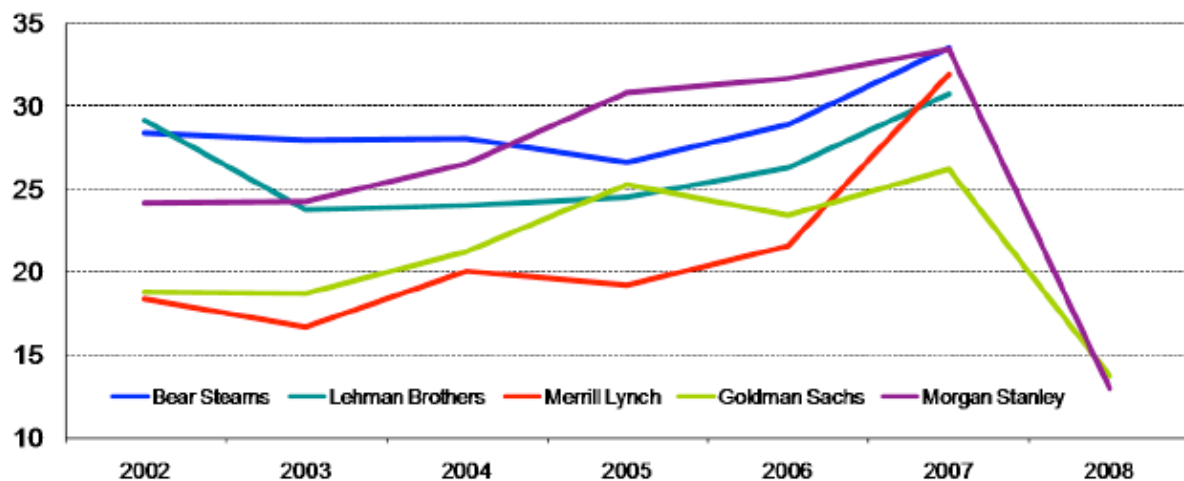


Fig. 1 Leverage ratio of US investment banks (Rosengren, 2009)

The term subprime loan in this context describes loans to borrowers with low credit-worthiness. Receivers of subprime loans usually have a high debt payment-to-income ratio and/or a high mortgage loan-to-value ratio (Gorton, 2009). It was not uncommon that loans were granted to people who did not have to provide any income statement (no document loans) or so called NINJA loans (no income, no jobs or assets). Loans were usually issued with short term variable interest rates and since interest rates were low the credit receivers did not have troubles meeting their payment obligations (Neubäumer, 2010).

Rating Agencies

In order to increase the commercial viability asset backed portfolios were evaluated and rated by rating agencies. Especially Standard & Poor's (S&P) and Moody's Investor Services rated many portfolios of MBS. Institutions merged mortgages of high credit quality with assets of the subprime segment so that the portfolios still received a good credit rating. Often only certain cases were evaluated without taking into account the "systemic risk" of increasing interest rates or the burst of the real estate bubble. This resulted in misvaluations at a large scale by the rating agencies (Erber, 2008).

Depending on the mix of high credit quality and subprime loans portfolios for basically all risk levels could be constructed. Therefore also institutional investors like insurance companies or pension funds which are bound to strict investment criteria could invest in these assets. Due to the fact that the complex portfolios included all kinds of asset classes the investors had to believe the provided credit rating by the rating agencies (Schäfer, 2008).

Crisis and burst of the real-estate bubble

As the Federal Reserve Bank increased the interest rates up to 5% in 2006 again many debtors especially from the subprime tranche were not able to fulfil their payment obligations for their mortgages. As more and more mortgages defaulted the MBS decreased in value dramatically. Several major players including investment banks as Bear Stearns and Merrill Lynch had to depreciate billions of dollars in 2007. In 2008 the government sponsored agencies Fannie Mae and Freddie Mac were nationalized, while the FED refused to rescue the investment bank Lehman Brothers, which caused a breakdown in interbank trust. Under this pressure the last two American investment banks Morgan Stanley and Goldman Sachs transformed to regular commercial banks protected by the FED. Furthermore, institutions worldwide invested in MBS experienced major losses or had to depreciate large investment portfolios. (Zobler & Bölscher, 2009)

Effect on Europe and German pension funds

According to a report from the International Monetary Fund, the financial crisis led to a global depreciation of 1.900 billion Euro of which around 25% are depreciated by European investors (International Monetary Fund, 2009). In Europe the crisis caused the burst of real-estate bubbles in Ireland and Spain in 2008. Both countries had to increase the public debt to a large degree in order to stabilize their economies by granting securities to banks. (FAZ, 2012). Another major problem child for the European union and the Euro area is Greece because of its public debt ratio of 160% of its gross domestic product (GDP) in 2011 (Handelsblatt, 2012). But also other countries within Europe and the Euro-area face increasing problems regarding public debt ratios, structure and performance of financial markets and economic development. Since the beginning of the financial crisis rating agencies decreased the credit rating of Italy, Spain, Portugal, Cyprus by two grades (Spiegel, 2012). The banking system in Germany suffered substantial losses as well. In 2009 the German Bank Hypo Real estate was nationalized and € 175 billion of toxic assets were transferred to a bad bank. With WestLB another bank had to transfer assets worth around € 80 billion into a wind-up agency. Germany's second biggest Bank Commerzbank implemented an internal bad bank worth around € 45 billion (Handelsblatt, 2012). Germany as a member of the European monetary union is additionally exposed to the economic and political development in the crisis-shaken EU countries such as Spain, Portugal and Greece. If one country leaves the monetary union Germany will have to depreciate the financial

assistance provided. In 2012 the German Central bank had outstanding debits of about € 500 billion against the countries in the monetary union. A collapse of the Euro system would have a severe impact on Germany and its economy. Regarding this potential threat assets outside the European Monetary Union gain importance for institutional investors as pensions funds (Wirtschaftswoche, 2012). The bond market, as a preferred investment class for pension funds, provides little risk adjusted investment opportunities during the advance of the financial crisis. Safe investments do not generate high yields due to a high demand for safe assets and preferable yields are provided by issuers with higher default risk. Pension funds therefore have to find additional asset classes providing on the one hand sustainable yields and on the other hand safe investment environments. In general real-estate and other material assets are preferred investments during times of economic instability and inflation (Portfolio Institutionell, 2012). This is a phenomenon known as the "flight to tangible assets". Overall investors face a very volatile and unsecure investment environment with few investment opportunities in secure assets providing a reasonable return, but institutional investors still need to invest their assets under management according to their investment regulations and the aim to increase the value of these assets. Under the given circumstances and the development of economies within the European Union Sweden becomes a more interesting market for investments (Focus Money, 2012).

Sweden as Safe Haven

While Central Europe is still dealing with the aftermath of the debt crisis, Sweden managed to become a popular target for risk averse investors of all kinds. Even though the Swedish economy was affected by the crisis as well, it recovered faster and came out stronger of the crisis as other countries in Europe such as Spain, Italy and Greece. International investors from the Euro-zone seek for safe investments outside the Euro area to avoid the currently high volatility in the markets and the uncertainty of the future development with Greece, Italy, Portugal and Spain struggling with their economic development and posing a threat for the development of the whole Euro-zone's development (Grüttner & Krieger, 2012)

The stable development of the Swedish economy is one factor for investors to favour Sweden in the recent time. In 2010 the economy grew by more than 6% and in 2011 the growth was still among the highest with respect to the most important European economies

(European Commission, 2013). Additionally, the national debt carried by Sweden is one of the lowest in Europe. Sweden managed to decrease its state debt from 54.7% of its GDP in 2001 to 38,2% in 2012 whereas the rest of the European countries increased their indebtedness to an average of 85% of the countries GDPs (Eurostat, 2013). The credit rating of S&P, Moody's and Fitch grants Sweden the highest credit rating (AAA) with a stable outlook to keep the rating, while Spain, Portugal, Italy and Greece have considerably lower ratings and a negative outlook on the development of their rating (Simon Rogers, 2013). According to a report by Germanys biggest pension fund the institution had to depreciate 71,5% of the face value of Greek government bonds they invested in. Consequently this circumstance and the missing trust in government bonds caused a shift in the investment behaviour of the institution, which does not include government bonds in their investments (BVV, 2012). The real-estate market of Germany is in great demand for national as well as international investors seeking for safe investments. Especially in the Core segment good investment opportunities became seldom due to the high demand. Furthermore, yield levels declined due to the demand, which makes it worthwhile for investors to scan international markets for good investment opportunities but still provide safe investment environments like in Sweden (Institutional Investment, 2013).

With a Swedish economy outperforming most economies within the European Union, the political stability and the stable cash-flow budget the Swedish market is interesting for risk averse investors as German pension funds. Pension funds as institutional investors can profit from the macroeconomic factors of Sweden and its economic development by investing in real-estate assets providing calculable cash-flows and higher yields than markets with the same security features e.g. bonds offer.

Research Problem

Pension funds are one of the few actors in the financial markets that have to invest their capital no matter what the market circumstances are. Steady returns on their investments are crucial for pension funds in order to be able to fulfil their obligations to the pensioners. On the other hands pension funds are limited regarding their investment opportunities due to the regulatory framework of investments.

During the financial crisis and its aftermath pension funds lost billions due to unprofitable investments and the US financial crisis led parts of Europe and its financial markets into a volatile phase which makes it unpredictable for pension funds to invest in risk adjusted investments and still achieve their targeted yield (Süddeutsche Zeitung, 2010). Also German pension funds suffered losses from their investments in foreign assets especially regarding the investment in Greek government bonds (BVV, 2012). The bond market does not provide sufficient risk adjusted yields to reach the pension funds' targets and the stock market showed high volatility. For this reason pension funds are diversifying their investment portfolios towards real-estate assets since these assets on the one side provide a more safe calculation basis and on the other hand are under normal circumstances considered stable in value (Financial Times Deutschland, 2012). Due to the high demand for German real-estate good investment opportunities within the Core sector become rare (Institutional Investment, 2013), which leads to investors looking for additional markets to invest in. The uncertain development within several European countries strengthens the demand in safe investments. Sweden providing a suitable political and economic framework as well as an interesting real-estate market features two factors demanded by pension funds. Even though the Swedish Krona appreciated since the beginning of the financial crisis, Sweden provides a good investment market to escape the volatility in the Euro-area for German pension funds.

With regards to circumstances described above the research problem can be defined in the following research question.

How do German pension funds evaluate the Swedish real-estate market as an investment location since the advance of the financial crisis and what are their major interests within the market?

2. Literature Review

The literature review chapter provides information regarding the regulatory framework German pension funds are bound to as well as the major investment principles, according to which the pension funds choose their investments. Furthermore the Swedish real-estate market is presented starting with an overview of the Swedish economic development. A brief explanation about the different asset classes in the real-estate market is provided followed by a historical analysis of the Swedish real-estate market. The chapter ends with a specification of the different market segments of the Swedish real-estate market.

German pension funds

Organisation of German pension System

Since 1974 the German pension system is based on a three-pillar system. The three pillars are "gesetzliche Rentenversicherung" equal to the statutory pension, "betriebliche Alterssicherung" equal to the occupational pension scheme and "private Altersvorsorge" which is equal to the personal pension scheme.

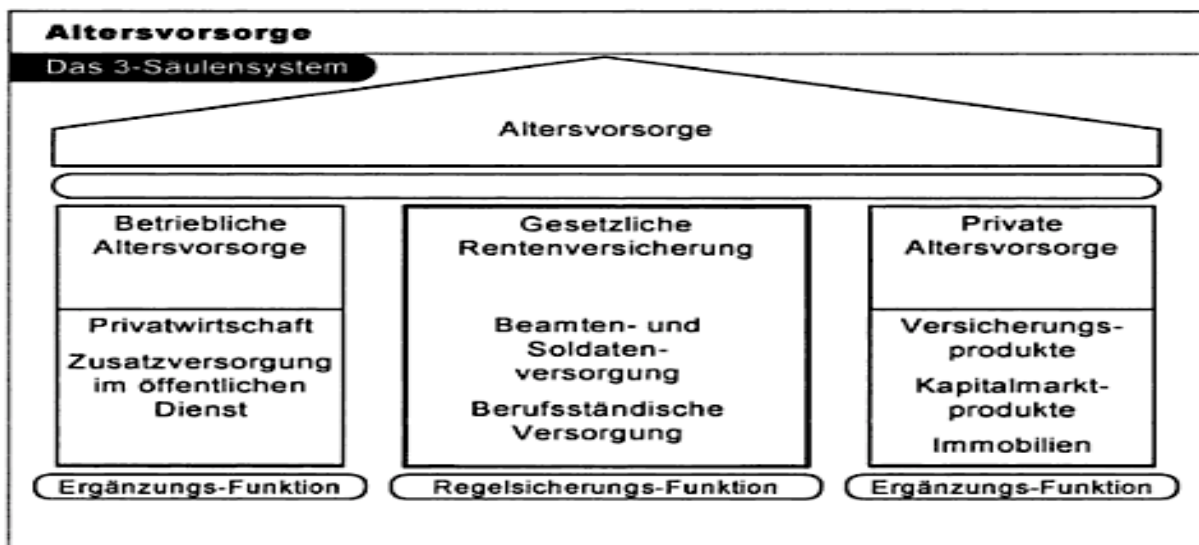


Fig. 2 German Pension System (Wehowsky & Rihm, 2009)

The statutory pension builds the foundation of the pensioners and secures their existence. The carrier of the statutory pensions are statutory corporations. Since the new pension regulations in 1957 the statutory pensions are financed by the pay-as-you-go system (Sozialgesetzbuch SGB, 2012). All administrative and operative employees have a compulsory obligation to be insured in the statutory pension system up to a base of contribution. Therefore all employees in that sense have to pay for the contribution in the pension fund up to the base of contribution, which is adapted each year according to the

development of salaries and wages and defined in the social security code (Sozialgesetzbuch SGB, 2012).

The second pillar, the occupational pension scheme, is a voluntary institution established and used by many companies to support the retirement savings of their employees. The employees pay their contribution to the occupational pension scheme from their gross salary, thereby providing tax advantage for employees investing in their occupational pension. In total we can distinguish between five different types of occupational pension funding vehicles (Drols, 2005).

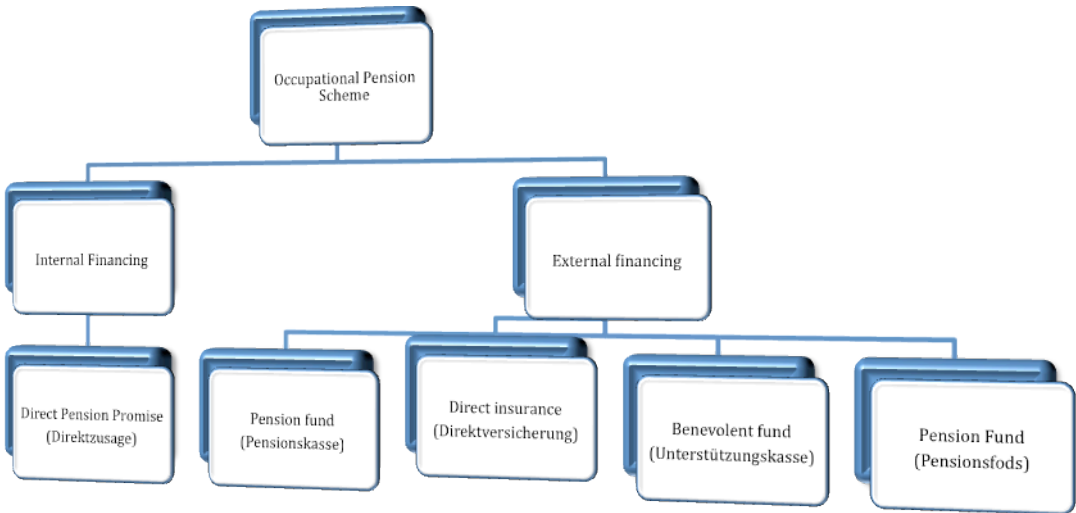


Fig. 3 Occupational pension scheme financing vehicles (Own illustration)

The thesis will concentrate on the investment behaviour of pension funds, therefore the structure and investment opportunities of pension funds will be discussed more detailed in the following chapter.

The personal pension scheme includes all capital formation methods targeting the aim to make a living as a pensioner on a personal level. A variety of capital market and insurance products can be used to invest in the personal pension scheme. All kinds of savings plans, securities, stocks, bonds, life insurances or investments in real estate can be part of the personal pension scheme (Sander, 2008). The personal pension has to be funded by after-tax income, whereas the limit of the personal pension investments is only limited by the assets and money available to the employee. In order to encourage individuals to invest more of

their income into their personal pension scheme Germany implemented a state funded form of personal pension scheme investment called "Riester Rente" (Stiftung Warentest, 2003) and since 2005 another instrument for e.g. self-employed persons who so far could not invest in state funded retirement investment products called "Rürup Rente".

Pension funds

In Germany pension funds can refer to the German term "Pensionskassen" or "Pensionsfonds" which for most cases follow the same structure and investment regulations, while certain regulations differ. In the case of differing regulations the differences will be explicated. Totally Germany has 149 registered "Pensionskassen" and another 30 "Pensionsfonds".

"Pensionskassen" and "Pensionsfonds" are legally independent institutions according to § 118a of the Insurance Supervisory Law (VAG). "Pensionskassen" are regarded as private insurance companies and therefore are subject to state supervision of insurance companies, whereas "Pensionsfonds" are not regarded as private insurances. Both institutions are governed by the Federal Financial Supervisory Authority (BaFin). "Pensionsfonds" are subject to fewer regulations regarding their investment behaviour than "Pensionskassen". "Pensionsfonds" can thus exploit the investment opportunities in the capital markets more efficiently. According to the deregulation "Pensionsfonds" have to take out insurance against the risk of bankruptcy (Bode & Obenberger, 2005). Originally big companies established their own "Pensionskasse" for their employees as a possibility of occupational pension. Later on "Pensionskassen" for economic sectors e.g. the public sector were established. By this employees from small companies in this economic sector could participate in the occupational pension scheme. Another group of "Pensionskassen" can be found for labour agreements. Employees working in a company bound to this labour agreement can invest in this pension fund (Dresp & Fabian, 2011).

Regulatory framework

Both "Pensionskassen" and "Pensionsfonds" operate under the authority of the Federal Financial Supervisory Authority (BaFin). The BaFin supervises the capitalization and ensures that the investments of the pension funds are in compliance with the investment regulations (Versicherungsaufsichtsgesetz VAG, 2012). In order to ensure the feasibility of its obligations the pension funds have to hold free and unencumbered equity according to a solvency

margin defined by §53c VAG and report it to the BaFin on a yearly basis. A more important regulatory framework for the insured persons is the investment regulations pension funds are bound to. Target of these regulations is to prevent pension funds from a total loss of invested capital and ensure liquidity. The main target of the pension fund is not to maximize profit but to generate sustainable earnings with the undertaken investments. The Act on the Supervision of Insurance Undertakings defines the investment policy of pension funds in §54 as follows:

"The structure of the undertaking, be invested in a way that ensures maximum security and profitability, while maintaining the insurance undertaking's liquidity at all times, maintaining an adequate diversification and spread." (Versicherungsaufsichtsgesetz VAG, 2012)

According to this, the main investment principles of the pension funds are security, profitability, liquidity, spread and diversification. The following section gives a more detailed definition of these investment principles.

Security

As one of the most important duties the pension fund has to ensure the security of the funds invested. The ambition of the pension fund has to be the minimization of risk for the capital invested. For investment decisions the security of the investment has a high priority both for single investment decisions as well as regarding the investment portfolio as a whole (Klatt, 2003). By definition of the Investment Ordinance (AnIV) speculative investments are not allowed. Another requirement is the option to unrestrained divest investments at any time. According to this closed funds are not suitable investments for pension funds unless they are not designed specifically for institutional investors. Pension funds can invest in rated assets if the rating of the asset is above "investment-grade". The status of the rating has to be evaluated on a yearly basis. If the assets were downgraded below investment grade, the assets have to be divested. If there is information on a potential downgrade of the rating below investment-grade, the assets can not be acquired (BaFin, 2010). Up to 5% of the coverage assets can be invested in speculative assets, whereat the pension fund has to ensure intervallic evaluations of the assets credit rating. Regarding the security aspect Sweden provides a solid investment environment for pension funds with a strong economic development compared to the European countries a low state indebtedness and a strong legal and political system.

Profitability

The profitability of an investment should generate a sustainable return. In order to achieve this goal the pension funds invest in consideration of the liquidity and security requirements as well as the current situation on the capital markets (BaFin, 2010). Pension funds do not have a minimum rate of return but investments which do not yield any returns are not favourable. For the profitability aspect Swedish real-estate provides a variety of investment opportunities for pension funds and institutional investors in general. Due to the recent troubles of investors regarding the financing or refinancing of projects, pension funds with large capital stocks are less dependent on external financing and therefore face better investment opportunities than other players in the market.

Liquidity

According to the principle of liquidity, pension funds need to structure their investments in a way that payment obligations can be met on an on-going basis. For this reason the pension fund has to hold liquid funds or investments which are easy to realise to a certain degree (Klatt, 2003). In general the pension funds can not take on loans since it is not part of the insurance business. Under certain circumstances exceptions are granted which are regulated by the BaFin (BaFin, 2010). The demand for Core real-estate, which is a preferred asset class of institutional investors as pension funds, showed a historically high demand, which increased even more since the advance of the crisis. This can be observed in declining yields due to the high demand. Thus, core assets can be divested quickly if needed at a fair market value and therefore provide the necessary liquidity required by the German pension funds.

Spread

The spread principle increases the risk diversification of the pension funds investments and reduces the risk of being exposed to risks from the same asset class. Pension funds should not concentrate their investments on assets issued by the same debtor. For real-estate investments, assets should be spread within the market and should not concentrate on a single investment location. Regarding stock investments, the assets should be spread across different industry segments to avoid a high exposure regarding the development of a single business sector (Klatt, 2003). As defined in Tab. 1 the pension fund can only invest 5% of the tied up assets into assets issued by one counterparty. This does not include the investment in funds if the fund itself is spread sufficiently. In this case the investment is not regarded as

issued by the same debtor according to §3 subsection 1 sentence 3 AnIV. But not more than 20% of the tied up capital are allowed to be invested with the same portfolio manager of a fund (BaFin, 2010). Even though pension funds might not concentrate their major part of investments on Swedish real-estate, the market provides good opportunities to diversify the portfolio of the pension funds and elude the currently busy German real-estate market (Institutional Investment, 2013).

Diversification

The diversification principle defines the allocation of the pension funds investments to different asset classes. This diversification requirements are limited to the tied asset base of the pension fund, whereas the free asset base has practically no restrictions on investments. The principle of diversification should prevent pension funds from concentrating their investments on a single asset class exposing the investments to only this asset class risks (Klatt, 2003). If there is no quota assigned to an asset class, it automatically is limited by 50% of the total investment volume. The table specifies the investment quotas as well as the regulations on the diversification of risk and spreading.

Tab. 1 Investment restrictions pension funds ((Hertrich, 2011)

Asset Class	Maximum Allocation	Comments
Risk Capital	35%	<ul style="list-style-type: none"> Includes shares, subordinated debt, participation rights, loans backed by shares or cash, investment funds
Real Estate	25%	<ul style="list-style-type: none"> Direct or indirect investments allowed (i.e. REITs or real estate funds)
Bonds/Mortgages /Loans	50% each	<ul style="list-style-type: none"> Investment grade with rating, two ratings recommended Max. 12 years to maturity and NPV of at least 50%. If longer than 12 years, than minimum return of current actuarial interest rate (currently 2.25%) or minimum coupon of 2.25% For assets that drop below B- or B3: if direct investment or fund participation is more than 3% of the total fund volume, disposal or swap into free assets within 6 months, if less than 3% you have 6 months to see if rating improves and then another 6 months for disposal or swap into free assets
Indirect Investments	1%	<ul style="list-style-type: none"> Indirect investments, i.e. private equity funds, into one single entity cannot exceed 1% of Tied Asset Base
ABS, CLN	7.50%	<ul style="list-style-type: none"> Max. maturity of 12 years, NPV of capital guarantee at least 50% as for bonds Stricter rules than for bonds/mortgages/loans: requires IVG rating, in case of downgrade no possibility to allocate as high yield, disposal threshold is already reached at rating of BB+ or Ba1

High Yield	5%	<ul style="list-style-type: none"> • If at least B- / B3, then allocation to Tied Asset Base possible
Commodities	5%	<ul style="list-style-type: none"> • No physical delivery of underlying commodities
Maximum Allocation Single Asset Class	50%	<ul style="list-style-type: none"> • unless specified otherwise for asset classes within Tied Asset Base
Maximum Exposure Single Counterparty	5%	<ul style="list-style-type: none"> • Exposure to any counterparty is limited to 5% of the Tied Asset Base
Single Portfolio Manager	20%	<ul style="list-style-type: none"> • If Tied Asset Base is in the hands of one single portfolio manager, in one single company only 1% allowed
Low-Risk Loans	30%	<ul style="list-style-type: none"> • Loans issued by governments, supranational and regional issuing entities
Secured Debt Instrument by Single Financial Institutions	15%	<ul style="list-style-type: none"> • Refers to plain-vanilla secured bonds, covered bonds, for which there is protection on the collateral via law or regulation
Sponsoring Company	5% / 15%	<ul style="list-style-type: none"> • Limit for one sponsoring company 5% • Sum of all existing companies (if 3 or more) to not exceed 15%
Subordinate Debt	1%	<ul style="list-style-type: none"> • For same issuer
Equity	1%	<ul style="list-style-type: none"> • For same issuer
Hedge Funds	5%	<ul style="list-style-type: none"> • Either via fund-of-funds or direct investments
Exemption Clause	5%/10%	<ul style="list-style-type: none"> • Assets under the exemption clause can only represent up to 5% of the Tied Asset Base. The BaFin can allow an increase to up to 10% under special circumstances
Exchange Rates	70%	<ul style="list-style-type: none"> • A maximum of 30% of the Tied Asset Base can be invested in a currency that is not the currency of the liabilities of the pension scheme • Real estate is denominated in the currency of the respective country in which the object is located, for shares the reference point is the stock exchange
Minimum Return Assets	>0%	<ul style="list-style-type: none"> • Minimum not required, although zero return assets are not allowed

Swedish Real-estate market

Swedish economy

Within the last 20 years the Swedish economy experienced a variety of phases with the last major recession after the crash of the Swedish banking system in the early 1990's. The development of the GDP experienced declines in 2000-2001 due to the burst of the IT bubble and another major decline starting in 2006-2009 triggered by the advance of the global financial crisis. Even though the economical development during the crisis was negative, Sweden managed to recover quickly and outperform the Euro-zones' average GDP development in 2010 (Eurostat, 2013). The GDP growth decreased again from 2010 as the export-driven Swedish economy suffers from an appreciation of the Swedish Krona and bad economic conditions in many EU countries as a consequence of the financial crisis (Riksbanken, 2013). Compared to other European countries the Swedish economic development and its economy in general can be considered at the top end. Even though the general economic development in Europe is highly uncertain with Greece, Italy, Spain Portugal and even France struggling, central European countries as Germany will face a higher exposure to these threats than Sweden and the Nordic countries in general. But the economic development in central and southern Europe will also affect the export-oriented Swedish economy (LSE, 2013).

Asset classes

The real-estate market can be divided into the asset classes Core, Core-Plus, Value-added and Opportunistic. A short definition of the characteristics of the different asset classes will be given. The main target of a Core investment is to generate a stable long-term cash flow. Risk levels of Core investments are marginal to ensure a high value retention. The amount of risk carried by Core investments is also reflected by a lower yield. In comparison to the other asset classes Core investments have the lowest rate of return but also the lowest risk. Core investments are usually undertaken in stable and mature market segments (Trübstein, 2012). Properties in the Core segment are usually located in areas with high demand (A-1 locations) and well developed transport connection. Most properties in the Core segment are existing properties. Tenants of these properties can be characterized as highly creditworthy and equipped with long-term leases (Falk, 2004). The buildings of the Core segment are of high quality and vacancy rates are generally low. Core segment investments

are usually financed with a higher degree of equity since debt capital requires the refund of the capital at the expense of the usually already low yield. Debt ratios for Core investments are on average between 0-50% (Schulte, 2005). Core asset investments provide a variety of favourable aspects for pension funds as an investment. Steady cash flows in a safe environment guarantee a sustainable yield for the investors with a low risk. Due to the top locations and property characteristics there is generally a high demand for these assets, which increases liquidity of the asset. For this reason Core investments are an ideal investment class for institutional investors as German pension funds.

Core-Plus investments show characteristics of two asset classes. On the one side the investments provide a high level of security which is a characteristic of Core investments, on the other side the appreciation of value is an attribute of Core-Plus investments which is the main feature of value-added investments. Main investments are, as in the Core segment, locations with high transparency and a low market risk as provided in Central Business Districts (CBD). The holding period of Core-Plus investments is between five and ten years (Woelbern Invest). On the contrary to Core investments the properties are in a later life time cycle. The quality of the buildings is lower compared to Core properties. Leases do not have such a long lifetime anymore as in the Core segment. In order to appreciate the value of the property active tenant management and re-letting of the property is undertaken. Core-Plus investments carry more risk as Core investments due to the shorter leases and lower quality of the properties, but also purchase prices in this segment are lower. Equity ratios of 40-60% and return on equity between 8-11% are most common within the Core-Plus segment (Schulte, 2005). Core-Plus investments provide a higher yield ratio for risk averse investors as pension funds compared to Core investments however still providing a high level of security for the investor.

On the contrary Value-added investments target properties where the bulk part of the cash return is generated by appreciation of value of the property rather than the stable cash flow during the holding period. The holding period of these investments is shorter compared to Core and Core-Plus investments (Shilling & Wurtzebach, 2012). Regarding properties also special real-estate as retirement homes and hotels are in the range of assets, next to office and retail properties. Value-added properties are located in lower quality (1B-locations) locations and properties are either in an early or late state of the real-estate life cycle. Properties usually show higher vacancy rates as in the Core and Core-Plus segment. The

number of tenants per property is usually higher and creditworthiness is moderate but below the prime segment (Schulte, 2005). Due to the higher risk carried by Value-added investments the rate of return on equity is considerably higher than for Core investments. Investments in this asset class are financed by a higher degree of debt in general (Woelbern Invest). Value-added investments are less popular among pension funds due to the higher degree of risk included in these investments.

Even more risky than Value-added investments are Opportunistic investments which provide the highest rate of return but also carry the highest amount of risk. Cash return is predominantly created by the appreciation of value to the property. The holding period for opportunistic investments is the shortest of all asset classes and returns show high volatility. Project development or properties in need of renovation are typical opportunistic investments (Shilling & Wurtzebach, 2012). For this reason vacancy rates are high and existing tenants usually have low credit ratings. Additional risk originates from usually high amounts of debt used to finance these kind of investments. Due to the high volatility in returns and the amount of debt carried by the investment, return on equity has to be higher than in the other investment classes (Woelbern Invest).

Real-estate market development

The Swedish real-estate markets development in the last 10 years reflects the economic development in that time. After a low transaction volume in the early 2000's the economy began to grow continuously and so did the real-estate market transactions until the financial crisis kicked in. The transaction volume plummeted due to the inability of investors to finance new transactions with bank loans and a general reluctance to invest.

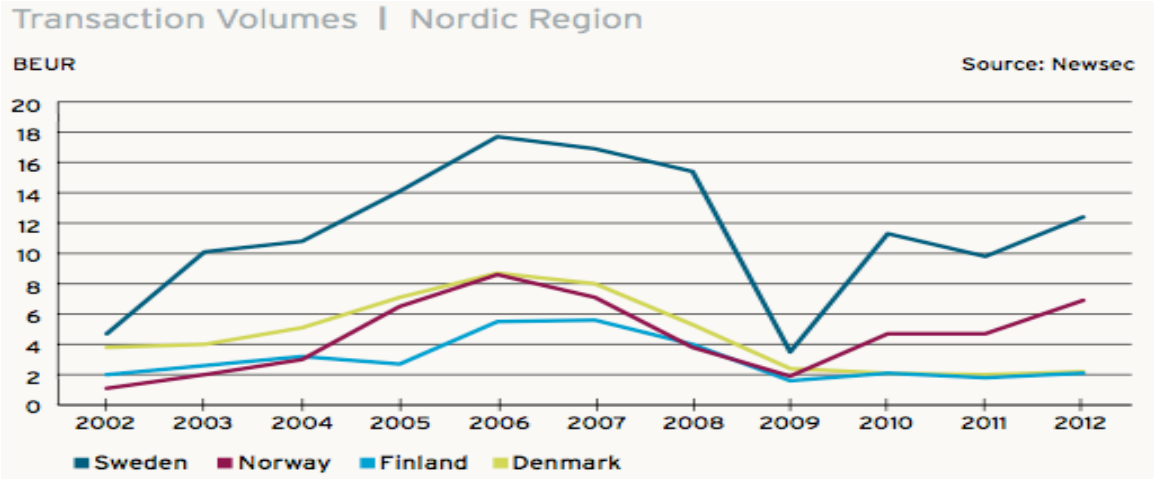


Fig. 4 Transaction Volume Nordic Countries (NEWSEC, 2013)

In 2012 the investment volume in the Swedish real-estate market amounted SEK 105 billion, which is in line with the average investment volume of the last 10 years amounting around SEK 100 billion. For the last years investors showed a high demand for core properties since they are considered safe investments due to the volatility of the financial markets and uncertainty of the future economic development in Europe (Colliers International , 2013). Financing options for investors improved compared to the last years, but financial institutions are still very selective regarding the type of assets they are willing to provide financing for (NEWSEC, 2012). This fact provides opportunities for the German pension funds as investors with high funds. German pension funds are not necessarily in need of financing and therefore can exploit the market potentials more effectively than players who are dependent on external financing. With respect to Basel III regulations for banks, the willingness of banks to finance the same scope of investments than in recent years becomes more unlikely, which opens opportunities for pension funds to close this financing gap by providing financing for real-estate.

Stockholm, Gothenburg and Malmö represent about one third of Sweden's population. These three cities are considered the most important locations in the real-estate market with the highest interest among investors (Statistiska centralbyrån, 2010). For investors the real-estate market can be divided into four segments with the most common classes of investments being office, retail, logistics and residential properties.

Real-estate market segments

The office market

The most important location of office properties is in Central Stockholm. Rental levels for Stockholm offices in Grade A locations experienced a small decline after 2000 until 2004 and another decline in 2007 after the advance of the financial crisis lasting till 2009. Since 2009 rental levels improved again. The rental gap between grade-A and grade-B rents increased since the beginning of the financial crisis (Nordier Property Advisors, 2012). Yield levels for Stockholm offices in general declined or stagnated due to the high demand driven by the "flight to quality" of investors to acquire secure assets with stable cash flows for their investments (Capital Economics, 2012). Prime assets in the Core office segment show a constant high demand by investors and thereby provide a high liquidity of the assets with safe cash flows. These kind of investments are very suitable for pension funds to invest in

since these assets fulfil the criteria of the German pension funds investment principles presented in the previous chapter.

The Gothenburg office market is characterized by a low supply and relatively high demand after a hard hit of the financial crisis to Gothenburg based industrial companies. The economic growth of Sweden in the recent years improved the rental situation again, leading to prime office rents of around 2.500 SEK/sqm/year. The vacancy rate in the central business district (CBD) is below 5% and a total vacancy rate of below 10% for greater Gothenburg (DTZ, 2012).

For Malmö a change of interests can be experienced within the last years. Within the next three years the Malmö area will increase its existing office stock by 6.1%, most of which will be in the area of Västra Hamnen (DTZ, 2012). Rent levels increased steadily in the Västra Hamnen area in the recent years, whereas the CBD of Malmö experiences slightly declining or stagnating rent levels. Vacancy rates for office buildings decreased during the last years but are likely to increase due to increased supply within the next years (Nordier Property Advisors, 2012).

The retail market

The market segment of retail real-estate depends on the economic development in general, the availability of disposable income of the population and the willingness of companies to invest capital. Even through the crisis the disposable income grew although only marginally due to low taxes, a low interest level for loans and little inflation. Even though consumers were reluctant to spend the increased disposable income due to an uncertain economic development. Since the economy grew again in 2010 households consumption increased. The retail real-estate market with a large supply in shopping centres experiences a yield advantage over the 10-year Swedish Government Bond for more than the last ten years. During the financial crisis the high demand for prime shopping centres increased drastically, which lead to a decrease in the yield gap, but with its advance and an increase in risk aversion and tighter lending policies the yield gap widened again. Core assets in the retail segment provide on average a higher risk adjusted yield compared to government bonds. Therefore higher yields can be achieved by the German pension funds as financially sound investors who are not dependent on external financing.

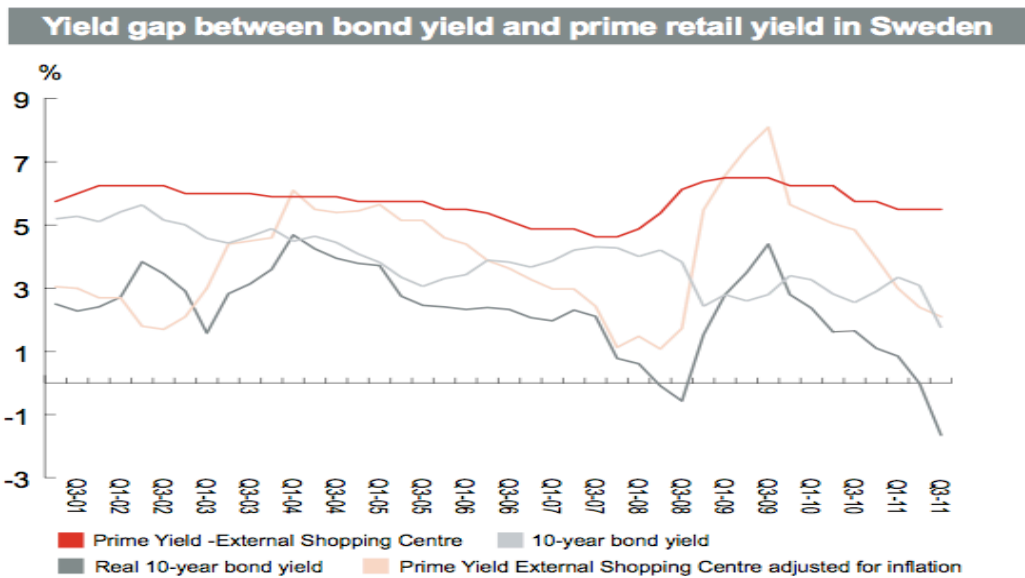


Fig. 5 Yield gap between bond yield vs. prime retail yield in Sweden (Jones Lang LaSalle, 2011)

As for other market segments the demand for core properties increased lowering the yield, whereas properties in secondary locations experience less demand by investors, increasing vacancies compared to prime locations and a declined rent development. Financing opportunities for investors were difficult during the crisis but in recent years improved again, especially regarding investments in the prime segment financing options became better (Jones Lang LaSalle, 2011).

The logistic market

Logistic properties provide features which are favourable for many investors regarding the current market condition. The properties in the logistics segment usually provide long term leases, stable rent levels and strong tenants (Savills, 2012). The majority of tenants demand units of 2.000-5.000 sqm which is rarely supplied. Therefore also B-class assets are let out at relatively high rent levels and additional development in this category is rare (Colliers International, 2013). Environmental certification of the building is another aspect that gained in importance (Savills, 2012). Properties in big city regions were attractive to institutional investors as pension funds within the last years due to the long leases and strong tenants.

The residential market

Since the last financial crisis in Sweden residential real-estate increased in value. By now the prices for residential real-estate more than doubled within the last 20 years (Statistiska centralbyrån). The yearly demand for additional residential real-estate from 2003-2020 will be around 30.000 units for Sweden in total. The area of Stockholm accounts for around one third of this demand (Handelskammer, 2010). As can be seen in Fig. 7, Stockholm also displays the most pricy location for residential real-estate due to the high demand and relatively low supply.

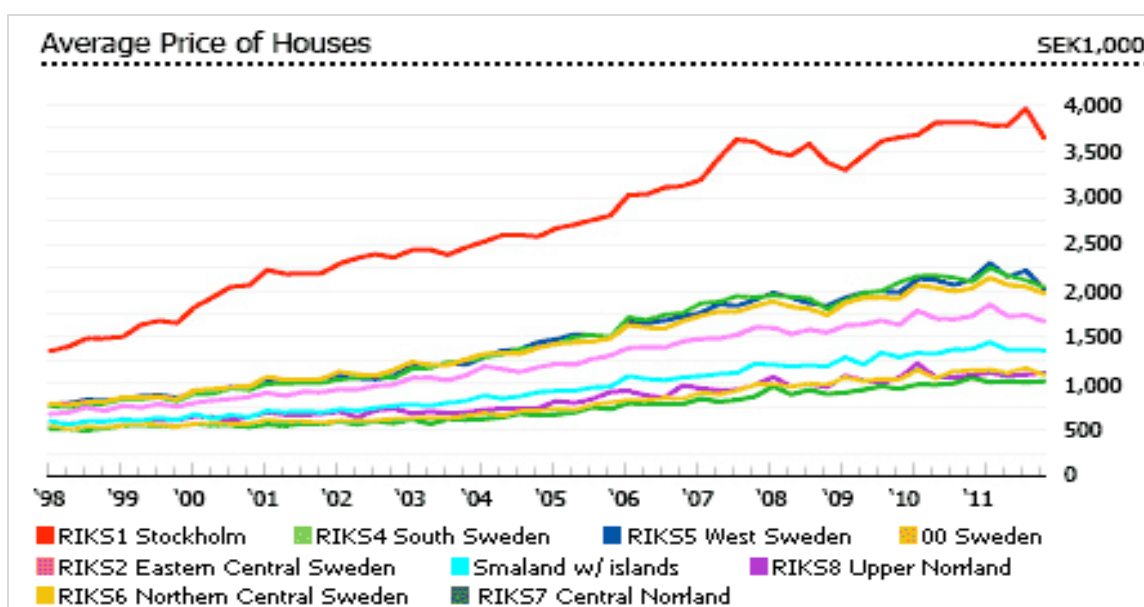


Fig. 6 Residential real-estate price development (Global property guide, 2012)

On the other hand demand for residential real-estate increases due to relatively strong economy performance and low interest rates, which increased the disposable income of households and the demand for credit. Additional changes of the tax regulations also favoured the demand for residential real-estate. Household indebtedness increased significantly during the last 15 years and now is over 160% of the households disposable income. Also the ratio of interest rates for loans changed from a high fixed interest rate ratio in the past to a variable interest dominated ratio within the last three to five years (International Monetary Fund, 2011).

3. Methodology

The methodology chapter provides information about the research approach of the study and the different sources of information which were used to acquire information to answer the research question. Additionally the chapter will give a brief explanation about the analysis of the acquired data.

Research approach

In order to answer the research question of this thesis entirely a combination of quantitative and qualitative research methods was used. By the combination of the two different research approaches a holistic view of the Swedish real-estate market and the interests of German pension funds within the market was provided.

A quantitative as well as qualitative research approach was used for the investigation of the research question regarding the investment behaviour of the pension funds. To provide the general overview of the investment environment within the Swedish real-estate market faced by German pension funds quantitative studies, market data and market forecasts were analyzed and evaluated. In order to support this research a qualitative research approach was used by interviewing market experts.

Empirical information gathering

To gather the relevant information different kinds of sources were used. Primary information was provided by German pension funds and German real-estate funds set up for institutional investors. Information about the Swedish real-estate market was collected by data available on the market, generated by official sources or market experts. Market data as well as the information provided by the German pension funds was then additionally discussed with experts in the real-estate market in order to get a more detailed picture of the market environment and influential factors for international investors.

Primary information sources

In order to get the most recent information about the investment behaviour of German pension funds for the thesis the pension funds and real-estate companies providing real-estate funds specially designed for institutional investors were approached. The questionnaire was developed with respect to the recent economic developments within Europe after the crisis potentially influencing the investment behaviour of the pension funds or portfolio selection of real-estate funds. A survey provides an efficient way to gather

information from a larger group within a short time. Personal interviews were not conducted as the basis of the evaluation due to a lack of time to perform the necessary amount of interviews and the potential biasness created by the selection of the informants (Holt, 1997). Additionally interviewing the pension funds would have led to subjective opinions which would have made data interpretation more difficult (Fowler, 2008). The implementation of a questionnaire could therefore provide the necessary information to answer the research question for this study. Additionally the questionnaire reduces biasing errors by its impersonality, enabling the respondents to take more time for the survey and consult documents if necessary (Holt, 1997). The usage of questionnaires also has a few drawbacks, which the researcher has to be aware of. The questionnaire requires straight forward closed questions that the respondent is able to understand without any further information on the scope of the question, what may otherwise lead to a wrong interpretation of the question and therefore to wrong results. For this reason closed, quantitative questions need to be posed (Collis & Hussey, 2009). It is also beyond the control of the researcher to investigate if the person answering the questionnaire is also the person who was intended to answer the questionnaire by the researcher. This method of collecting data faces the drawback of low response rates in many cases, which might lead to lower significance of the results (Dillman, Smyth, & Christian, 2008). Another factor influencing the response rate can be seen in the specificity of the topic.

The questionnaire was designed as an online survey including ten closed questions. The questions focus on effects of the financial crisis regarding the pension funds investment behaviour. The role of the German and Swedish real-estate market are evaluated in order to acquire information about the perceived benefits and drawbacks of the individual real-estate markets. Additionally the pension funds were questioned regarding their current opinion and future assessment of the Swedish real-estate market as an investment location. The questions were developed according to the questions frequently arising in the literature reviewed for this thesis as well as talks with industry experts performed beforehand the thesis project. The questionnaire results provide a unique set of data and information in relation to the topic.

In total the questionnaire was sent out in a first round to more than 140 "Pensionskassen", 30 "Pensionsfonds" and a number of institutions providing investment products for institutional investors. To increase the response rate a second round of personal mails was

sent out to the majority of the so far non responding interviewees. Due to the specificity of the topic numerous interviewees responded that they haven't performed international investments since the advance of the financial crisis or have no experience within the Swedish real-estate market so far. The total response number of responses to the questionnaire were 22 respondents.

The interview partners regarding the assessment of the German pension funds investment behaviour were chosen by their expertise of the Swedish real-estate market and the ability to assess the changed investment environment institutional investors face since the advance of the crisis. In order to provide a general overview of the topic interview partners from Germany and Sweden were chosen. The interviews were conducted as structured, open ended interviews based on the information acquired via the questionnaire, as well as additional structured questions covering a wider scope of the topic. The purpose of the interviews was to validate the information acquired by the online questionnaire, interpret the results and explicate reasons for the answers provided. Due to the complexity of the topic and the variety of factors influencing the real-estate market the interviews provide additional information and potential reasoning for information gathered via the questionnaire.

Secondary information sources

To gather information on the performance and investment behaviour of German pension funds, real-estate funds and the market development of the Swedish real-estate market secondary information sources have been used. Secondary sources used were industry newspapers, statistical databases as well as research analysis of markets from expertise organizations. A critical evaluation of the trustworthiness of the secondary sources has been executed. Forecasts and market evaluations for the development of the Swedish real-estate market were collected from official sources available within the Swedish real-estate market or performed by analysts and market segment experts. Real-estate market evaluations performed by market experts were cross-checked with the results provided by other institutions to increase the validity of the findings.

Data analysis

The analysis of data was conducted first on an independent level for the different sources of data. The questionnaire was evaluated according to the answers given by the respondents

comparing the acquired information with the data presented in the literature review. Additionally a comparison and evaluation of the information gathered via the questionnaire and the assessment of the statements from the interviews was conducted in order to cross-check for coherence or eventual discrepancies.

The interviews with the real-estate market experts were performed as structured interviews. The information of these interviews was presented according to the statements of the interviewees. The statements were compared to the data and information provided in the literature review as well evaluated with regards to the questionnaire results. The interviews assist to define factors influencing the investment behaviour of the German pension funds since the interviewees have a more holistic view of the market situation and the expertise within the Swedish real-estate market.

4.Data analysis

In this chapter the gathered information will be presented. The evaluation of the questionnaire results will be presented first, followed by the statements given by the interview partners. The chapter ends with discussion about the coherence of the questionnaire and interview results.

Evaluation of the questionnaire

The questionnaire was answered by pension funds directly, as well as institutions in Germany providing investment products such as real-estate funds specially designed for institutional investors.

The first two questions of the questionnaire dealt with the general importance of the Swedish real-estate market for German pension funds since the advance of the financial crisis in 2008. The first question asked about the increased importance of the Swedish real-estate market due to the influence of the financial crisis. The majority of the respondents agreed or strongly agreed with the statement and attach a higher importance to the Swedish real-estate market since the financial crisis.

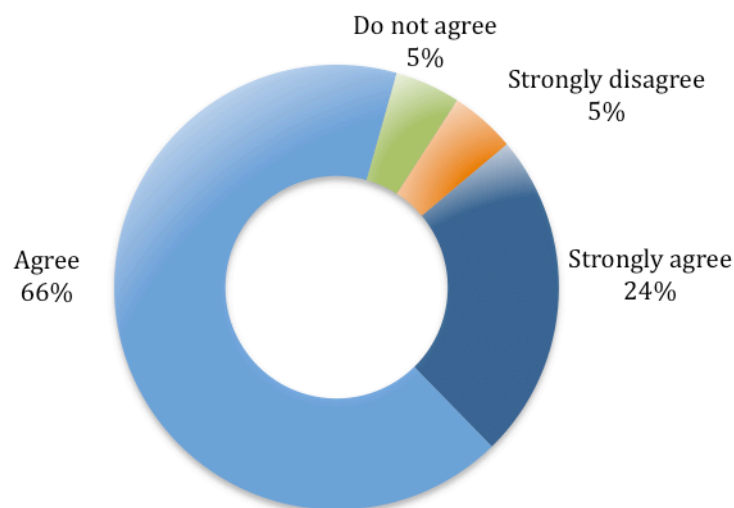


Fig. 7 Do you agree with the statement: Due to the effects of the financial crisis the Swedish real-estate market gained in importance? (Own illustration)

Regarding the aftermath of the financial crisis and the consequential development of the economies within Europe, the interest of pension funds is supposed to shift away from risky markets as for example Spain, Portugal, Greece towards safer markets such as Sweden. According to the respondents 64% share the opinion that the Swedish-real estate market

will gain in significance compared to other European real-estate markets. This information is in line with the arguments in the literature review and strengthens the general assumption that Sweden and the Swedish real-estate market are regarded as a more important investment location for risk averse investors such as the German pension funds.

The attractiveness of Sweden as an investment location in general was assessed according to the following factors: Economic development, state indebtedness, Sweden as not a member of the Euro Monetary Union, growing population, political stability, liquidity of the real-estate market and the development of real-estate prices. The respondents evaluated each statement as beneficial, neutral or negative influence on their investment decisions.

The stable and positive economic development of Sweden is regarded as a highly positive factor by the German pension funds. 86% of the respondents shared the opinion that the stable economic development is a positive driver of their investment decisions. Furthermore, the respondents approve the relatively low state indebtedness of Sweden compared to other European countries as a benefit. Of all respondents 77% agree that this factor is a positive feature underpinning the potential of Sweden compared to other European countries. The fact that Sweden is not a member of the European Monetary Union is regarded as a neutral or negative factor by the pension funds. 50% of the respondents state that this fact has a negative influence for them regarding investment decisions.

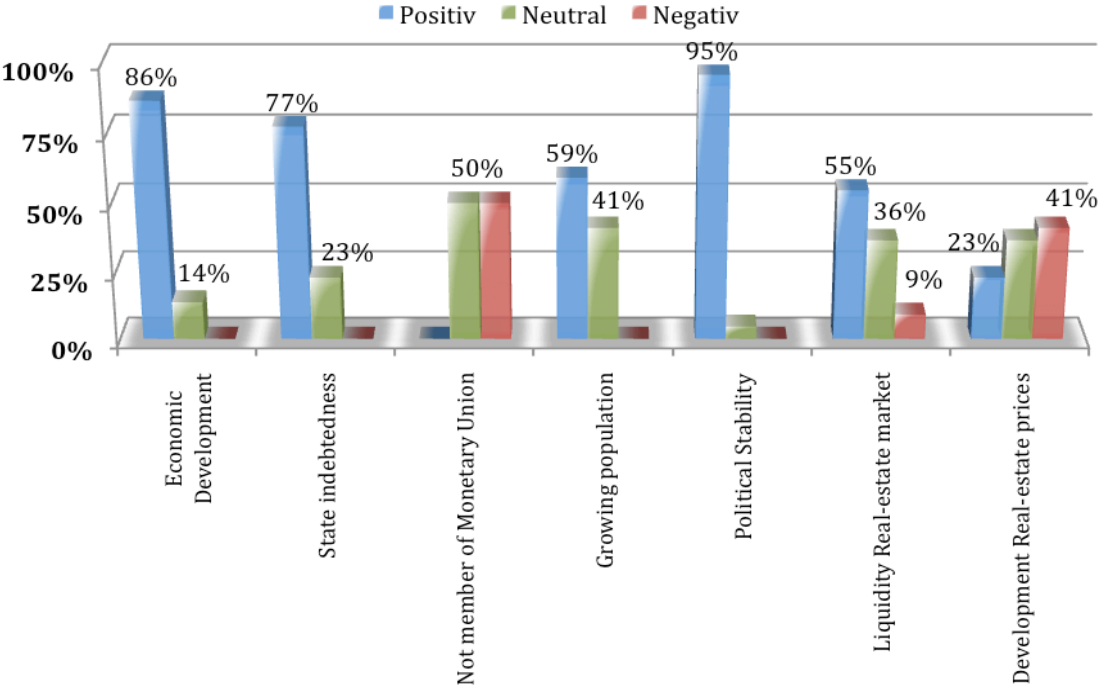


Fig. 8 Are the following factors positive, neutral or negative for Sweden as an investment location compared to other European countries? (Own illustration)

The growing population of Sweden is for the majority of the respondents a beneficial factor for investment decisions. 59% attach a positive influence to this factor, while 41% perceive it as neutral for their investments within Sweden. Another positive factor for Sweden according to the respondents is the political stability of Sweden. This information is in line with the literature review which shows the stability of the political system during the financial crisis and the relatively low affection of the Swedish banking system compared to other European countries. 95% of the respondents assess this factor as a benefit for Sweden as an investment location over other European countries. With regards to the liquidity of the real-estate market the respondents consider this factor as positive for Sweden. As presented in the literature review the Swedish real-estate market averaged around SEK 100 billion within the last 10 years with strong investors in the market. As shown in the presentation of German pension funds an important principle for pension funds is the liquidity of the assets, therefore a liquid real-estate market is beneficial and necessary for pension funds. 55% of the respondents rate the liquidity of the real-estate market in Sweden as a positive factor, while another 36% regard it as a neutral factor. The prices of Swedish real-estate rose constantly during the last decade as shown in the presentation of the Swedish real-estate market. The respondents value this factor as negative. 41% assess that the development of the real-estate prices has a negative influence, another 36% value it as neutral factor, on their investment decisions since investments got more expensive for German investors. Combined with the factor that Sweden is not a member of the European Monetary Union and the appreciation of the Swedish Krona since the financial crisis the increase in real-estate prices makes investments for German pension funds notably more expensive. Additionally a question was posed to evaluate why investors would invest in foreign real-estate markets but not the German real-estate market, which should be the first choice for German pension funds to invest in real-estate. Half of the respondents agreed with the fact that the development within Europe and the European Monetary Union influences the development in Germany. Since the development for certain countries as Spain, Portugal, Greece, France and Italy is quite uncertain, German pension funds regard this fact as a threat towards the economic development of Germany and the German real-estate market. Therefore international investments in safe environments as Sweden become more attractive. Due to the impact of the financial crisis on the countries earlier mentioned and the real-estate crisis in Spain and Ireland, the German real-estate market became a favoured

market for German and international investors. Especially for the asset classes Core and Core-Plus, which are regarded as safe investments, investors conglomerate within the German real-estate market. This leads to a shortage of good investment opportunities for pension funds requiring safe investments at the local market. 77% of the respondents answered that due to the concentration of national and international investors in the German real-estate market international investments become more interesting.

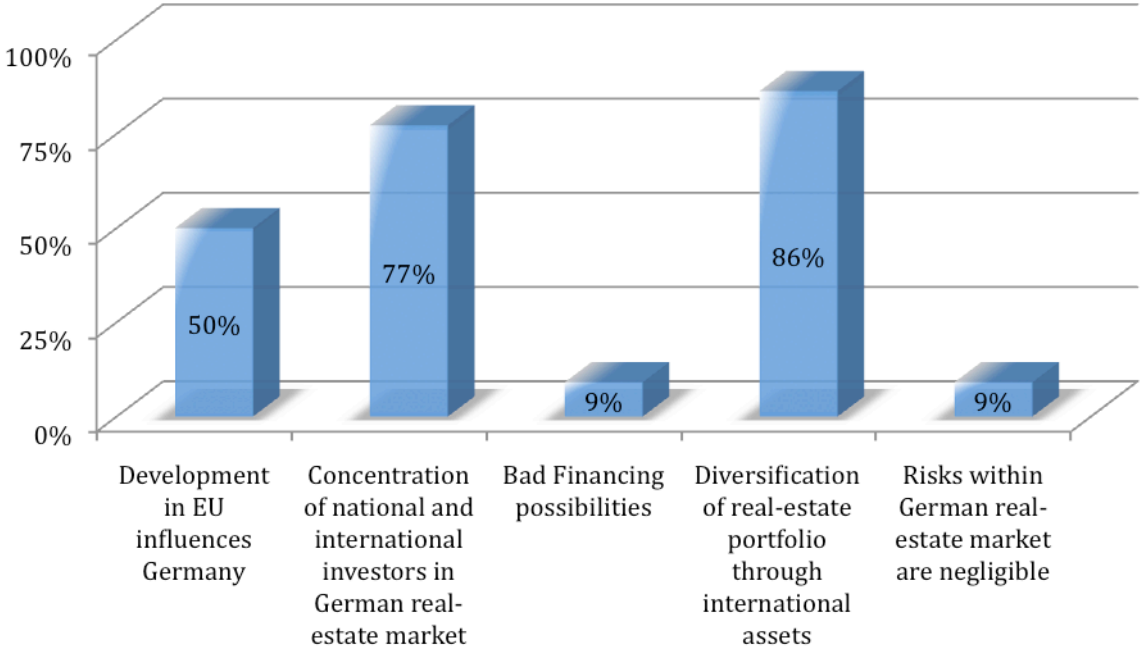


Fig. 9 Which factors of the German real-estate market influences you to invest in foreign real-estate markets? (Own illustration)

Pension funds, as described in the literature review, require safe investment environments for their assets which makes Sweden and the Swedish real-estate market a worthwhile investment location. Financing opportunities in Germany are regarded only as a minor problem. 9% of the respondents answered that they would invest internationally due to better financing options in other markets. With 86%, the majority of the respondents states that investments in international assets are used to diversify their investment portfolio. Regarding the price level of the Swedish real-estate market compared to other European countries, the majority of the respondents state that the price level of Swedish real-estate is higher. Around three-fourth of the respondents assess that prices are higher, while another 14% value the price level of Swedish real-estate much higher than other markets in Europe. This perception of the respondents is coherent with the price development actually experienced within the Swedish market, as shown in the literature review.

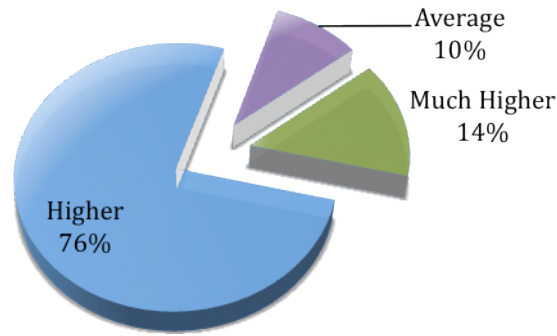


Fig. 10 How do you assess the price level of Swedish real-estate compared to other real-estate markets in Europe? (Own illustration)

The financing possibilities of real-estate in Sweden compared to other European countries were assessed by a question as well. According to the answers of the respondents, the possibilities to receive financing for real-estate investments in Sweden are on average the same compared to other European countries. Around half of the respondents stated that the financing possibilities for Swedish real-estate are on an average level, while around one-fourth stated that it is harder/easier to get financing.

To be able to distinguish which market segment of the real-estate market is most interesting for the German pension funds a question was implemented to assess the importance of the different market segments. The Swedish office market is according to the answers of the respondents of high interest for the German pension funds. All respondents were somehow interested in office properties, while 45% of them showed a strong interest. The retail segment is also of high interest. More than 90% of the respondents showed interest in retail assets within the Swedish real-estate market.

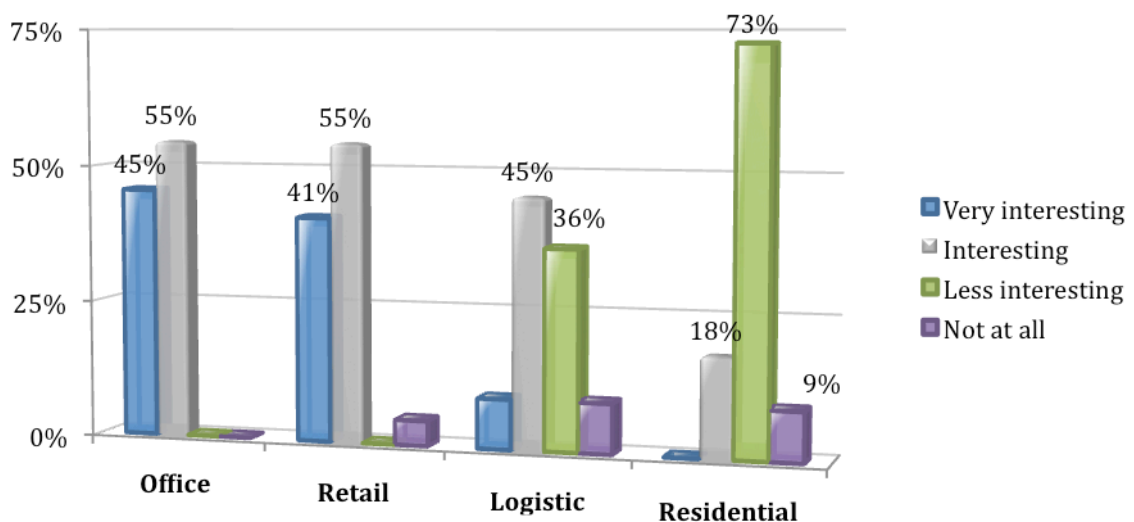


Fig. 11 Which market segment in the Swedish real-estate market is of your interest for future investments? (Own illustration)

When it comes to logistic properties the interest of German pension funds is considerably lower compared to the office and retail segment. 45% of the respondents are interested in logistic assets, while 45% of the pension funds are less interested or not at all interested in this asset class. Residential real-estate is the least interesting market segment for German pension funds. More than 80% of the respondents stated that residential real-estate is less interesting for them or not interesting at all.

To get a closer assessment of which assets are interesting for German pension funds and institutions providing investment products for institutional investors, a question was posed to evaluate which asset classes in the Swedish real-estate market are most interesting for German pension funds. Obtained from the results of the questionnaire, Core-Plus investments are interesting for 73% of the respondents. Another 23% declared that Core-Plus assets are very interesting as investment class for them. The Core segment, as the least risky asset class for real-estate, is the most demanded asset class by German pension funds. 82% of the respondents show very strong interest in Core segment investments. Overall more than 95% of the respondents are interested strongly or interested in Core assets located in Sweden. These statements show that pension funds are still keen on acquiring safe assets also known as the "flight to quality and tangible assets" which was observed since the advance of the financial crisis.

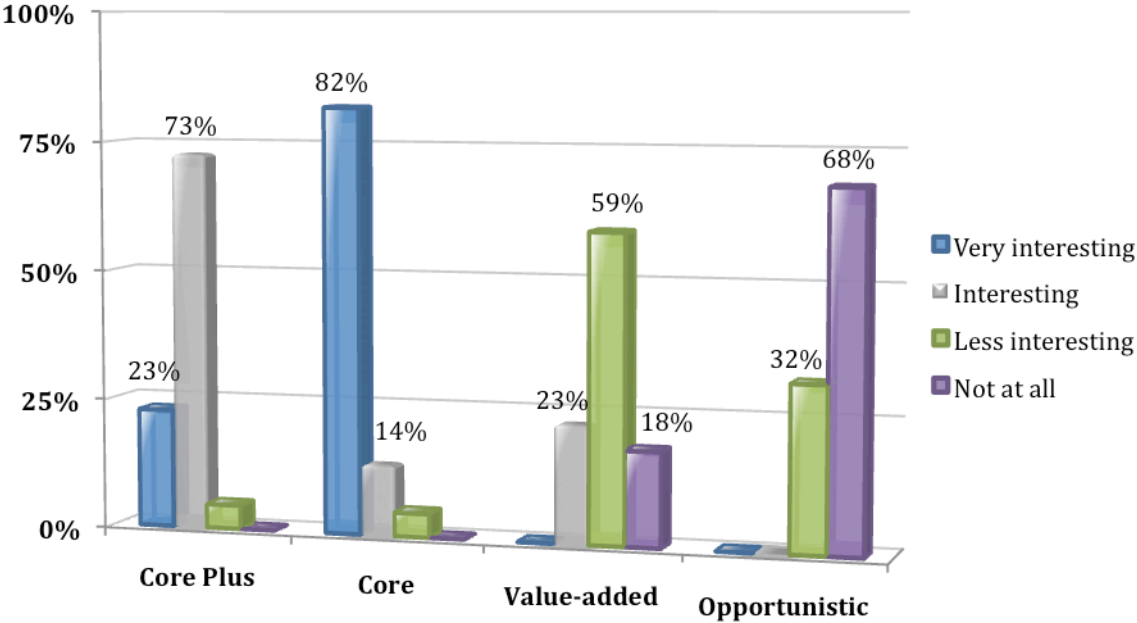


Fig. 12 Which asset class in the Swedish real-estate market is of your interest for future investments? (Own illustration)

Looking at the riskier asset classes of Value-added and Opportunistic investments it can be seen that the interest of pension funds in this asset classes decreases sharply due to the higher risk carried by these asset classes. 77% of the respondents state that Value-added investments are less interesting or not interesting at all for them in the Swedish real-estate market. Nevertheless 23% stated that even Value-added investments are interesting for them. The most risky asset class of Opportunistic investments is not interesting at all for most of the German pension funds. All respondents answered that Opportunistic investments are less interesting or not interesting at all for them.

Concerning the location of investments in Sweden, German pension funds follow the general interest of investors within the Swedish real-estate market as shown in Fig. 13. The most interesting investment for German pension funds is Stockholm and its urban catchment. 91% of the respondents answered that Stockholm is very interesting for them as a location for future investments. Stockholm is followed by Gothenburg which in total more than 90% regard as an interesting investment location, even though the strong interest in Gothenburg is lower than for assets located in Stockholm. Last but not least 77% of the respondents state that Malmö, as Sweden’s third biggest city, is interesting for them as investment location as well. This evidence is in line with the preferred investment locations for investors in Sweden as presented in the Swedish real-estate market chapter.



Fig. 13 Which investment locations in Sweden are most interesting for you? (Own illustration)

When it comes to investment in other parts of Sweden German pension funds show less interest. Cities with more than 100.000 inhabitants are only interesting for 32% of the respondents, while half of the interviewees state that these locations are less interesting for them for future investments. This trend of decreasing interest continuous with even smaller cities between 50.000 and 100.000 inhabitants. 91% of the respondents state that they have less interest or no interest at all in these locations. Other parts of Sweden are not interesting for German pension funds at all. It can be observed that favoured investment locations are metropolitan areas, whereas the interest declines sharply by a decreasing number of inhabitants in a city.

The last question in the questionnaire should give an overview of potential drawbacks of the Swedish real-estate market as an investment location for German pension funds. The most significant answer, given by the interviewees, not to invest in Swedish real-estate is that they evaluate other real-estate markets as cheaper. As shown in the presentation of the Swedish real-estate market, real-estate prices within Sweden rose constantly for the last decade and since the advance of the financial crisis the Swedish Krona appreciated compared to the Euro making investments of German investors within Sweden more expensive.

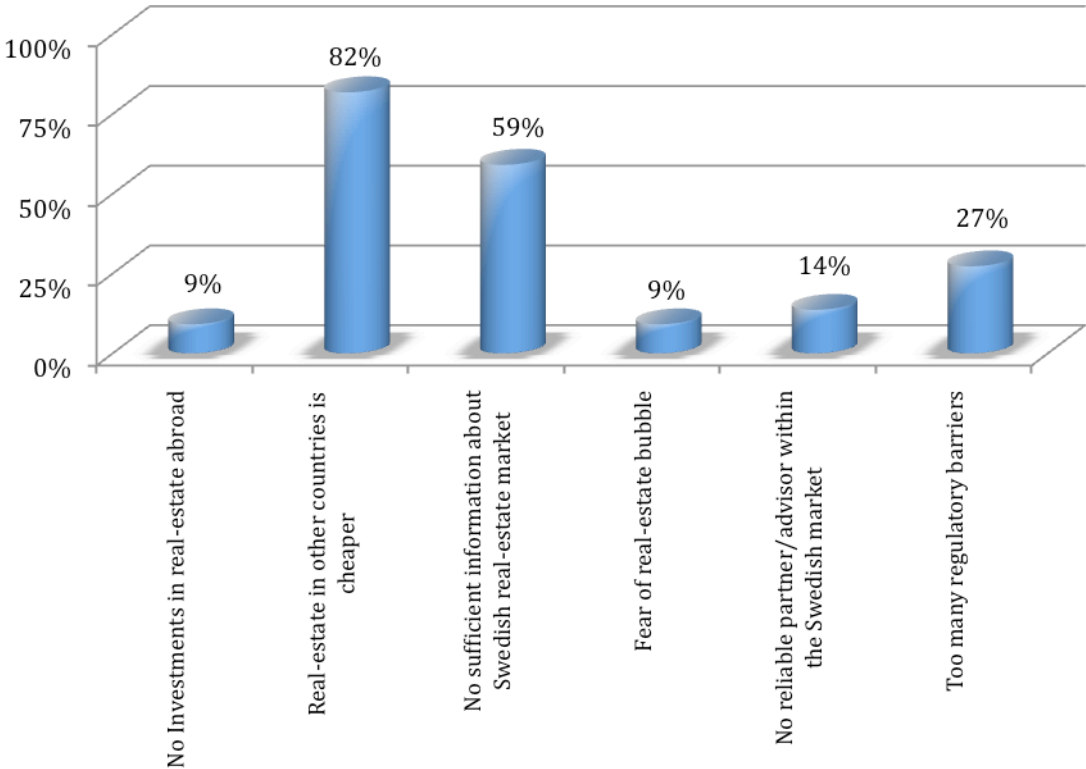


Fig. 14 Which factors influence you to potentially not invest in the Swedish real-estate market? (Own illustration)

Additionally, Sweden is considered a safe investment location, so investors within the Swedish market are willing to pay a premium for Core assets in order to safe their investments. 59% of the respondents state that one criteria for them to not invest in Sweden is that they do not have sufficient knowledge and information about the real-estate market. Connected to this factor, 14% of the German pension funds are missing a reliable expert partner within the Swedish real-estate market supporting them in highlighting investment opportunities and provide strategic advise when it comes to investment decisions. In addition, 27% of the respondents state that there are too many regulatory barriers for them to make lucrative investments.

Interviews

Interview with Nordier Property Advisors

The interview was conducted with Tomas Nyström and Markus Backlund from Nordier property Advisors.

Regarding the first question from the questionnaire, the evaluation of Nordier is the same as the information provided by the German pension funds. Investors regard Sweden as a safe haven in the times and the aftermath of the financial crisis and therefore a high agreement with the first interview question is justified. A potential explanation by Nordier for the 10% of the respondents stating that Swedish real-estate did not gain in importance is that these investors were influenced more by the financial crisis as other investors. Before the crisis the Swedish real-estate market experienced a high activity of international investors, but as soon as the crisis kicked in and the impact on European countries increased the pension funds withdraw their money from international investments and tried to secure their assets. These investors probably have not been interested in international investments again until now, which explains the 10% of responses not agreeing with the statement of the first question in the questionnaire.

Regarding the third question of the questionnaire we discussed the fact why the German pension funds assume that it is more of a negative effect that Sweden is not a member of the Monetary Union. Nordier agrees with this perception and supports the statement drawn from the survey. The positive effect of not being part of the Monetary Union is that Sweden does not face the risk currently observed in the Euro area as for example Germany does. This positive effect of risk reduction is however only secondary since the Swedish Krona appreciated compared to the Euro what makes investments in Sweden way more expensive for German investors. Assets, German pension funds are largely interested in, are also very interesting for Swedish institutional investors who do not face the foreign exchange rate risk and are known for their conservative investment strategies. For this reason, German pension funds face a high competition with a local player who is willing to pay a premium for top-notch assets and in no need of a high yield. The low yields for prime assets are then even lower for German pension funds taking into consideration the exchange rate of Euro/Krona. Nordier states that for example Finland is also regarded as a safe investment location with

the difference that Finland is a member of the Monetary Union and therefore exchange rate risk is non-existent there for German investors.

Talking about the influencing factors why German pension funds would invest in real-estate abroad and not only in Germany the majority of the pension funds stated that foreign real-estate investments are used to diversify their portfolio. From the diversification point of view Nordier states that the Swedish real-estate market is definitely the better option to invest in due to the fact that Sweden is not in the European Monetary Union and changes in the value of the Euro can be balanced by assets held in another currency. For this purpose the Swedish market is more interesting than foreign countries within the Euro area.

Nordier also agrees with the majority of the statement of the pension funds that the price level of Swedish real-estate is higher compared to other European markets and the fact that German pension funds regard the price level of Swedish real-estate as a factor to not invest in Sweden at the moment. Mr. Nyström describes that Core office properties in Stockholm at the moment reach up to the price levels of real-estate in London, which is considered the best real-estate location in Europe, at lower yield levels. The Swedish market on the other hand is then again dominated by the Swedish institutional investors and pension funds who are willing to buy at lower yield levels as German pension funds can buy properties.

Financing opportunities for properties during the last years were really bad but by now an improvement of financing opportunities can be seen within the Swedish market. Especially for Core assets the possibilities to get financing improved. For the secondary market banks are still reluctant to provide financing compared to the time before the financial crisis. The pension funds had a benefit from this situation due to the fact that they are very liquid players in the market and are not necessarily dependent on external financing, therefore competition on the market was lower. This also led to a two-way development within the real-estate market as Nordier states. The pension funds were looking for safe investments in the Core segment, which led to lower yields and increasing prices in this segment while the demand for assets in the secondary market dropped, price levels decreased and vacancies increased. Nordier does not see any activities of German pension funds to invest in the secondary market even though investment opportunities are quite good and the availability of assets is better than in the Core segment. The risk of investments in the secondary market is too high according to the statements of pension funds. This is also supported by the fact that institutional investors lost quite some of their investments due to indirectly held asset

portfolios with properties from the secondary market in the recent years and are now reluctant to invest in these assets again.

Regarding changes in the regulations of Basel III and Solvency II Nordier sees an opportunity for pension funds to step into the real-estate market as a provider of financing for real-estate thereby taking the position currently held by banks. The benefit is that the issuing institution is less dependent on the development of the real-estate market itself, but more exposed to the risk of the debtor. In general the loan-to-value of financing does not exceed 50-60% of the property value and with the property as collateral the investment risk of the pension fund providing the financing is calculable.

Nordier also agrees with the distribution of the investment interest regarding the market segments stated by the German pension funds. Office and retail properties are the most common and most interesting asset segments. Logistics in general provide good investment characteristics with long leases and strong tenants but for pension funds the fact that in general there is only one tenant is a risk that pension funds are not willing to take in most of the cases, therefore logistic investments are less interesting for many pension funds. Another fact for the lower interest in logistic assets from German pension funds can be seen in the fact that it was not very common in Sweden to have very long lease contracts of 15 or 20 years. Shorter leases means a higher risk for the property owner which scares off the pension investors. Since the occurrence of the financial crisis, Nordier experienced a change in this field and now longer leases of 15-20 or even 25 years are seen more frequently. This might make logistic investments more interesting for German pension funds. Another fact for the lower attractiveness of logistic and the high attractiveness of office and retail properties is the liquidity of the assets. Prime office and retail properties are easier to liquidate than logistic assets, which is a big issue for the pension funds.

When it comes to asset classes Nordier agrees with the fact that pension funds are still looking for Core assets as the major investment class. The main driver is the risk aversion of the pension investors. When it comes to indirect real-estate investments via real-estate funds, Nordier states that Value-added investments become more interesting due to the higher yields of this asset class. In this case the portfolio can be diversified with Core and Value-added assets to adjust a right mix of risk and return.

Interview German financial institution

The interview partner for this interview was a German financial institution. The interviewee is established in the real-estate department of the institution and responsible for real-estate financing within Sweden.

From the interviewees point of view international investments within the Swedish market declined drastically since the advance of the financial crisis. A general decline in the investment volume can be seen in Fig. 4 whereas the transaction volume increased again steadily from 2009 on but predominantly driven by local Swedish investors. This fact is on the one side founded with the general unavailability of free capital to invest during the crisis and the protection of assets until a more clear market environment is reached. On the other side investments for German investors became more expensive in Sweden due to the appreciation of the Swedish Krona compared to the Euro since the financial crisis kicked in. A clear separation, which of the two factors influence the current reservation of German investors most, is hard to evaluate, but most likely the factors have a mutual influence on each other.

The interviewee also states that Swedish institutional investors are regaining interest in real-estate, driven by the crisis and lack of alternative risk adjusted investment opportunities. It is stated that Swedish institutional investors appear as a financially strong player in the market, facing more or less no financing issues due to the vast amounts of capital held by the institutions. Real-estate investments by these investors is most commonly financed with equity. The unavailability of financing for other players eases the competitive situation for financially sound investors as Swedish institutional investors which on the other hand means strong competition for German pension funds, since the Swedish institutional investors do not face any exchange rate risk. Regarding this factor the interviewee also states that the real-estate market is a complex system affected by a variety of macroeconomic and microeconomic factors. These different factors influence the investment behaviour of German pension funds and investors in general so that from the respondents point of view a clear separation of single factors influencing the investment behaviour is not possible.

The interviewee agrees with the statements that depending on the assets location A or B locations, financing options still differ. It is easier to get financing for prime location properties than secondary locations and according to the interviewee this situation will hold for the near future due to economic uncertainty and the banks reservation to finance riskier

investments. An aspect which the interviewee supports as well concerning the fact why German pension funds not only invest in the German real-estate market is the point of diversifying their portfolio, which is a general factor to invest internationally and not necessarily connected to the financial crisis. Regarding the Swedish real-estate market in general, the interviewee confirmed that the market environment provides a good framework for institutional investors as pension funds. In the first place the market stability and low volatility is regarded as a quite predictable factor, providing a solid investment environment for institutional investors.

The interviewee sees a challenge for the Swedish real-estate market to attract more international institutional investors within the fact that the prime assets, as for example in the central business district of Stockholm, are in the hand of long-established Swedish institutions and are available on the market very rarely. Investment opportunities for German investors will also improve again if the Euro/Krona exchange rate will reach the level of the time before the financial crisis.

Cross analysis

Comparing the results from the questionnaire with the two interviews the results are coherent for most of the questions. The interviewees in general agree largely with the fact that the Swedish real-estate market gained in importance since the financial crisis kicked in 2008. The major factors for this development as stated by the different sources are the macroeconomic factors of gross domestic product development, the stable political system and the low state indebtedness compared to other European countries. As stated by the interviewees and shown by the results of the questionnaire the liquidity of the Swedish-real estate market and low volatility provides a good market environment for German pension funds as an investment location. Stated by the pension funds in the questionnaire and the interviewees the interest of German institutional investors is focused on Sweden's major cities, whereas the major interest of the German pension funds is the office and retail segment of the real-estate market. The respondents of the questionnaire state that Core assets are the most important and most interesting asset class which is supported by the opinions of the real-estate experts. This is also justified by the investment principles of the German pension funds, to invest in safe assets yielding a sustainable return and on the other hand the general risk aversion of the investors caused by the financial crisis.

The main negative aspect of the Swedish real-estate market stated by all sources is the price level of Swedish real-estate. This is additionally driven by the exchange ratio of Euro/Krona. This development causes German investors to buy properties within the Swedish real-estate market at a lower yield level compared to local investors which do not face any exchange rate risks or exchange rate fluctuations. Swedish institutional investors are willing to buy at relatively low yields. The most important asset classes are Core assets in the office or retail segment in one of Sweden's major cities.

5. Conclusion

From the information acquired via the different sources it can be stated that the Swedish real-estate market gained in importance since the advance of the financial crisis. Regarding the research question it can be stated that the interest in the Swedish real-estate market arouses from the stable market environment and a lower exposure to the threats through other European countries development. The German pension funds, as risk averse investors, are keen on market environments such as provided by the Swedish real-estate market due to market liquidity of the interested assets and from a diversification perspective. Concentration of investors on the local German real-estate market and Germany's higher exposure regarding the development of other countries in the European Monetary Union benefits the willingness of German pension funds to invest in international real-estate.

The interest of German pension funds within the Swedish real-estate market concentrates on the three major cities Stockholm, Gothenburg and Malmö. Especially office and retail assets in the Core segment are interesting for German pension funds due to the high liquidity of these assets and the stable returns.

The major problem the German pension funds face with the Swedish real-estate market is the relatively high price level for properties compared to other European countries. Prices for prime Swedish assets, as in Stockholm's central business district, are in the range of London properties which is considered the best real-estate market in Europe but with lower or equal yield levels. The exchange rate of the Euro to the Swedish Krona is not favourable for German investors. Since the advance of the financial crisis the Krona appreciated and investments became more expensive this way. The relatively high price levels in combination with the exchange rate risk and low yields for prime assets make it hard for German investors to compete with the strong institutional investors within the Swedish market. The investment opportunities for German pension funds in the Swedish real-estate market will improve again if on the one hand other international markets will improve their price levels and adapt towards the price levels in Sweden and on the other hand the Euro/Krona exchange rate will improve in favour of the Euro so that investments within the Swedish real-estate market are less expensive purely due to the exchange rate.

Bibliography

BaFin. (2010). *Rundschreiben 4/2011 (VA) - Hinweise zur Anlage des gebundenen Vermögens von Versicherungsunternehmen*. Bundesanstalt für Finanzdienstleistungsaufsicht.

Bode, C., & Obenberger, T. (2005). *Die betriebliche Altersversorgung nach dem Betriebsrentenrecht ab 2005. Umsetzung des Alterseinkünftegesetzes in der Praxis*. Schmidt Erich Verlag.

BVV. (23. 04 2012). *www.bvv.de*. Von http://www.bvv.de/cms/de/int/ueber_den_bvv/presse_1/pressemitteilungen_2/pressedetail_7552.jsp abgerufen

Capital Economics. (2012). *EUROPEAN COMMERCIAL PROPERTY FOCUS*. Capital Economics.

Colliers International . (2013). *Nordic Real Estate Review Q1 2013*. Colliers International Real Estate Market Forecasts.

Collis, J., & Hussey, R. (2009). *Business Research: A Practical Guide for Undergraduate and Postgraduate Students* (3rd Ausg.). Palgrave Macmillan.

Dillman, D., Smyth, J., & Christian, L. (2008). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (3rd Ausg.). Wiley.

Dresp, F., & Fabian, R. (2011). *Pensionskassen: Grundlagen und Praxis*. C.F. Müller.

Drols, W. (2005). *Handbuch Betriebliche Altersversorgung*. Gabler Verlag.

DTZ. (2012). *Property Times Gothenburg Offices Q3 2012*. DTZ.

DTZ. (2012). *Property Times Malmö Offices Q3 2012*. DTZ .

DTZ. (16. 04 2012). *www.dtz.com/research*. Von http://dtz.se/sites/default/files/DTZ%20Property%20Times%20Stockholm%20offices%20Q1%202012_0.pdf abgerufen

Erber, G. (2008). *Verbriefungen: Eine Finanzinnovation und ihre fatalen Folgen*. Wochenbericht des DIW Berlin Nr. 43.

European Commission. (2013). *European Economic Forecast Winter 2013*.

Eurostat. (26. 02 2013). *Bruttoverschuldung des Staates - jährliche Daten*. Von <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=taina225&language=de> abgerufen

Eurostat. (02. 26 2013). *Wachstumsrate des realen BIP - Volumen*. Von <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=de&pcode=tec00115> abgerufen

Falk, B. (2004). *Fachlexikon Immobilienwirtschaft* (3 Ausg.). Immobilien Informationsverlag Rudolf Müller.

FAZ. (05. 06 2012). Steht Spanien wie Irland vor dem Offenbarungseid? (P. Plickert, Hrsg.) *Frankfurter Allgemeine Zeitung* .

Financial Times Deutschland. (15. 05 2012). Verlockendes Betongold. *Financial Times* .

Focus Money. (27. 06 2012). Das große Anleger-Handbuch für die Euro-Krise . (H. Achatz, Hrsg.) *Focus Money* .

Fowler, J. F. (2008). *Survey Research Methods (Applied Social Research Methods Series, No. 1)* (4th Ausg.). SAGE Publications.

Global property guide. (26. 04 2012). www.globalpropertyguide.com. Von <http://www.globalpropertyguide.com/Europe/Sweden/Price-History> abgerufen

Gorton, G. (2009). *The Subprime Panic*.

Grüttner, A., & Krieger, R. (23. 02 2012). Krisenländer in der Rezession Europas Sorgenkinder. *Handelsblatt* .

Handelsblatt. (03. 12 2012). Europa fault auch in der Mitte. *Handelsblatt* .

Handelsblatt. (16. 04 2012). www.handelsblatt.de. Von <http://www.handelsblatt.com/unternehmen/banken/deutsche-bad-banks-das-sind-die-milliardenfriedhoefe-der-geldinstitute/6505870.html#image> abgerufen

Handelskammer. (2010). www.handelskammer.se. Von http://www.handelskammer.se/sites/www.handelskammer.se/files/sites/handelskammer.se/files/Immobilienmarkt_Schweden.pdf abgerufen

Hertrich, C. (2011). *Strategic Asset Allocation Considerations for German Pension Insurance Funds: Theoretical Analysis and Empirical Evidence*. Stuttgart.

Holt, G. (1997). *Construction research questionnaires and attitude measurement- relative index or mean?* Journal of Construction Procurement.

Holtemöller, P. D. (2009). *Die Weltfinanzkrise und Ihre Auswirkungen auf Deutschland* . Aachen.

Institutional Investment. (18. 04 2013). www.institutional-investment.de. Von http://www.institutional-investment.de/content/asset-allocation/artikel//der-wettbewerb-um-die-immobilie-selbst-ist-haerter-geworden.html?no_cache=1 abgerufen

International Monetary Fund. (2009). *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systematic Risk*.

International Monetary Fund. (2011). *Sweden: Financial Sector Assessment Program Update—Technical Note on Household Indebtedness: Implications for Financial Stability* .

Jones Lang LaSalle. (2011). *The Retail Market in Sweden 2011*.

Kelman, A. (2002). *Mortgage-backed Securities & Collateralized Mortgage Obligations*.

Klatt, M. (2003). *Die Pensionskasse in der betrieblichen Altersversorgung*. Verlag Versicherungswirtschaft .

- LSE. (2013). *LSE European Institute – APCO Worldwide Perspectives on Europe Series Perspectives on the European crises from a small open economy.*
- Neubäumer, P. D. (2010). *Hintergründe und Ursachen der Finanzkrise – Wo sind die Milliarden geblieben?*
- NEWSEC. (2013). *NEWSEC Property Outlook Spring 2013.*
- NEWSEC. (2012). *Newsec Property Update Autumn 2012.*
- Nordier Property Advisors. (2012). *Market Update Spring 2012.* Nordier Property Advisors.
- Portfolio Institutionell. (28. 11 2012). *www.portfolio-institutionell.de.* Von <http://www.portfolio-institutionell.de/newsdetails/article/studie-europaweiter-ruf-nach-sachwerten.html> abgerufen
- Riksbanken. (18. 04 2013). *riksbanken.se.* Von <http://www.riksbank.se/en/Interest-and-exchange-rates/search-interest-rates-exchange-rates/?g130-SEKEURPMI=on&from=2005-03-01&to=2013-04-18&f=Month&cAverage=Average&s=Comma#search> abgerufen
- Rosengren, E. (2009). *Could a Systemic Regulator Have Seen the Current Crisis?* . Federal Reserve Bank of Boston.
- Rudolph, P. D. (2010). *Die internationale Finanzkrise: Ursachen, Treiber, Veränderungsbedarf und Reformansätze.* München.
- Süddeutsche Zeitung. (17. 05 2010). *Ist die Betriebsrente noch sicher?*
- Sander, W. (2008). *Altersvorsorge: So sind Sie gut gerüstet für die Zukunft. Tipps, Checklisten und Modelle für jedes Alter.* Frankfurter Allgemeine Buch.
- Savills. (2012). *Logistics Property Market.* Savills Research.
- Schäfer, D. (2008). *Kreditverbriefungen: Nicht alle Eier in einen Korb legen.* DIW-Wochenbericht 25, 43.
- Schulte, K.-W. (2005). *Handbuch Immobilien-Investition (2 Ausg.).* Immobilien Manager.
- Shilling, J., & Wurtz bach, C. (2012). *Is Value-Added and Opportunistic Real Estate Investing Beneficial? If So, Why?* *Journal of Real Estate Research* , 34 (4).
- Simon Rogers, A. S.-M. (03. 01 2013). *www.guardian.co.uk.* Von <http://www.guardian.co.uk/news/datablog/2010/apr/30/credit-ratings-country-fitch-moodys-standard> abgerufen
- Sozialgesetzbuch SGB. (2012). *Sozialgesetzbuch: Bücher I-XII. Allg. Teil, Grundsicherung, Arbeitsförderung, Gem. Vorschriften, Kranken-, Renten-, Unfallvers., Kinder-/Jugendhilfe, ... PflegeVers., Sozialhilfe* (Bd. 41). Deutscher Taschenbuch Verlag.
- Spiegel . (13. 01 2012). *Rating-Agentur: Standard & Poor's startet Rundumschlag gegen Europa.* *Spiegel Online* .
- Statistiska centralbyrån. (kein Datum). *www.scb.se.* Von http://www.scb.se/Pages/TableAndChart___39158.aspx abgerufen

Statistiska centralbyrån. (31. 12 2010). www.scb.se. Von www.scb.se abgerufen

Stiftung Warentest. (2003). *Die Riester-Rente: So funktioniert sie - Die besten Anlageformen - Jede Fördermöglichkeit nutzen*. Ullstein Taschenbuch.

Trübstein, M. (2012). *Praxishandbuch Immobilieninvestments: Anlagevehikel, Märkte, Strategien in Deutschland und Österreich*. Gabler Verlag.

Versicherungsaufsichtsgesetz VAG. (2012). *Versicherungsaufsichtsgesetz*. Beck Juristischer Verlag.

Wehowsky, W., & Rihm, H. (2009). *Praxis der gesetzlichen Rente: Der Experten-Ratgeber in allen Rentenfragen und zur Altersvorsorge* (2nd Ausg.). Expert-Verlag.

Wirtschaftswoche. (05. 03 2012). www.wiwo.de. Von <http://www.wiwo.de/politik/europa/euro-krise-wo-liegt-das-risiko-fuer-deutschland/6277238-5.html> abgerufen

Woelbern Invest. (kein Datum). www.woelbern-invest.de. Von http://www.woelbern-invest.de/uploads/tx_templavoila/Europa_01_Investitionstypologien_6b7640_05.pdf abgerufen

Zobler, M., & Bölscher, J. (2009). *Chronologie, Ursachen und Auswirkungen der Finanzkrise: Vom amerikanischen Immobilienboom zum globalen Bankencrash*. Books on Demand.

Appendix

Questionnaire Swedish real-estate market

1. **Did the effects of the financial crisis in Europe influence your investment focus towards the Swedish real-estate market?**

Agree strongly Agree Neutral Disagree Disagree strongly

2. **The Swedish investment market will become a more important investment market for future investments compared to other European real-estate markets?**

Agree strongly Agree Neutral Disagree Disagree strongly

3. **What are in your opinion favourable factors of Sweden as an investment location compared to other European countries?**

- Stable economy development	favourable <input type="checkbox"/> ; neutral <input type="checkbox"/> ; negative <input type="checkbox"/>
- State indebtedness	favourable <input type="checkbox"/> ; neutral <input type="checkbox"/> ; negative <input type="checkbox"/>
- Not a member of EU Monetary Union	favourable <input type="checkbox"/> ; neutral <input type="checkbox"/> ; negative <input type="checkbox"/>
- Growing population	favourable <input type="checkbox"/> ; neutral <input type="checkbox"/> ; negative <input type="checkbox"/>
- Political stability	favourable <input type="checkbox"/> ; neutral <input type="checkbox"/> ; negative <input type="checkbox"/>
- Liquidity of the real-estate market	favourable <input type="checkbox"/> ; neutral <input type="checkbox"/> ; negative <input type="checkbox"/>
- Real-estate price development	favourable <input type="checkbox"/> ; neutral <input type="checkbox"/> ; negative <input type="checkbox"/>

4. **Where do you see shortcomings of the German real-estate market so that international investments become more interesting?**

Exposure of Germany to the development of other EU countries

Crowding of German real-estate market through international investors

Financing opportunities

5. What is your opinion about the price levels for properties in Sweden compare to the rest of Europe?

Much higher Higher Average Lower Much lower

□ □ □ □ □

6. What is your opinion of the financial situation for the Swedish real-estate market. Is it easier to get financing for Swedish properties than in other European countries?

Much harder Harder Average Easier Much Easier

□ □ □ □ □

7. Which market segment of Swedish Real-estate are you most likely to invest in the future?

	Very Likely	Likely	Less Likely	Not at all
Office market				
Retail market				
Residential market				
Logistic market				

8. What asset classes would you most likely invest in when investing in the Swedish real-estate market?

	Very Likely	Likely	Less Likely	Not at all
Core Plus				
Core				
Value-added				
Opportunistic				

9. Which locations are you most likely to invest in?

	Very Likely	Likely	Less Likely	Not at all
Stockholm area				
Gothenburg area				
Malmö area				
Cities > 100.000 inhabitants in general				
Cities > 50.000 inhabitants in general				
Rest of Sweden				

10. Why would you choose not to invest in the Swedish real-estate market?

- Generally no investments outside of Germany are done
- Other markets are cheaper
- No sufficient knowledge of the market
- Potential real-estate bubble
- No reliable partner/consultant advising in investment decisions
- Too many legal regulations

Interview questions

Interview questions referred mostly to the results from the questionnaire and as an evaluation and interpretation of the results. Generally the graphs designed from the questionnaire results were discussed. Additionally the following questions were posed:

- Which factors do you think are the strongest drivers for international institutional investors as German pension funds to invest in Swedish real-estate?
- Where do you see shortcomings of the German real-estate market so that investors would invest internationally?
- Why do you think German pension funds assess a negative influence on the fact that Sweden is not a member of the European Monetary Union?
- How do you assess the statement of German pension funds that real-estate prices in Sweden are considered higher than in other European countries?
- Why is there a lower interest in logistic real-estate compared to office and retail properties? From the characteristics of logistic properties (strong tenant, long leases, stable cash flows) the properties seem suitable investments for pension funds.
- German pension funds state a strong interest in Core assets. Do you also see potential for them to invest in Value-added properties?
- Where do you see problems within the Swedish real-estate market influencing German pension funds to potentially not invest in Sweden?
- Do you see benefits for financially sound investors who are not necessarily dependent on external financing within the Swedish market?
- Do you see potentials for German pension funds regarding the new Basel III and Solvency II regulations for banks and insurances to fill the gap of real-estate financing?