COPENHAGEN BUSINESS SCHOOL, DEPARTMENT OF FINANCE
M.SC APPLIED ECONOMICS AND FINANCE
**MASTER'S THESIS**

# Allocation to alternative asset vehicles

*Investment performance, decision factors and motives*

JOHAN HOLMBERG & OSCAR LIDFELDT

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SUPERVISOR AT VATOR CAPITAL: ESRA KARAKAYA
TUTOR AT CBS: BENT JESPER CHRISTENSEN

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## Abstract

The objective of this thesis is to analyse institutional investors engagement in alternative assets. An area where previous research has been scarce regarding the factors motivating investments in alternative assets. The aim is to address this gap by enhancing the understanding of asset allocation strategies in alternative assets and specifically the investment motives, decision factors, performance and various outlooks supporting their allocation. To achieve the objective, we composed a survey directed towards wealth management firms in Europe and to pension funds and insurance companies in Sweden.

We conclude that alternative assets are indeed important in asset allocation for institutional investors. Going beyond finance theory, the motives for institutional investors to invest in alternative assets are based on an expectation of high returns, attractive risk-return profile and portfolio diversification. The main motive for investments in alternative assets among our respondents is the diversification aspect in order to achieve low correlation with other traditional assets. However, we have identified alternative assets to have significant high levels of correlation with stocks and bonds. The increased correlation between the alternative assets and traditional assets has since 2008 diminished some of the diversification value to the investors' portfolio.

Wealth management firms revealed the significance of investing in private equity funds by emphasizing the national development aspect. However, the pension funds and insurance companies disclosed no signs of interest of investing in order to stimulate domestic innovation and growth. This is interesting since previous research suggests that public pension funds should feel political pressure for making investments with respect to national development, while omitting wealth managements' contributions. Existing limited partners appeared especially important for the smallest institutional investors. This confirms the assumption that investments in private equity to a large extent are established by a second mover approach, which infers to copy the behaviours and decisions of other investors who are perceived as having high skills and thus have attained prominence in the market.

## Table of Contents

# 1 Introduction

*This chapter gives an introduction to the topic followed by the purpose of the thesis. Furthermore, descriptions of the delimitations, intended contributions and the historical review of related literature on the subject is presented. The chapter ends with a section describing the overall organization of the thesis.*

## 1.1 Background

According to literature, private banking and family offices offers exclusive wealth-related services to high net worth individuals (Hens, Bachmann, 2008, p.1). The global household wealth in 2012 reached 223 trillion dollars and is expected to increase by 50% the next four years. The number of millionaires is expected to increase by 18 million, reaching a total amount of 46 million people in 2017 (Credit Suisse, 2012). Given the expected growth potential for this market, the demand for wealth management services is likely to increase and remain highly profitable (PWC, 2011). Wealth management business has, like many others, faced the difficulties of volatility in the financial markets. The reduced net inflows, squeezed margins and structural and regulatory changes has indirectly put pressure on private banking divisions to oversee their structures and strategies in order to attract new clients and re-think the investment allocations (McKinsey, 2012).

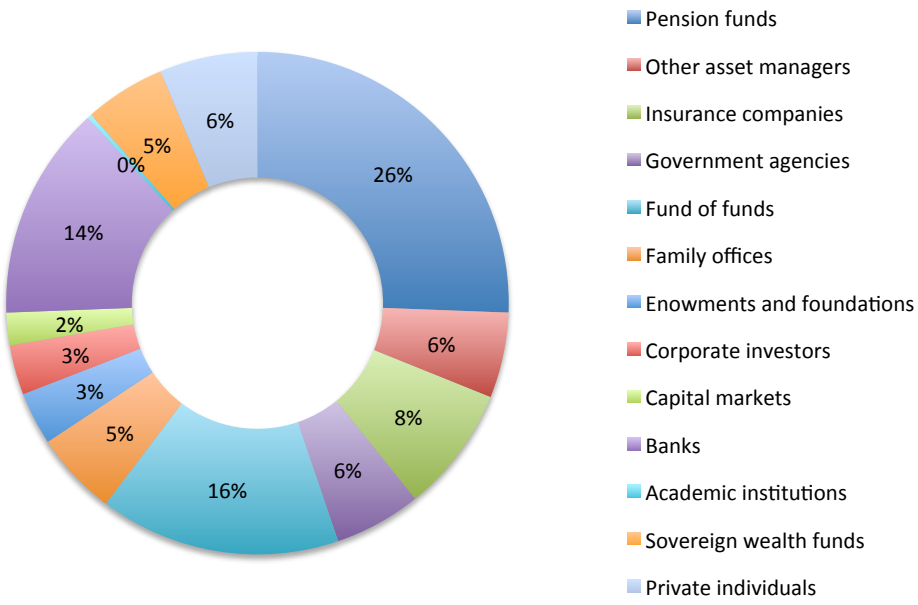
The market of wealth management services is well established; in particular Luxembourg and Switzerland represents the bear part of the assets of ultra high net worth individuals in Europe. Wealth management firms in Luxembourg managed more than €300 billion in 2011 and 89 percent of the private clients had at least €1 million in manageable assets (Claude, 2011). Switzerland probably has the longest history of providing private banking services and enjoys the reputation of being the financial centre in aspects of quality and client discretion (Collardi, 2012, p.9).

As volatile as the stock market can be, many investors have been looking into other ways to invest their money. This has increased the popularity of alternative investments, which is any investment other than traditional stocks, bonds and cash. Alternatives are an important compliment to traditional asset classes in order to better achieve the desired risk-return profile, especially for investors who have a long time horizon and the investment capital (McKinsey, 2012).

Historically, many of the alternative investments have been popular among high net worth individuals and institutional investors, in particular pension funds and insurance companies (DWS investments, 2009). They pool large amount of assets and contribute by providing capital to alternative asset classes.

In the figure 1 below the main sources of funds providing capital to private equity in Europe is listed. As one can see, both pension funds (26%), insurance companies (8%) and family offices (5%) provide significant capital in terms of investment allocation to private equity.

**Figure 1.** Main sources of funds of Private Equity (2007-2011)




Source: EVCA/Thompson Financial.

One example of the most successful investors in alternative assets is Yale endowment with 19.3 million dollar in assets under management. The allocation in the Yale endowment fund has over time changed its structure. Today, foreign equity and alternative assets dominates the portfolio and does represent almost 90% of the target portfolio. Yale endowment has received astonishing 14,2% in annum returns on their portfolio from 1986 to 2009 which is a record compared to peer institutional investors. As shown by Yale endowment, portfolio design is an important issue and a successful allocation to alternative assets can improve the overall portfolio. With the background of Yale endowment, our thesis will contribute with exploring other institutional investors engagement in the field of alternative assets.

## 1.2 Purpose

The research area aims to investigate institutional investors asset allocation strategy with focus on alternative assets. More specifically we define alternative assets as real estate, hedge funds, commodities and private equity leaving other assets such as infrastructure aside.

In order to be able to answer this purpose, we have stipulated six research questions:

1. Are alternative assets important in asset allocation for institutional investors?
2. What are the motives for investing in alternative assets?
3. What are the decision factors when investing in private equity funds?
4. Is the historical performance of the alternative investments satisfying?
5. Is the future outlook for alternative investments satisfying?
6. Portfolio theory states that one advantages of allocating to alternatives is to achieve diversification, do alternatives have low correlation with traditional assets?

This topic is very interesting and of high importance to us, and the results, might be of interest for professionals in this industry as well.

## 1.3 Delimitations

This master's thesis first and foremost examines institutional investors engagement in alternative assets. More specifically it entails performance, motives and decision factors in real estate, hedge funds, commodities and in private equity. Asset allocation and diversification is two important concepts in this thesis. Diversification involves spreading your assets around to various investment types, in this thesis with focus on alternative assets. As a consequence, other traditional assets commonly used for diversification such as large/mid/small-cap stocks, corporate- and municipal bonds will be omitted. A distinction of institutional investors will be drawn and only include pension funds, insurance companies, family offices and private banking (hereafter defined as wealth management firms).

We will to some extent discuss the new regulation, solvency II, that might have impact on insurance companies asset allocation in alternative assets. The new regulation will soon be implemented, scheduled to come into effect in 2014. Other types of regulations are excluded such as Basel III.

## 1.4 Intended contribution

This master's thesis is an exploratory study and expected to introduce a better understanding regarding institutional investors asset allocation in alternative assets. Emphasis on both the theoretical framework and practical comprehension will add to the existing science in two ways. First, provide an understanding regarding investments in alternative assets across institutional investors. Second, investigate the diversification aspect regarding certain alternative investments. To the best of our knowledge, very little is written about this subject and this study will fill some part of the gap in science.

## 1.5 Literature review

What has been written on the subject before has mainly been with regards to alternative assets in general and about how it contributes to the overall performance of the portfolio. Schweiser (2008) conclude that alternative assets play an outstanding role in asset allocation regardless of risk aversion rule among institutional investors.

Hobohm (2008) claims in his paper that different investor types enjoy different returns when investing in private equity funds. He also documented that inexperienced investors also had access to successful funds, which was a barrier decades ago. Furthermore, Söderblom (2011) found with her dissertation that inexperienced investors could gain satisfying returns by coordinating their private equity investments in a second-mover approach by following the lead of the first-mover investor. Hence, the major difficulties involving private equity mainly consist of lack of information and transparency to evaluate the funds compared to public markets. Bance (2004) claims that this can eventually make it difficult for the inexperienced investor to understand the dynamics and the best way to construct an investment strategy when including private equity.

By properly diversifying a portfolio, it is possible to achieve higher expected returns and lower overall volatility. Diversity to many securities will minimize the exposure to firm specific factors and the portfolio volatility will decrease. Portfolio theory states that portfolios of less than perfect correlated assets always achieve better risk-return profiles. The gain in efficiency will be much greater the lower the correlation is between the assets. Schneeweis, Karavas and Georgiev (2012) looked at the role of alternative investments in the institutional portfolio. They found with their paper that an allocation of at least 10% to 20% to alternative investments must be included with traditional stocks and bonds in order to obtain maximum risk-return profile benefits.

All of the mentioned authors agree that alternative assets have an important effect on performance of the investors' portfolio.

## 1.6 Disposition

In chapter 2, Theoretical framework, we present prevailing academic theory within the area of asset allocation, the key players on the market and the benefits for firms to invest in alternative assets.

Chapter 3, Research methodology, describes the sample of companies and the structure of the survey as well as a description of the variables that will be analysed. In addition, the data on indices prices from Bloomberg is explained in detail. It also describes how the analyses are carried out.

Chapter 4 and 5, Analysis, the results of our survey is presented and analysed. Two chapters of analysis will be presented since we have two different samples collected at two different times.

In chapter 6, Empirical study on correlation, the results from our Bloomberg data is presented and analysed with the use of theory described in chapter 2 and with parallels to the results from chapter 4 and 5.

Chapter 7, Conclusions, we lay forth the conclusions we made in our study.

# 2 Theoretical framework

*This chapter aims to provide an interpretation of the financial theory and an introduction to the related terminology widely used in this master's thesis. First, a presentation of the fundamentals that determines asset allocation is outlined followed by a section about the key players. Thereafter, a more detailed description of each alternative asset and how they differ from traditional investments is provided. The chapter ends with an empirical study by Marston (2011) of the potential benefits of including alternative assets in a portfolio.*

## 2.1 Asset allocation

There are two critical factors facing professional investors. First, what types of financial assets to invest in, and second, what would be an optimal allocation of these. A common used practice in the financial industry when outlining asset allocation strategies is derived from portfolio theory (Markowitz, 1952). The theory states that by choosing an optimal mix of assets, the expected return of the entire portfolio can be maximized given a certain level of risk. The determined expected return of the portfolio can also be achieved by reducing the risk through changing asset allocation. This is based on the fundamental principle of diversification. Diversification denotes the fundamentals of exposure to one particular asset in the portfolio are limited, which is considered to improve portfolio returns while reducing risk. However, an optimal mix of assets for one investor might not necessarily be the same for another. Individual preferences will be crucial in the selection of risk levels and return requirements appropriate for that specific investor. These factors are often considered as guidance in the process of deciding investment strategies (Bodie et al., 2011, ch1).

Many investors restrict their choice of assets on the basis of specific circumstances. An example of this is liquidity, i.e. the ease and speed with which an asset can be sold at a fair price. Cash and money market is the most liquid whereas real estate is among the least liquid. Investors must consider how likely it is to liquidate assets at a short notice and establish minimum quotas of liquid assets as part of the investment decision process. Another concern is the investment horizon, which is the planned liquidation date of the investment. Other restriction factors are legal regulations and tax considerations, both are central in the investment decision process. The mentioned restrictions and personal preferences may prevent the asset manager from achieving the most efficient frontier, as determined by Markowitz (1952) theory of modern portfolios.

The major asset classes generally used in portfolios are described as the traditional financial assets: (i) money market instruments i.e. cash or cash equivalent securities, (ii) fixed income securities i.e. bonds,

and (iii) public traded stocks. Investors have invested in these asset classes for decades and the instruments have well-understood characteristics (Bodie et al., 2011, ch2). However, investors have lately started to seek for supplementary assets to add to their investment portfolios. A broad dissatisfaction with poorly performed equity markets and generally low interest rates, together with new restrictions and changes in regulations have increased interest in new types of financial assets. Many of the new assets presented to the market is classified as alternative assets. Alternative assets endured the financial crisis and have performed well the past years and more growth is expected (McKinsey, 2012). The financial benefits of investing in such assets are efficient diversification and higher returns due to the riskier profile than traditional instruments. The returns of alternative assets are expected to outweigh the additional risk (IMF, 2005). In other words, alternative assets provide a better risk-return pay-off than traditional investments. Second, alternative asserts are assumed to have low correlation with traditional securities and contribute positively to portfolio diversification (Leitner et al., 2007). The category of alternative assets is considered to include private equity, hedge funds, real estate, infrastructures and commodities. The capital allocated to these types of investments has increased rapidly over the last decades and is expected to continue to increase (McKinsey, 2012).

## 2.2 Institutional investors

Institutional investors are a heterogeneous group of organizations that pool a large amount of assets on the global capital markets. Institutional investors are usually limited to three main types: pension funds, life insurance companies and mutual funds. However, a broader definition of institutional investors is "*an organization whose primary purpose is to invest its own assets or those it holds in trust for others*" provided by Griffin (2009, p.216). Moreover, the institutional investor manages the savings of small investors towards a specific objective in terms of an identified risk level; return maximization and the maturity of the claim (Davis, Steil, 2004, p.12). Based on this definition, institutional investors may include pension funds, insurance companies, banks, investment companies, endowments, family offices, corporate investors and government organizations.

A large cluster within the sphere of institutional investors are investments companies and banks, often with a private banking unit that provide professional management of financial assets on behalf of their clients (other institutions or private investors). Family offices are similar to private banking but have fewer clients and a more intense focus on high net worth families. They are providing investments, budgeting, insurance, taxation and multigenerational guidance to their clients. Endowments are

organizations that works in a similar fashion as family offices but to a larger extent manages the wealth of universities or other non-profit organisations (Hobohm, 2008).

One group of institutional investors that has gained increased capital share and importance for private equity and venture capital is pension funds. The common feature of pension funds is the characteristics of providing a form of risk pooling for small investors. The benefit is a better risk-return trade-off than is generally possibly via direct holdings. For pension funds, the characteristics and description of its purpose is to collect, pool and invest funds contributed by sponsors and beneficiaries for future pension entitlements. Moreover, emphasis is focused on providing stability and constant accumulated return to the beneficiaries in order to finance their retirement (Davis, Steil, 2004, p.13)

The insurance companies are yet another category within institutional investors and can be divided into two parts. The first category includes companies supplying the market with life insurance products, annuities and pension products while the other part handles property/causality insurances and has significant financial assets to back the beneficiaries potential claims (Davis, Steil, 2004, p.17). Both orientations have a premium function with its objective to provide an eventual contractual obligation occurring in the future. Like family offices and private banking; life insurance companies aim to invest the assets on a long investment horizon, while property/causality insurance companies generally invest on a shorter horizon (Davis, Steil, 2004, p.53). The demand of liquidity in the overall portfolio differs between the two parts since property/causality insurance has a high degree of pay-outs to their customers while life insurance companies usually can predict the assurers longevity and hence, can evaluate the classification of assets to a larger extent (Davis, Steil, 2004, p.13). Alternative investments have gained significant importance in the asset allocation of pension funds and insurance companies, although it still represents a small amount of their total asset under management. One reason why it can be difficult to examine exactly the proportion of invested capital allocated to alternative investment is because it often accumulates in the section of "other investment" items in the annual reports (Herrero, 2007).

## 2.3 Private equity

Giving a universal interpretation and definition of the term private equity is not an easy task, importantly due to the various types of investment activities that summarizes the characterization. Synonymous for both venture capital and buyouts; the two major asset classes defining private equity is the active investment strategy and the settled exit objective that differentiates private equity from most

other types of investment classes. Another broad definition of private equity is capital invested in firms not accessible on the stock market. Being as successful as Yale endowment in private equity investments is not easy and require the investor to consider several aspects:

- The portfolio has a very long time horizon and can manage illiquid assets.
- The goal is to improve the risk-adjusted performance of the overall portfolio.
- Access to the required expertise and resources.

Theoretically, investing in private equity, which is an illiquid asset, should provide a risk premium over a similar asset that is publicly traded. Consequently, private equity should have a higher expected return than public equity. A general partner (GP) typically runs the private equity fund on behalf of the limited partners (LP), which are the investors. The key factor for success is to gain access to top-tier fund managers. This can be difficult for smaller investors since the private equity firms often limit the size of funds they manage.

To give the reader a broad understanding of the definition of private equity a separation of the term will be presented for both venture capital and buyouts, this to distinguish the features of the asset classes (Dimeo Schneider, 2012). Venture capital targets firms in their seed, startup or expansion phases. In other words, the businesses of interest are usually early-stage companies, often belonging to high-growth industries such as IT, telecom or biotech (Hellman, Puri, 2000). Furthermore, venture capital can also include capitalization of firms for developing new products and technologies, expanding operations, commercialization activities, internalization, making acquisitions, or turning around unprofitable businesses. The advantages of having access to venture capital as an asset class in the overall portfolio is mainly due to the fact that it seldom correlates as to the same extent that bonds and stocks does to each other. The advantages of venture capital compared to buyouts is the characteristics of being more transparent, and in some cases, less complex compared to hedge funds and other alternative investments (Chorafas, 2003, p.82-84).

Another type of alternative investment that has gained lots of attention through its targeting of a majority control within related investments is buyouts. A study by Harris, Jenkinson and Kaplan (2013) found that buyout funds have outperformed public markets, particularly the S&P 500, during the 1980s, 1990s and 2000s. The characteristics differs from venture capital in the sense of investing in more mature companies, primarily focused on financing expansions, consolidations or spinouts of

divisions. The investments can vary, ranging from growth to value and early to late stage (Bance, 2004, p.3).

## 2.4 Hedge funds

The main features of hedge fund investments often consist of engagements in publicity available securities which is often bonds and equities related. Moreover, hedge funds generally requires a shorter lock-up period for the investment, usually comprised of one to two years, this compared to private equity investments, which have a generally longer lock up period (Marston, 2011, p.191).

The framework of the structural organization of hedge funds consists of general partners being managers and the limited partners being the investors. An important understanding when speaking about hedge funds and its managers is that each fund manager claims to be using a unique strategy, which explains the great variations in returns. In short, one could say that the manager selection is everything when it comes to hedge funds (Marston, 2011, p.181). According to Connor (2005) the different strategies can be grouped into four major categories: Relative value, event driven, tactical, and equity hedge. In broad terms speaking, hedge funds that use a relative value approach seek for arbitrage opportunities by taking advantage of mispricing of assets. Event driven hedge funds are focused on investment opportunities, such as changes in capital structure or M&A activities. Tactical trading refers to forecasting movements in global macro economical events, while equity hedge strategy involves taking a long or short position in equity in order eliminate most of the systematic risk by keeping beta close to zero. Beyond its strategy, hedge funds strive to generate returns that have low correlation with traditional assets and act independently of market movements resulting in keeping the portfolio returns stable in periods of uncertainty (Connor, 2005).

## 2.5 Real estate

Real estate is a segment within alternative investments that is characterized by its broad definition and returns that has a low correlation with traditional assets, such as stocks and bonds (Kallberg et al., 1996). Additional advantage is the potential of providing a hedge against expected and unexpected inflation. The broad definition of real estate deals with investments such as apartment buildings, office buildings, shopping malls and other types of commercial real estate assets. The capital inflow mainly consists of rents from tenants and the gains occurring when the real estate is sold. Regarding the earlier mentioned Yale endowment fund, the chief investment officer David Swensen recommends ordinary investors to allocate 20% of their investments in real estate (Marston, 2011, p.213). Some of the characteristics that make the unlisted real estate market inefficient are inadequate and costly

information, transaction costs, limited liquidity, and time lags in production (Maier, 2009). In order to avoid the illiquidity problem with investing in real estate, one can invest directly in publicly traded Real Estate Investment Trusts (REITs). In addition to liquidity, there are more advantages with investing in RETIs that will be explained below such as:

- Portfolio diversification: REITs works as a mutual fund and allows the investor to diversify into many different real estate investments. REITs have shown a modest correlation with stocks and bonds, which makes it a good asset in terms of portfolio diversification.
- Current income: REITs pay a much higher dividend than most stocks and a higher yield than most bonds. In the US, REITs are exempt from taxation if they distribute at least 90% of their income to its investors. The required dividend can vary from country to country but it is in general around 80-90% worldwide.
- Inflation hedging: Inflation affect the prices of real estate and rental income tend to increase with generalized inflation, which make real estate a proper hedge against inflation (S&P, 2013).

## 2.6 Commodities

Another asset with interesting features that falls into the segment of alternative investments are commodities. The asset consists of two main alignments; one with consumable features such as corn or salmon and another that owns the characteristics of alteration i.e. crude oil transform into petroleum products or gasoline. In a number of ways commodities do distinct itself contrary traditional assets. First, the characteristics of commodities market as being dollar denominated, for instance general depreciation of the dollar results in an increase of the commodity prices (Anson, 2006, p. 277-279).
Second, commodities offer its investors an effective hedge both against expected and unexpected inflation. This through the fundamentals of bringing the characteristic as a real asset and therefore have an intrinsic value by reflecting the changes in the pricing level. Three, commodities are determined by the current state of the economy and therefore, vary with the business cycle, thus periods of strong expansion corresponds with rising commodity prices due to increased demand and the inflation hedging properties of commodities. Finally, a commodity product is not an income-producing asset - it does not yield an on going stream of cash flows. Therefore, commodities cannot be estimated through traditional valuation methods, instead it is dependent on the interaction between supply and demand.

Moreover, commodities further distinguish to traditional assets in its inherent of low correlation with stocks and bonds. However, lately, the increased attractiveness of the asset class has resulted in

stronger market dynamics resulting in increased trading volumes and total turnover. This, primarily due to the growing interest in commodities which has contributed to a higher degree of pricing efficiency and increased capital inflows, which indirect can lead to higher correlations with traditional assets eliminating the diversification benefits (Belousova, Dorfleitner, 2012).

## 2.7 Portfolio optimization with alternative assets

In the recent years alternative investments have increased in popularity, both among individuals and institutions. Investors wants to allocate capital to alternative assets that have delivered historical attractive returns where the Yale University endowment is a good example of an institutional investor that has been successful in terms of asset allocation. The Yale endowment shifted the investment allocation from stocks and bonds towards real estate, hedge funds and private equity. In order to interpret how these alternative asset classes have performed historically this section will examine a couple of portfolios designed for high net worth individuals.

Marston (2011) present two portfolios of alternative investments designed for high net worth (HNW) individuals and ultra HNW individuals. Both portfolios have 25% invested in bonds, 50% in stocks, and 25% in alternative investments. The first portfolio has 10% in hedge funds, 5% in commodity futures, and 10% in real estate funds. The second portfolio excludes commodity futures and instead increases the investments in real estate funds to 15%. Marston (2011) compared these two portfolios to a conventional portfolio without investments in alternative assets. By including real estate, hedge funds, and commodities, the risk decreased by 1,8% while lowering the average return by only 0,2%. The second portfolio with more allocation in real estate funds revealed even higher returns in comparison to both the HNW portfolio and the conventional portfolio.

Ultra high net worth individuals are somewhat different in relation to the typical investor due to the longer investment horizon and ability to invest in private equity to a larger extent. The definition of wealth of ultra HNW individuals corresponds to asset under management of 20-30 million dollar. Although, the definition may vary and some wealth management firms have higher requirements in terms of managing the client's assets, few clients are able to tie up 10 percent of their portfolio in investments that will be illiquid for at least 10 years. The general investor would not obtain much diversification through private equity since the minimum of capital to invest in venture capital or buyouts often require several rounds of capital. Marston (2011) defines ultra high net worth investors as individuals that can devote 10 percent or more of their total portfolio to private equity or other

illiquid assets. Marston (2011) uses several relevant indexes to evaluate portfolio performance. The first portfolio consists of 10% allocated to private equity. The second portfolio has increased the allocation in private equity to 20%. The performance of the first portfolio reached 0,3% higher return than the conventional portfolio and the standard deviation was 1,4% lower. However, the performance of the portfolio with double allocation in private equity revealed a level of return corresponding to 0,6% above the conventional portfolio, while the risk was 2,4% lower (Marston, 2011, p.267-269).

A stated example of an institutional investor that has displayed significant historical returns by allocating additional investments in alternative assets is the Yale endowment fund. In order to illustrate its performance and to compare the fund with a conventional portfolio comprising of only stocks and bonds an example will follow. Yale's portfolio managed to achieve both lower risk and an alpha value of 4,3% in relation to the benchmark portfolio. In order to evaluate if it is Yale's devotion to alternatives or their access to superior managers that contributes to its extraordinary return Marston (2011) did perform a study on this topic. He found that Yale's choice of managers added an additional 2% to the overall performance and has on average achieved level of returns of 14,2% during the period 1986-2009. Over the same period, NACUBO's[1] equal-weighted index achieved a level of return corresponding to 8,8%. Both the manager selection and reliance on alternative investments are identified factors to describe the success of the Yale endowment fund. Asset allocation is for sure improved by alternative investments but it is no guarantee that investors achieve comparable level of returns equally to the Yale endowment fund. Alternative assets are desirable due to its structure of reducing the risk for a given return or the increased return for a given risk (Marston, 2011, p.273-281).

[1] National Association of College and University Business Officers

# 3 Research methodology

*This section describes the sample of companies. It initially provides a presentation and discussion of the chosen research approach. The following subsection covers the pre-study, the qualitative study and the quantitative study. The chapter ends with a discussion with focus on validity and reliability.*

## 3.1 Research approach

This study has been conducted on wealth management firms in Europe and on pension funds and insurance companies in Sweden because:

- We were provided access to a database by Vator Capital with contact information to 300 wealth management firms located in Sweden, Luxembourg, Switzerland and in Germany.
- Alternative assets have been popular among wealth management firms, pensions funds and insurance companies.
- The Swedish pension funds and insurance companies can reveal information without referring to secrecy policy. They also tend to offer more detailed annual reports describing their holdings than for example other European corporation.
- Few previous studies have been conducted in this research area.

Given the limited research of institutional investors allocation in alternative assets, an explorative research approach appeared to be a natural choice. The study aims to give a basic understanding within this field and serve as a base for further studies (Lekvall, Wahlbin, 2001). The study is based on responses from a questionnaire that was sent out to investment professionals responsible for investing activities at 33 wealth management firms' in Luxembourg, Switzerland, Germany and in Sweden. The study itself had questions ranging from the respondents asset allocation, motives and the future outlook of different products within the field of alternative investments.

Since we received a scarce dataset from the wealth management firms' we wanted to legitimate their responses with an additional survey redirected to pension funds and insurance companies in Sweden. The redirected survey had the same purpose although some questions were modified to better fit their business model. An additional question regarding solvency II is included since the new regulation might have impact on asset allocation for the insurance companies. The results from these companies were combined with the quantitative data collected from each company's annual report. An overview of the respondents and the survey can be found in appendix 1 and 2.

In order to investigate the correlation aspect, which is our last research question, indices of equity, fixed income, real estate, commodities and hedge funds are downloaded from Bloomberg, while index on private equity is omitted since we are not focusing on publicly listed companies active in the private equity space. The main analysis in carried out in Microsoft Excel.

## 3.2 Data collection

The research method is divided into three parts: Pre-study, qualitative study and quantitative data collection. The broader qualitative study investigates institutional investors engagement in alternative asset classes. The quantitative data is used as the main source for analysing pension funds and insurance companies and the qualitative data serves its purpose of supporting information throughout the analysis. The quantitative data downloaded from Bloomberg is used in order to answer our last research question regarding the correlation between alternative assets and traditional assets.

### 3.2.1 Pre-study

The thesis process started with reading related literature in order to get an overview of the topic. Literature such as books is known as common knowledge and in order to legitimate the information we proceeded with a pre-study. The exploratory pre-study included a thirty minutes telephone interview with a senior employee responsible for the product supply in the private banking division at one of the largest banks in Sweden. He had extensive experience in this field, which makes the information he provided us with reliable. He could confirm our beliefs and gave us more ideas of what we could focus on.

### 3.2.2 Qualitative study

The qualitative study was designed in collaboration with Vator Capital after completing the pre-study. The database with the companies contact information was provided by Vator Capital and is considered reliable since Vator Capital has been active on the financial market since 2010. The sample of 300 companies in Sweden, Luxembourg, Switzerland and in Germany is used as an approximation of the total population. We targeted these firms located in four different countries because Vator Capital provided it to us through the database. The response of 33 companies is modest and the business is indeed difficult to reveal any information from, in particular, we experienced limitations of receiving additional comments. Many firms referred to their policy of secrecy as the main barrier to reveal any information. The quality of our data received is also modest and only 12 companies responded to our key parameters, which makes it hard to draw any statistically significant conclusions.

In order to legitimate the scarce dataset from the European wealth management firms' one modified survey was sent to four pension funds and 15 insurance companies in Sweden. The institutions in Sweden were targeted of two reasons. First, they are the largest investors on the Swedish financial market. Second, detailed information regarding holdings is available to the public. The targeted institutions are defined as the total population by SEB Global Financial Solutions, which supports the datasets credibility. The response of 13 companies is good as well as the quality. The quality makes us able to draw general conclusions. The pension funds and insurance companies provided extensive comments, resulting in a comprehensive understanding of investments in alterative assets.

The respondents worked as investment professionals at 33 wealth management firms and 13 pension funds and insurance companies. Whereas, four of these 33 wealth management firms were located in Sweden and all 13 pension funds and insurance companies were Swedish-based. CEO's, CFO's, partners, executive directors, vice presidents, investor strategist, and senior managers responded to the study. In other words, the respondents all have a comprehensive understanding of their organisations way of managing investments.

The contact was made by email with an including link to the Internet based survey and a following letter that explained the purpose of the research. This method has been chosen due to the efficient data collection and the cost-effective aspect. The questions were developed in collaboration with Vator Capital and chosen with deep thoughtfulness. The survey consisted of multiple close-end questions aiming to ensure that more in-depth information was provided. In order to collect personal opinions, some questions were open-ended. The questions were formulated based on the overall objectives and purposes of this research. The questions followed a logical sequence, starting with simple subjects and progressing to more complex issues in order to sustain the respondent's interest. One of the major advantages of using an Internet based survey is the cost-effective aspect. The instrument is efficient and offers the respondents to answer at their own pace and convenience.

The responses of the surveys are collected from the period 1st of February 2013 to 10th of May 2013. The data have been stored and updated simultaneously when the responses was received. The results have been organized in the Microsoft Excel 2011 spread sheet and coded in order to maintain their anonymity.

### 3.2.3 Quantitative study

The sample consists of national pension funds and insurance companies on the Swedish market. The data were collected by study each of the 19 firms annual reports between 2005 and 2011. The figures of interest were mainly asset under management, returns and allocation to alternative asset classes. The data were later complemented with information and comments from the study of the same sample.

Our last research question about the low correlation benefits that alternative assets offer against traditional assets such as stocks and bonds was answered using data from Bloomberg. We used Bloomberg because it is one of the largest databases available to the market with accessible information for answering this research question. We downloaded all available weekly closing index values for the time period of 2005-01-01 to 2013-07-05. This eight-year period provided us with data before the financial crisis and some time after. The indices we have used in order to answer this question are:

- Equities: S&P 500 Total Return Index (SPXT)
- Fixed income: JP Morgan EMBI Global Total Return Index (JPEIGLBL)
- Real estate: Dow Jones Real Estate Total Return Index (DJUSRET)
- Commodities: Thomson Reuters/Jefferies CRB Commodity index (TRJ/CRB)
- Hedge funds: Global Hedge Funds Index (HFRXGL)

In consultation with a senior portfolio manager at SEB we were told that these were the main indices that could be used to answer this purpose and also be easily accessible via Bloomberg.

## 3.3 Validity

Evaluating the quality of a research project is an essential task to perform. Validity aims to examine whether the research instruments really measures what it was supposed to measure and how truthful the results are (Lekvall, Wahlbin, 2001). Given that some variables in the survey will influence the respondent to use proxies or interpretations, there will always be inference involved between responses and the construct in focus.

Within the thesis, validity has been ensured in several ways. First, previous literature is included and a pre-study was executed, which increased the understanding of this subject at an early stage. The respondents of the survey are all investment professionals and assumed to have a comprehensive understanding of their organisations way of managing investment, which increase the validity of the

thesis. The quantitative study of pension funds and insurance companies is also incorporated by high-quality data.

## 3.4 Reliability

The concept of reliability refers to the capability of another researchers to perform the same study and arrive at the same conclusions. The major difference between reliability and validity is that it does not concern what should be measured, but focuses on how the events should be measured. Further, reliability focuses on how measurements are performed, how carefully the data is analysed and how resistant the chosen measurement methods are for unexpected events.

The thesis is mainly based on primary data collected from the online survey. The delivered questionnaire was carefully designed with several rounds of reversion. The survey was resent up to four times with an including letter that stated the purpose and ensured confidentiality. The quantitative data was collected from each firm's annual report, hence available to the public. All of the steps in this research process have been documented thoroughly, enabling other researchers to replicate or perform further research on this area.

# 4 Analysis of wealth management firms

*This chapter presents the results from the distributed survey that 33 investment professionals responded to. First, an overview of the wealth management firms is presented. Second, the firms' characteristics, motives, investment performance, decision factors and the general satisfaction with opinions regarding the future outlook are provided.*

## 4.1 Introduction

This chapter aims to provide an understanding of investors' opinions and insights regarding alternative asset classes and more specifically, it seek to identify motives in asset allocation to alternative assets. This is done by presenting the results and the analysis from the distributed survey in which 33 respondents participated.

The sample of organizations included in this qualitative study manages the assets of high net worth individuals. In order to determine how the capital is employed a number of variables are included in terms of business types, assets under management, comparative advantage, investment focus, satisfaction, etc. The largest group in the dataset consist of private banking firms, which represent 70 percent of the corporations and family offices represent 30 percent. The majority of the respondent corporations were Swiss (15), while the others were from Luxembourg (10), Germany (4) and from Sweden (4).

**Table 4.** Overview of corporations participating in the qualitative study

| | AVG | MED | MIN-MAX | OBS |
|---|---|---|---|---|
| **TYPE OF BUSINESS** | | | | |
| Private Banking | | | | 23 |
| Family Office | | | | 10 |
| **WEALTH OF AVERAGE CLIENT** | | | | |
| (millon Euro) | 16,5 | 2,25 | 0,5-160 | 33 |
| **ASSETS UNDER MANAGEMENT** | | | | |
| (million Euro year 2012) | 2117,5 | 750 | 100-11000 | 33 |
| **ASSET ALLOCATION** | | | | |
| Bonds | 26% | 24% | 10-70% | 12 |
| Equity | 32% | 33% | 10-80% | 12 |
| Cash | 8% | 8% | 0-20% | 12 |
| Alternative assets | | | | 12 |
| *-Whereof Hedge Funds* | 8% | 9% | 0-10% | |
| *-Whereof Private Equity* | 4% | 4% | 0-10% | |
| *-Whereof Real Estate* | 13% | 13% | 0-30% | |
| *-Whereof Other* | 9% | 9% | 0-30% | |
| **INVESTMETS** | | | | |
| No. Of PE fund investments | 41 | 20 | 0-100 | 12 |
| First PE/VC investment (year) | | | 1990-2011 | 12 |

Table 4 depicts that the wealth of the average client in the dataset is 16,5 million euros. The median client has a wealth of 2,25 million euros. The range from the smallest to the largest company in terms of average client wealth ranges from half a million to 160 million euro. Asset under management among the 33 corporations manage on average around 2 billion euros. The median investor company manages 750 million euros. The range from the smallest to the largest investor range between 100 million up to 11 billion euro, this means that the capital varies considerably between the institutions.

There are large differences in the extent to which the institutions allocate their assets. Only 12 companies responded to our key parameters, which makes it hard to draw any general conclusions about the asset allocation. The traditional assets such as bonds vary between 10-70%, and investments in equity vary between 10-80%. The amount of capital set aside to alternative assets is on average 34%, however, it is large variations within the asset classes. Investments in hedge funds and private equity ranging from zero to 10%, and the proportion to real estate and other assets differ dramatically between the institutions, ranging from zero to 30%. However, one can interpret that the average and the median institution have the same proportion of capital invested in the different alternative asset classes.

The numbers of contracts with private equity funds ranging from zero up to 100, and on average, the firms have 41 different private equity fund relationships. The 12 institutions that chose to respond to our key parameter made their first private equity investment between 1990 and 2011. Only one private banking firm responded that they were active in this market with one private equity fund relationship made in 2011. Family offices were definitely more active with performing private equity investments; the first investment was made in early 1990s and two family offices had completed 100 investments each in private equity funds.

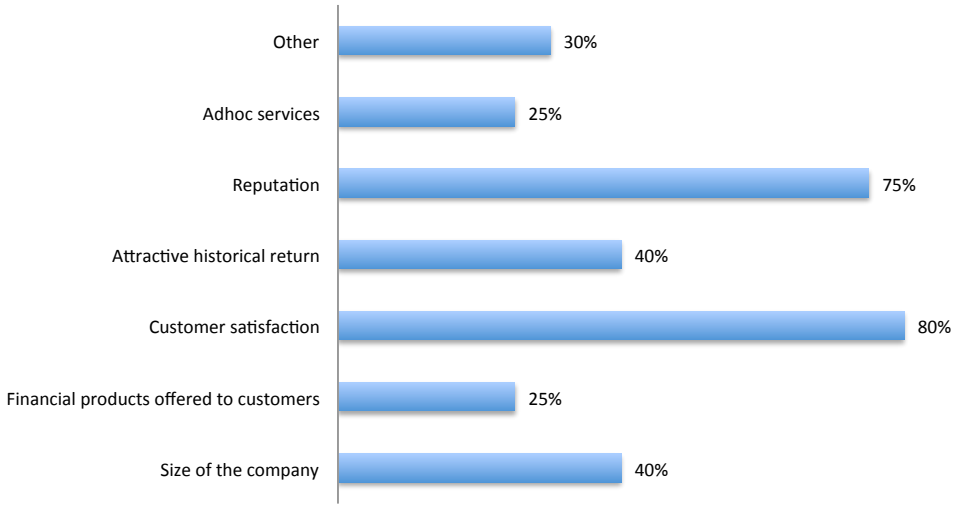
The following subsection will present results and related analyses from the qualitative study. Since the purpose of this study is to investigate portfolio allocation strategy in alternative assets, a presentation and analysis of each of our main findings will be revealed. Throughout the chapter, comments added by the respondents will be presented.

## 4.2 Characteristics

In order to investigate if financial products are important for new clients, the questionnaire exhibits the firms' opinions why clients should choose one's firm in terms of competitive advantages. In this

particular question, the firms was given seven different alternatives to pinpoint its company's strengths, as can be displayed by figure 4.

**Figure 4.** Firms view on their competitive advantage




The responding firms could choose one or more factors as their competitive advantage. Almost all of the 33 responding firms agreed that customer satisfaction is the most important factor to attract new clients. About as important, the firms regarded reputation as an opposing argument compared to its opponents. Interestingly to note is that neither attractive historical return nor financial products offered to customers gained as much attention as the former alternatives. Attractive historical performance is only mentioned by 40% of the participants, just as much notice where accredited to the size of the company as a competitive advantage. Financial products offered to customers were only stated by 25% of the respondents as competitive advantages. Interestingly to note from this is the primarily focus on attracting the clients by exterior features rather than the specific investment related attributes of the firms. Attributes involving adhoc services gained 25% attention to factors like walking the client's dog or picking up the laundry from the dry cleaning store. The firms also had the opportunity to leave comments on this question. Here, many firms emphasized independency as an advantage. Moreover, arguments related to the fee structure and the transparent features of the company are mentioned as competitive advantages in relation to its competitors.

Within the discussion regarding alternative investments a number of questions were published whether the firms considered the supply of alternative investments as important factors for new clients. According to the responses 22 firms believes that alternative investments are not important factors to

new clients, while 6 firms claims that it is somewhat important and additional 5 firms consider alternative investments as important or even very important to new clients.

### 4.3 Motives for investing in alternative assets

According to finance theory the motive for investing in alternative assets is to diversify investment portfolios with assets that provide risk adjusted returns and low correlation with other assets. The investors in the survey confirm this motive and recommend allocation to alternative assets to a high extent due to attractive diversification, as illustrated by table 4.1. Another reason why investors recommend allocation towards alternatives was because it to some or high extent provides an attractive risk-return profile. However, high returns were not the most significant motive among our respondents but it was used up to some extent. There are differences across investors as well; some firms suggested investments to high extent regarding both attractive risk-return profile and diversification while others did not recommend it at all.

**Table 4.1.** Number of firms that recommend allocation to alternatives based on different key factors sorted by degree

| | Very low extent | Low extent | Some extent | High extent |
|---|---|---|---|---|
| Expected high returns | 4 | 4 | 4 | 0 |
| Attractive risk-return | 1 | 2 | 4 | 5 |
| Portfolio diversification | 1 | 0 | 3 | 8 |

The primary reason for avoiding alternative assets was because of a divergence regarding risk-profile and/or due to the client's liquidity requirement of the portfolio.

*"We do not recommend alternative investments to the clients unless they ask for them"*

(Respondent #12, Private banking)

Another interpretation of these investors who did not recommend investments to alternative assets derives from the financial crisis that cut of the returns on alternatives, whereas some investors are still careful with taking on additional risk.

*"Hedge funds have had 4 horrible years. (…) Investors do not get paid back the performance fee if the funds goes down"*

(Respondent #1, Private banking)

When investigating the geographical focus of investments in private equity funds a limited disclosure was revealed. The firms that disclosed such information said that they allocated their private equity

investments towards USA, Europe and Israel. However, other respondents revealed that they only invested in buyouts without any specific geographical focus and not in venture capital. Moreover, most of the respondents have never done private equity investments in the Nordic region, while some others have ceased and refocused towards funds in Europe and in the US. Investments in European funds are common for most of the firms in the sample, but how often investments occur range from sometimes to very often. The second most attractive market is the US, were firms constantly screen the market in order to find potential funds. However, investments in emerging markets are less attractive than European and US funds, just a few firms have done investments in those regions but not on a regular basis. The focus has not changed over time despite the financial crisis, as one may think.

## 4.4 Investment performance

The respondents were asked to disclose their annual return in their aggregated portfolio in order for us to break down the material and identify differences in allocation to alternatives. From the table 4.2 a summary is made whether private banking firms have performed better or worse than family offices over the last 3-5 years. The main identified difference in terms of investment performance between the two groups of investors is that family offices have more allocation in private equity funds. Furthermore, family offices have also more active private equity fund relationships in general. The dataset is not statistically significant which makes it difficult to perform a deeper analysis of the potential causes to these differences.

**Table 4.2.** Average annual returns in aggregated portfolio

| | Private banking | Family office |
|---|---|---|
| Average annual return in aggregated portfolio (%) - Last 5 years | 6,25 | 15,15 |
| Average annual return in aggregated portfolio (%) - Last 3 years | 6,1 | 16,8 |

Finally, the respondents were asked to indicate how satisfied they have been with returns from their private equity investment and whether they had decided to make any changes in future allocation to the asset classes. The private banking companies were in general satisfied with the returns in alternative assets, but they were very disappointed with the returns from private equity investments. The family offices were, on the other hand, more positive and satisfied with their private equity investment and in general more satisfied with the overall performance of their alternative assets. The private banking firms were the only investor group that had a few firms that were both very disappointed with the overall performance of alternative investments and with the returns of their private equity investments.

Among the investors belonging to the family office group, the satisfaction with private equity investments was considerably higher compared to the other investor group. One primary reason that one firm stated, for investing in private equity, is the low correlation advantage with other asset classes. Another opinion by one firm states how the satisfaction of returns have developed and changed over time.

*"Returns are more stable and offer lower volatility"*

(Respondent #4, Family office)

In addition, bad experiences and lack of competence regarding the asset class were presented as comments of how satisfactions with returns have developed and changed over time.

## 4.5 Decision factors

Table 4.3 displays the decision factors used in order to decide upon investments in private equity. Five different factors where presented and the respondents could answer either not important, somewhat important, important or very important. The factors presented included past fund performance, diversification needs, investor team quality, quality of existing limited partners and good citizenship/national development.

**Table 4.3.** Decision factors when investing in private equity funds (number of firms)

| | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| Past fund performance | 0 | 3 | 1 | 1 |
| Diversification needs | 0 | 1 | 2 | 2 |
| Investor team quality | 0 | 0 | 2 | 3 |
| Quality of existing limited partners | 2 | 1 | 0 | 2 |
| Good citizenship/ National development | 0 | 2 | 1 | 2 |

Due to the fact that very few firms decided to complete this question, it is difficult for us to make any general interpretations. The investor team quality earned the greatest attention as decision factor. The diversification argument, good citizenship/national development aspect and other existing limited partners in private equity funds appeared to be very important. It might be an overall assessment based on all these factors before the final investment decision is made. Two private banking firms stated that the quality of existing limited partners is of no importance to them, while it is especially important for

two family offices. This indicates that some firms see themselves as professional investors and are not influenced by other investor's movements.

After evaluating the decision factors for making certain investments in private equity funds, the next step is to analyse the decision making process. The firms were asked who decides on the investments in specific funds. Giving the participants three alternatives, whereas the first was the investment team, the individual managers and an "other" alternative. In the latter an open answer to respond to this question could be chosen. Moreover, the firms had the option to choose more than one alternative. The distribution from the answers revealed that 8 firms makes investment decisions on a team level, while 6 firms stated that the individual investment manager makes the final investment decision. The result appear ambiguous as many of the firms has chosen both alternatives, although one possible interpretation may implicate that investments decisions in general are made on a team level, where yet an individual manager makes the final decision. Or the situation is vice versa; the individual manager makes a first research while the final decision is made on a team level.

Family offices indicated a formal and more standardized procedure when clarifying the major steps in the decision process within private equity.

*"Business plan, due diligence, potential return, risk"*
(Respondent #4, Family office)

The private banking investors on the other hand, did emphasized a more customized decision process.

*"A team member comes up with the idea and presents the investment case to the team. All team members read the investment case. Some team members may decide to get to know the managers of the PE/VC Investment case. Decision by team members"*
(Respondent #9, Private banking)

The typical duration of the investment decision process for family offices is 4-6 months, while private banking firms disclosed a somewhat shorter process period.

The respondents were asked what type of incentive contracts the firms usually arrange with their general partners. The importance of this question was to see if the fee is a barrier for making

investments in private equity. In this context, general partners are defined as the fund managers, while limited partners are defined as the investors. When evaluating the results, firms tend to use management fees to a larger extent than performance shares. The subsequent question regarded the typical percentage level charged as management fees. The results indicated a percentage fee ranging from 0.4-1% on the investment, however a one percentage fee was the most common management fee according to the respondents. The performance share on the other hand, was slightly higher and ranged from 0.5-2%.

According to the firms the incentive contract has changed over time towards more achievement-driven targets.

*"More performance"*
(Respondent #14, Private banking)

*"The fee's are too high. Bad for the clients"*
(Respondent #8, Family office)

While the overall responses indicated a development towards the use of performance targets to a larger extent, significant emphasis concerned the negative aspect of the current high levels of commission charged by the fund investors.

## 4.6 Future outlook

The respondents were asked to provide their view on the development of the alternative asset market and what they expect the performance to be in the future. Regarding future outlook of alternative investments, each category will be explained in detail including specific comments from the respondents.

Family offices will to some extent increase their private equity investment in the short run, one firm is also referring to the increased transparency of the asset class as a reason for increasing allocation.

*"PE/VC have developed to be more transparent but with lower returns, very attractive for the coming years with higher returns."*
(Respondent #4, Family office)

Family offices were in general more positive of the development and the future outlook of the private equity market compared to private banking firms, who will diminish their allocation mostly because it is too risky for their clients. Interesting to note is that some private banking firms are ready to take on additional risk in order to achieve higher returns. One firm is optimistic about the future of the asset class despite the recent economic turmoil.

*"I have the impression that investors risk appetite currently increases, and thus they will be seeking higher returns also via PE/VC investments."*

(Respondent #9, Private banking)

However, both investor groups are not likely to increase the allocation in hedge funds. Bad experience and unpredictable returns were stated regarding the last few years' development of the asset class. Regarding investments in real estate, neither family offices nor private banking firms will increase their allocation. The main reason for not investing in this asset class is that a substitute can be found on the stock exchange such as REITs.

*"Better to buy real estate on the stock exchange."*

(Respondent #8, Family office)

Private banking and family offices are positive to the development of the commodity market and will to some extent increase their allocation in this asset class. The commodity market has performed poorly the last couple of years but the investor groups believe that the asset class should generate better returns the next years to come. Among the investors, gold is the most popular metal to invest in, with a recommended allocation of 3-7%.

# 5 Analysis of insurance companies and pension funds

*This chapter is based on the results from the quantitative data and the survey responses from 13 investment managers representing pension funds and insurance companies in Sweden. First, an overview of the selected companies is presented. Second, the firms' motives, investment performance, decision factors and the general satisfaction with opinions regarding the future outlook are provided.*

## 5.1 Introduction

This chapter aims to investigate institutional investors asset allocation to alternative assets. This is done by presenting the results emerging from both a quantitative and a qualitative study. The quantitative data in our analysis originates from 19 insurance companies and national pension funds in Sweden, whereas 13 of these participated in the survey. The survey composed have the same purpose and design as for the wealth management firms but a few questions is adjusted to better fit the insurance companies and pension funds business model (See appendix 2). Hence, the benchmarking effect is accessible for most of the questions regarding decision factors, performance and motives.

The quantitative data stretches from 2005 to 2011 and were collected from property- and life insurance companies and pension funds active on the Swedish market. These funds are of interest due to the combined amount of invested capital of approximately 3 000 billion SEK[2], hence representing a significant amount on the financial market. The aggregated allocation in the dataset reveals that more than 300 billion SEK is allocated to alternative assets, which represent 11% of the total assets under management.

The data were used to determine how the investors' asset allocation has changed over the years. This generates an overview of how institutional investors allocate to these asset classes, and how their perspective has emerged and evolved over time. Table 5 illustrates the companies included in the quantitative study, whereas 13 of these companies responded to the survey. We have done a distinction of the two insurance companies since the theory described in chapter 2 states that property and life insurance companies have different investments horizons.

[2] Aggregate excel sample 2011.

**Table 5.** Overview of the selected companies

| Property insurance | Life insurance | | National pension funds |
|---|---|---|---|
| IF | Alecta | SPP Life | AP 1 |
| Trygg Hansa | AMF Pension | Folksam Life | AP 2 |
| Folksam | Skandia Life | Handelsbanken Life | AP 3 |
| Länsförsäkringar | SEB Life | KPA Life | AP 4 |
| AFA | Länsföräkringar Life | AFA Life | |

The institutional investors in this study differ to some extent regarding the dedication and commitments in allocation to alternative assets. Table 5.1 indicates that, on average, the investors in the dataset allocate ten percent of their capital to alternative assets. The life- and property insurance companies set aside the largest part ranging from zero percent up to 30 percent. The national pension funds set aside on average 12 percent, despite some differences within the investor group. The investor with least allocation to alternatives has seven percent invested, and the investor with most dedication to alternatives has 18 percent invested. This result is quite unexpected since our initial hypothesis was that pension funds invest more in alternatives, in particular private equity, with respect to national development (Phalippou, Gottschalg, 2009). One explanation is that the Swedish national pension funds have a restriction of a maximum of five percent for investments in unlisted assets, which foreign pension funds does not have (SOU 2012:53).

**Table 5.1** Overview of the aggregated dataset

| | AVG | MED | MIN-MAX | OBS |
|---|---|---|---|---|
| **TYPE OF BUSINESS** | | | | |
| Insurance Company | | | | 15 |
| Pension Fund | | | | 4 |
| **ASSETS UNDER MANAGEMENT** | | | | |
| (million SEK year 2011) | 145 953 | 111 338 | 2 715-487 180 | 19 |
| **ASSET ALLOCATION** | | | | |
| Bonds | 62% | 65% | 35-88% | 19 |
| Equity | 27% | 28% | 2-62% | 19 |
| Alternative assets | 10% | 8% | 0-30% | 19 |
| **INVESTMETS** | | | | |
| First PE/VC investment (year) | | | 1989-2006 | 9 |

The life insurance companies allocated approximately 40 percent of their capital to equity during periods of good market condition and decreased the allocation to around 30 percent when the financial climate worsened. They strive to have around 50-60 percent in interest-bearing assets (e.g. government bonds) and ten percent in alternative assets, whereof eight percent is allocated to real estate. The institutions in the property insurance group invest in a similar way and set aside on average 20-30 percent in equity, 70-75 percent in fixed income and nine percent in alternative assets, including five

percent in real estate. The national pension funds tend to invest 50-60 percent in equity over time, 40 percent in fixed income products, and 12 percent in alternatives, whereof 11 percent in real estate. The national pension funds have on average increased their investments to alternative assets from three percent in 2005 to 12 percent in 2011.

The Swedish institutional investors included in the dataset seem to be modest about investments in alternative assets. Earlier reports reveals that international institutions, mainly corporate/public pension funds, endowments and insurance companies allocate about 20-25 percent to alternative assets in 2012 (Russell Research 2012). In comparison, the Swedish pension funds and insurance companies included in this study tend to allocate less capital to alternatives compared to their international peers. However, the investors are in general satisfied with their investments and will not consider increasing their allocation in alternative assets to the same extent as their international peers. Most of the respondents from the insurance companies will increase their allocation in real estate, due to its lower impact on stress levels of solvency II, cited by one of the investment managers. The outcome is still unknown but solvency II will probably put higher risk-weights on private equity investments. However, pension funds are not affected by the solvency II regulation and do regard the development of the private equity market as mainly positive.

Literature dedicated to alternative asset classes usually implies that investments within alternative assets require superior experience, due to the high levels of secrecy and complexity. Investments in alternatives are considered to be more resource-intensive than investments in other quoted securities (Söderblom, 2011). The national pension funds have by far the most developed organisation in that sense, with a department and a team that constantly work with these kinds of asset classes, which may explain their positive achievements.

## 5.2 Motives for investing in alternative assets

According to financial theory, the advantages of investing in alternative assets is to diversify investment portfolios with securities providing high risk-adjusted returns and low correlation with other assets (Markowitz, 1952). The investors was given the option to answer to the question regarding the motives of investing in alternative assets and to explain the major forces thriving their investment pattern.

**Table 5.2.** Number of firms that allocate to alternatives based on different key factors sorted by degree

| | Very low extent | Low extent | Some extent | High extent |
|---|---|---|---|---|
| Expected high returns | 0 | 1 | 4 | 6 |
| Attractive risk-return | 0 | 2 | 3 | 6 |
| Portfolio diversification | 0 | 3 | 3 | 5 |

As one can see in table 5.2 the motives for the investors to invest in alternative assets are based on an expectation of high returns, attractive risk-return profile and portfolio diversification. The pattern is similar for both pension funds and insurance companies. However, one pension fund stated that investments in private equity only occur with the expectations of high returns and the desired diversification effects is generally achieved by investments in real estate.

*"It depends on the type of investment, private equity only for high return, real estate and bonds to create a more balanced portfolio and stock market return for lower risk"*

(Respondent #43, Pension fund)

Yet another national pension fund emphasizes the purpose of investing in certain types of assets to conclusively fulfil certain objectives in terms of investment strategies.

*"Private equity – Return enhancer, real estate, infrastructure and timberland – Diversifiers"*

(Respondent #44, Pension fund)

Folksam (2012), a combined life and property insurance company claimed that the purpose of their investments in alternative assets is to achieve diversification effects due to low correlation with traditional assets. Skandia (2012), a life insurance company revealed that alternative assets have contributed in a positive way to the overall performance of the portfolio. This pattern is also valid for AFA (2012), an insurance company in the middle segment that allocated as much as 32% to alternative assets. The overall appetite to invest in alternative assets within the insurance market is consistently high, both regarding the life- and property insurance companies.

Regarding the Swedish national pension funds the emphasis of investing in alternative assets is also persistently high. AP 2 (2012), one of the largest pension funds revealed an allocation of 15% to alternative assets. The annual report reveals that the purpose of investing in alternative assets is to achieve risk diversification due to the low correlation with the rest of the portfolio. AP 3 (2012),

another national pension fund stated that they allocate to alternative assets in order to improve performance and to minimize the risk of having co-variation among assets. Overall, the institutional investors' clarified a description of both positive return and overall satisfaction to reflect their contributions in alternative assets.

The investment motives among the institutional investors revealed diversified opinions concerning the regions of private equity investments. Scandinavia and the US were the most popular regions were both investor groups made investments to a large extent and on a regular basis. The European region was also popular among our sample. Regarding investments outside the western world, one institutional investor displayed increased exposure, while less attention was given to the national market.

*"We have increased our exposure towards Asia and reduced in Europe, in particular the Nordic countries"*
(Respondent #42, Pension fund)

To sum up the responses of whether the investments within private equity have changed over the recent years, two insurance companies indicate a reduced interest within the mentioned field. One motivates this by increased competition in the asset class and difficulties to find the best investors on the market.

*"Decreased expected return after the financial crisis in 2007-2008 due to reduced growth and increased competition in the asset class. It's more difficult nowadays to identify the best investors. We are more restrictive with investments within PE/VC today"*
(Respondent #43, Pension fund)

However, the majority of the Swedish institutions tend to predominantly invest locally. One argument for preferring local investments concerns the challenges associated with evaluating the fund managers. The institutions claimed that it is important to observe the general partner, which can be very expensive if the fund is located outside of Scandinavia.

## 5.3 Investment performance

According to the financial dataset in our study, the average annual return among life, property and national pension funds do vary. From table 5.3 one can interpret that the national pension funds had the highest average return over the last three years. Although, property and life insurance companies

display an average return of four percent over the last five years and a return of seven percent the last three years.

**Table 5.3.** Average annual return aggregated dataset.

| | Property insurance | Life insurance | National pension funds |
|---|---|---|---|
| Average annual return in aggregated portfolio (%) - Last 5 years | 4% | 4% | 2,1% |
| Average annual return in aggregated portfolio (%) - Last 3 years | 7,5% | 7% | 9,4% |

The reason why this is evident has partly to do with the differences in the overall investment allocation between the institutional investors. As shown in appendix 3, the national pension funds displays significantly higher shares of equities than property- and life insurance companies in their overall portfolio. Moreover, one can interpret the emphasis of alternative assets within the life insurance segment to a greater extent in comparison to the property insurance segment. Within the property insurance segment the interest-bearing assets make up the major part of the overall asset allocation, equivalent to almost 75 percent of the total portfolio during the whole observation period. As depicted in appendix 3 the asset allocation within alternative assets for the life insurance segment has been approximately constant during the seven years period. A minor decrease can be displayed during 2009, whereas the trend subsequently recovered to a level at roughly 10%, equivalent to the levels prior to the financial crisis in 2008.

The respondents were also asked to indicate and provide comments on how satisfied they have been with their investments in alternative assets. Motives for reducing or increasing allocation to the different types of alternatives were included in the survey.

The two groups of investors were in general satisfied with their investments. Three investors very satisfied with the returns from their alternative investments. Interesting to note is that none of the investors is disappointed with fund returns from neither alternatives in general nor private equity in particular. Both the insurance companies and the national pension funds were in general satisfied, and a few investors were very satisfied with their investments in private equity. Only one pension fund in this group were disappointed with the performance from their private equity investment. The investors that were very satisfied with their investments in alternatives were also very satisfied with the fund returns from private equity.

A final comment of performance satisfaction concerned the time of entry. Some of the institutions that had made their first private equity investment around the dot-com boom seemed to be more disappointed with the returns from their investments than other investors. However, institutions that had entered the market between 1989-1997 had rather positive experiences about fund returns.

## 5.4 Decision factors

Furthermore, emphasis is focused on the factors in the decision making process that is considered important for investments in private equity funds. One of the pension funds emphasized the importance of the funds strategy and the investors knowledge in the decision making process.

*"Team, Strategy and Track Record"*

(Respondent #43, Pension fund)

Among the insurance companies the importance of fee structures and the managers was mentioned as important factors.

*"Choice of investor, the fees and alignment of interest"*

(Respondent #34, Insurance company)

However, the decisions factors in private equity funds do differ to some extent between the companies. Although, both investor groups agreed that the single most important factor for investing in private equity funds is the management team quality of the fund. The management team needs to have a solid track record in order to attract the major institutional investors.

**Table 5.4.** Decision factors when investing in private equity funds (number of firms)

| | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| Past fund performance | 0 | 2 | 5 | 3 |
| Diversification needs | 1 | 5 | 4 | 0 |
| Investor team quality | 0 | 2 | 2 | 6 |
| Quality of existing limited partners | 2 | 4 | 2 | 2 |
| Good citizenship/ National development | 8 | 1 | 0 | 0 |

Pictured in table 5.4, past fund performance and existing limited partners was ranked as very important by a few firms. Interesting to note is that these are the smallest insurance companies in our sample with a market share of less than ten percent. However, two of the major pension funds conducted that

limited partners was of no importance to them. Hence, declaring themselves to be professional investors and would not consider how other investors allocate their assets. This confirms the assumption that investments in private equity to a large extent are established by a second mover approach, which infers to copy the behaviours and decisions of other investors who are perceived as having high skills and thus have attained prominence in the market (Söderblom, 2011).

Besides the financial motives in terms of investment decisions in private equity, one additional variable was included regarding the aspects of national development. This alternative was included since the capital from private equity investments is considered to have positive effects on job creation and economic growth (Phalippou, Gottschalg, 2009). Previous research suggests that public pension funds are affected by political pressure to invest in national private equity funds (Lerner et al., 2007). Having this in mind, the results was very surprising since none of the public pension funds considered supporting domestic growth as important. The firm that considered it somewhat important was one of the minor insurance companies that also ranked existing limited partners as very important.

*"Expected risk/return, existing limited partners (very important), sustainability"*
(Respondent #35, Insurance company)

The investment decision occurs after the potential funds are identified which fulfil the criteria's of having attractive past return, desired diversification effects, and an exceptional investment team. The final investment mandate and what type of manager that takes the final decision differ across the companies. The smallest insurance companies in this study have a more simple process where the investment team also have the final investment mandate. Even if the process is simple, the length of this period is usually long – six months or more. However, the national pension funds and the largest insurance companies have a shorter process, ranging from one to six months and includes the period of business and legal due diligence. All the propositions have to pass through the CEO or the board of directors, where the final decision is made.

## 5.5 Impact of Solvency II

Solvency II is the European Union's new legal system for insurance companies, which is set to be in effect from the first of January 2014 in the whole European Union, but incorporated in Swedish law from the autumn of 2012 according to the Swedish financial supervisory authority. The new directive (2009/138/EC) is a set of rules that relays on three pillars that consist of quantitative requirements and

how to calculate them, qualitative requirements that focus on risk management and supervision, and finally, requirements for supervisory reporting and disclosure of information. The Solvency II regulation might have impact on asset distribution, which makes it interesting for this thesis when discussing allocation to alternative assets.

The main purpose of the new rules is to make it easier to start and operate insurance businesses within the internal market of the European Union. There are a lot of different rules within the member states today and the solvency II framework aims to harmonize these rules. For the internal market to be well functioning, it is important to protect the policyholders' with a set of rules that is easy to follow when a company engage in activities outside their home country.

The most important rule in the new framework is to establish new solvency capital requirements, in order to secure an efficient capital allocation within the European internal market. The development within the market means that the existing solvency requirements are no longer adequate. The central purpose of the new solvency capital requirement is to give policyholder sufficient protection.

The impact of solvency II on the insurance companies is still uncertain but higher capital requirements will be put on the alternative asset classes than for other instruments, which may reduce the attractiveness of alternative investments (Schreuder, 2013). Since higher capital requirements dilute returns, one respondent insurance company stated that it would probably affect them to increase the required return for that particular asset class.

In general, the insurance companies in our sample believe that solvency II will only affect their investment strategy to some- or small extent. However, Schreuder (2013) claims that even if the regulation will cause higher capital requirements, alternatives can continue to help improve risk-adjusted returns for insurance companies.

### 5.6 Future outlook

The last section in the questionnaire deals with the standpoints in terms of future outlook and forecasting. The respondents were asked about their attitudes towards increasing or decreasing the allocation in the alternative assets classes in the near future. The allocation within commodities is the asset class that had the lowest shares in terms of allocation whereas all of respondents reply that they will not increase their allocation at all. A determinant for this outcome is the significant magnitude of regulations that control the business among the institutional investors. Four of the respondents

comment on this question and gave similar answers in terms of a prohibition of investing in commodities.

*"The national pension funds are prohibited from investing in commodities"*
(Respondent #43, Pension fund)

According to Iwarson (2006) the national pension funds are in accordance to Swedish law prohibited to invest in commodities. He claims this is a problem since commodities possess the qualities of having advantageous effect in the overall portfolio, in particular in aspects of the low correlation with stocks and bonds. He claims that the law is not based on true facts, and that a small allocation in commodities could generate astonishing returns.

All of the 13 respondents, except one, stated that no increase in allocation to hedge funds would be made in the near future. One primary reason to avoid future investments in hedge funds across the insurance companies is because of enhanced stress levels, due to the solvency II regulation.

*"The transparency is a problem - induces increased stress levels if the hedge fund is not transparent"*
(Respondent #36, Insurance company)

The two groups of investors would to some- or small extent increase their allocation in real estate on a short-term basis. One primarily motive for increasing the allocation is due to relative small stress tests assigned to real estate by solvency II, as one investor stated. Another motive is that the investors have been satisfied with the past returns and also expects stable returns in the future. However, one pension fund will increase the exposure abroad while another pension fund will increase the allocation on the Swedish market with regards to the decent growth levels and low interest rates.

Private equity is the alternative asset class that is most favourable among the institutional investors in aspects of future allocation. All of the pension funds would to some extent increase their allocation. Although, there are three insurance companies that does not consider any future investments to private equity. Here, the solvency II regulation is the main motive for the low contributions to private equity.

*"Increased solvency II stress levels may have a negative impact on the allocation"*
(Respondent #36, Insurance company)

One insurance company anticipated increased allocation due to the positive progression and low interest rates of private equity investments in the recent years. Currently, the debt-to-capital ratios for the start-up companies are relative low and an increased focus towards making the companies grow are two of the main arguments to continue the investments within private equity as one insurance company stated.

The national pension funds revealed more diversified motives regarding the future outlook. While all investors agreed that they would increase their allocation to private equity in the near future one investor left a contradicted comment on the development of the private equity market. Here, the return ratios are a major factor for the resistance to invest in private equity.

*"The private equity model is very cost-heavy which complicates the target of outperforming the stock-return plus the risk-premium of 4% that we use"*

(Respondent #43, Pension fund)

One national pension fund gaze beyond the national market in order to seek attractive investment teams. Moreover, the pension funds have a more positive outlook of the returns from their private equity investments in comparison to insurance companies.

*"More focus on manager selection, we will probably increase our exposure towards Asia and on a short-term against Latin-America. Today we have no exposure towards ventures in Europe, only the US (small ratio of the portfolio)"*

(Respondent #42, Pension fund)

# 6 Empirical study on correlation

*In this chapter we will answer the last research question about correlation. This will be done by using the results from the data gathered from Bloomberg explained in the methodology chapter together with theories from the framework of reference. In addition, we will draw parallels to our findings by the respondents of our survey presented in the analysis chapters.*

## 6.1 Introduction

For several years, institutional investors have increased allocation to alternative assets as a part of their asset allocation strategy. Wealth management firms, pension funds and insurance companies, have paid most attention to this strategy. According to financial theory, the advantages of investing in alternative assets is to diversify investment portfolios with securities providing high risk-adjusted returns and low correlation with other assets (Markowitz, 1952). In addition to theory, we can also conclude that one of the main motives for investments in alternative assets among our respondents is the diversification aspect in order to achieve low correlation with other traditional assets.

Correlation measures the degree to which prices of assets move together. The correlation coefficient vary from perfect negative correlation, -1, to perfect positive correlation, +1. The correlation coefficient is labelled on the vertical axis and the time period on the horizontal axis in the following charts in this chapter.

**Table 6.** Correlation matrix

| Correlation matrix | | | | | |
|---|---|---|---|---|---|
| | SPXT | JPEIGLBL | DJUSRET | TRY | HFRXGL |
| SPXT | 1,00 | 0,58 | 0,77 | 0,46 | 0,64 |
| JPEIGLBL | 0,58 | 1,00 | 0,52 | 0,40 | 0,49 |
| DJUSRET | **0,77** | **0,52** | 1,00 | 0,34 | 0,43 |
| TRY | **0,46** | **0,40** | 0,34 | 1,00 | 0,52 |
| HFRXGL | **0,64** | **0,49** | 0,43 | 0,52 | 1,00 |

As seen by table 6, the investors have witnessed a significant high correlation between indices of equities (SPXT), fixed income (JPEIGLBL), real estate (DJUSRET), commodities (TRY) and hedge funds (HFRXGL) during the period from 1st of January 2005 to 5th of July 2013. The most important correlations are highlighted in red but as pictured in the table, we have rather high correlation between the alternative assets as well. In contrast, table 6.1 depict the correlations before the financial crisis. The period of investigation is from 1st of January 2005 to 29th of August 2008 and indicates significant lower correlation between all indices compared to the levels after the crisis. The correlation between

commodities and traditional assets is close to zero and correspond to our respondents' belief of the features of the asset class. However, the pattern does not apply today and some of the diversification value has diminished.

**Table 6.1.** Correlation matrix pre-financial crisis

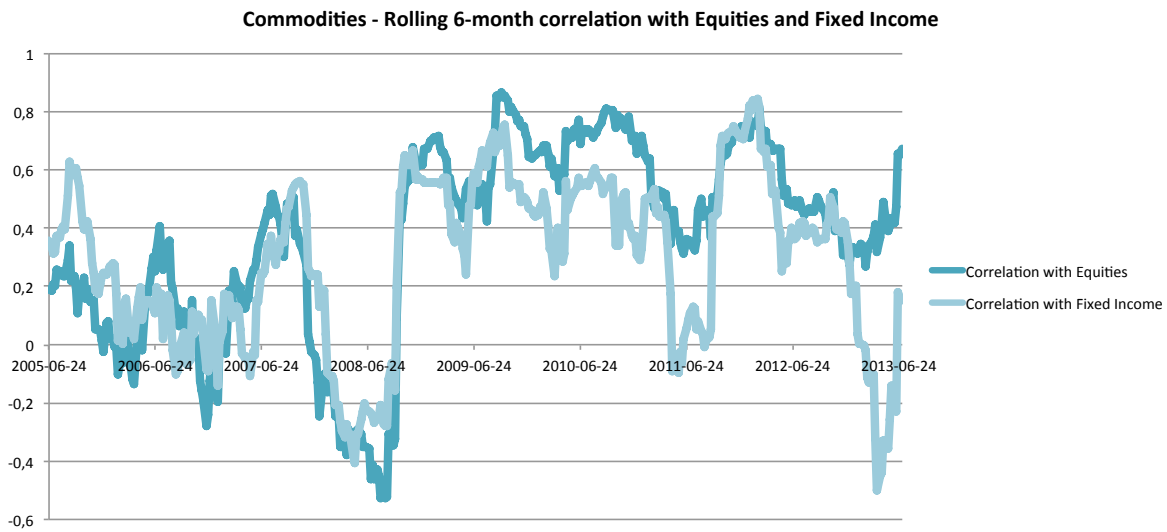
| Correlation matrix (Pre-financial crisis) | | | | | |
|---|---|---|---|---|---|
| | SPXT | JPEIGLBL | DJUSRET | TRY | HFRXGL |
| SPXT | 1,00 | 0,41 | 0,78 | -0,08 | 0,63 |
| JPEIGLBL | 0,41 | 1,00 | 0,36 | 0,10 | 0,40 |
| DJUSRET | **0,78** | **0,36** | 1,00 | -0,14 | 0,43 |
| TRY | **-0,08** | **0,10** | -0,14 | 1,00 | 0,39 |
| HFRXGL | **0,63** | **0,40** | 0,43 | 0,39 | 1,00 |

The high levels of correlations that have occurred during the last eight years are usually derived from the same source. During periods of high macro uncertainty, the prices of these assets are largely driven by changes in the macroeconomic outlook. In addition to the increase in correlation due to macroeconomic volatility, the changes of market structure has also been contributory to this transformation. Integration of global economies, increased efficiency and globalization of financial markets, and new risk management have all contributed to the increase in correlation (J.P. Morgan, 2011).

## 6.2 Commodities

As shown in figure 6, prior to the financial crisis in 2008, commodities were essentially uncorrelated to stocks and bonds. These attractive features were highlighted by numerous investors in our study as the main motive for investments in commodities. However, the pattern has changed the last four years and we can distinguish a relatively high correlation between commodities and stocks and bonds.

**Figure 6.** Overview of the rolling 6-month correlation with equities and fixed income for commodities



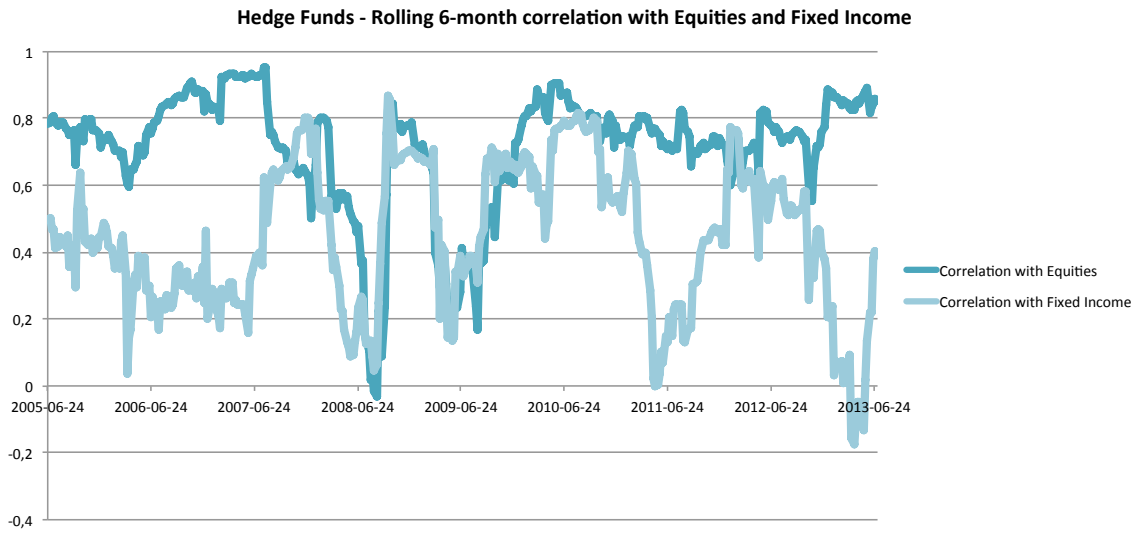

Prior to 2005, the attractive features of the asset class caught investors' attention and significant funds started to flow into the asset class. The increased demand for commodities caused large price increases. In addition to individual commodities, the broad index TR/J CRB used in figure 6 attracted significant investments as well. Correlation between equities and commodities was on average negative during the 1990s and early 2000s. However, after the collapse of Lehman Brothers in 2008 a sharp positive increase in correlation occurred and is depicted in the figure above. There are several explanations for this increase. First, the investors panic and sold of commodities and other risky assets, which caused a large drop in prices. Second, the recession that followed reduced the demand for commodities, causing a positive correlation between equities and commodities. Further on, as commodities are priced in USD, a significant driver of the positive correlation is derived from the negative correlation of USD and equities. The correlation with the bond index have displayed a similar pattern but have recently been close to its historic lows, while the equity correlation have been close to its historic highs. Although, the relationship between commodity prices and rates is generally inverse. The main reason for this is inflation. When the demand for money increases, the interest rates also increases. Since bond prices and interest rates is inversely related, the bond prices and commodity prices are negatively correlated (J.P Morgan, 2011).

The increased correlation between commodities and traditional assets has since 2008 diminished some of the diversification value to the portfolio.

## 6.3 Hedge funds

Correlation between the average performance of hedge funds, measured by HFRXGL index, and the S&P 500 total return index has been in a 0-90% range, as displayed in figure 6.1. This shows that hedge funds do have a significant exposure to equity markets. However, in 2008 during the height of the crisis, correlation of hedge funds versus equities almost reached levels of covariation of the asset classes. The issue resulted in no diversification benefit during these time periods. This outcome was counter to the advertised benefits of hedge funds stated by financial theory and the responses from our study of the institutional investors. Hence, hedge funds had substantial correlation with equities over the full cycle; from table 6 we can see that HFRX global hedge fund index had a 0,64 correlation with S&P 500 over the 2005 to mid 2013 time period. Although, we have experienced lower correlation with the bond index over the same time period, from table 6 we can find a 0,49 correlation with JP Morgan EMBI global total return index.

**Figure 6.1.** Overview of the rolling 6-month correlation with equities and fixed income for hedge funds



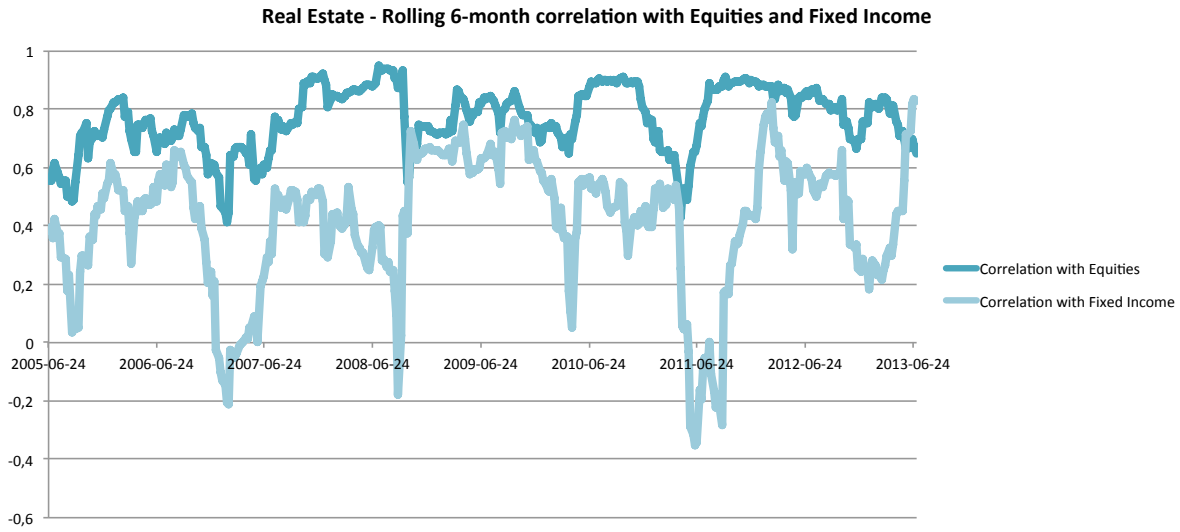

The reason for this unattractive behaviour as seen in the chart above is that, in general, hedge funds do not exclusively invest in hedges. The investors' positions are largely constructed of underlying stocks and bonds positions, the same assets represented in traditional portfolios. Therefore is the most attractive feature of hedge funds low correlation with other risky assets in periods of stress omitted.

## 6.4 Real estate

Motives among our respondents for investments in real estate were mainly diversification benefits and stable returns. We use Dow Jones U.S real estate total return index, DJUSRET, as an approximation of

investments in real estate since some respondents in our survey preferred buying real estate investments trusts (REITs) in order to avoid the general liquidity problem with real estate. The returns from DJUSRET have outperformed S&P 500 during the last eight years and as we can see by figure 6.2 they have almost moved in tandem with stocks, rather being an efficient diversifier in investors' portfolios.

**Figure 6.2.** Overview of the rolling 6-month correlation with equities and fixed income for hedge funds




REITs tend to give more exposure to equities than to bonds. From table 6 we have a moderate to moderately strong correlation with other assets; 0,52 with the bond index and 0,77 with S&P500. The sharp decline in prices that occurred in 2008 caused a lower correlation for both equities and bonds but most REITs raised capital and the prices increased as well as the correlation coefficients. However, REITs have played the role in the portfolio of being an inflation hedge and to deliver high returns during the last years, which was two of the advantages explained in the theoretical framework chapter. Although, REITs has not been the most favourable asset in terms of diversification as we can see from the correlation chart above. Maybe the moderate levels of correlation that we have experienced during the last eight years might not reflect the long-term diversification benefits.

# 7 Conclusion

*This chapter concludes the thesis by discussing the primary findings from the two analyses and the empirical study on correlation. Other insights acquired throughout the development of this thesis as well as limitations of the thesis and suggestions for further research are discussed.*

## 7.1 Introduction

The purpose of this study was to investigate institutional investors asset allocation strategy with focus on alternative assets. In order to answer this purpose we conducted an explorative study. The data for our study is not statistically significant and the respondents' rate from the wealth management firms is too small for making generalizing conclusions of the population. However, the data from the insurance companies and pension funds is neither statistically significant but with respect to the good respondents rate we are able to interpret general conclusions of the population.

Alternative assets are indeed important in asset allocation for institutional investors. The amount of capital allocated to alternative assets for the wealth management firms is on average 34%. Investments in hedge funds and private equity ranging from zero to 10%, and the proportion to real estate and other assets differ dramatically between the institutions, ranging from zero to 30%. However, the insurance companies have in general 8-10% invested in alternative assets, while the pension funds have on average 12% invested. The large difference in allocation may be derived from the fact that the wealth management firms are less regulated. The Swedish national pension funds are in accordance to Swedish law prohibited to invest in commodities (Iwarson 2006). Moreover, the national pension funds have a restriction of a maximum of five percent for investments in unlisted assets (SOU 2012:53). The insurance companies are also affected by the Solvency II regulation, which have impact on asset allocation to the extent that various risk weights are assigned to different asset classes. Higher risk weights are assigned to more risky assets, which reduce the benefits of most of the alternative assets in the investors' portfolio.

## 7.2 Performance

The private banking companies were in general satisfied with the returns in alternative assets, but they were very disappointed with the returns from their private equity investments. The unsatisfied returns in combination with the high risk profile of investments in private equity was put forward as the main reason for not increasing allocation to this asset vehicle in the future. The family offices were, on the other hand, more positive and satisfied with their private equity investment and in general more

satisfied with the overall performance of their alternative assets, which might be because they manage wealthier clients that can allow illiquid assets for a longer time. They were also in general more positive to the development and the future outlook of the private equity market. However, the wealth management firms are not likely to increase the allocation in neither hedge funds nor real estate since bad experiences and unpredictable returns were stated regarding the last few years' development of the asset classes. One additional reason for not investing in real estate is the liquidity problem with the asset class. However, the liquidity problem can be avoided by investing in public traded RETIs. The wealth management firms are positive of the development of the commodity market and will to some extent increase their allocation to this asset class.

The insurance companies and the pension funds were in general satisfied with their investments in alternative assets. Three investors was even very satisfied with the returns, notable are that these investors were the smallest in our sample with a market share of less than 10%. Both the insurance companies and the national pension funds were in general satisfied with the returns from their private equity investments. However, the institutions that had made their first private equity investment around the dot-com boom seemed to be more disappointed with the returns from their investments than other investors. Yet, institutions that had entered the market between 1989-1997 had rather positive experiences about the fund returns. Private equity is the asset class that is most favourable among the respondents in aspects of future allocation, especially among the pension funds. Commodities and hedge funds were the asset classes that had the lowest shares in terms of future allocation. A determinant for this outcome is the significant magnitude of regulations that control the business among the institutional investors in general and the insurance companies in particular. The two groups of investors would to a small extent increase their allocation in real estate on a short-term basis. One primarily motive for increasing the allocation is due to relative small stress tests assigned to real estate by solvency II.

### 7.3 Decision factors

The investor team quality earned the greatest attention as decision factor when investments in private equity among the wealth management firms. The diversification argument, good citizenship/national development aspect and other existing limited partners in private equity funds appeared to be very important. Two private banking firms stated that the quality of existing limited partners is of no importance to them, while it is especially important for two family offices. This indicates that some firms see themselves as professional investors and are not influenced by other investors' movements.

Five respondents regarded national development as an important factor. This is interesting since previous research suggests that public pension funds should feel political pressure for making investments with respect to national development, while omitting wealth managements' contributions (Lerner et al., 2007).

The insurance companies and pension funds agreed that the single most important factor for investing in private equity funds is the management team quality of the fund. Past fund performance and existing limited partners was ranked as very important by a few firms. Interesting to note is that these are the smallest insurance companies in our sample with a market share of less than ten percent. However, two of the major pension funds conducted that limited partners was of no importance to them. Hence, declaring themselves to be professional investors and would not consider how other investors allocate their assets. This confirms the assumption that investments in private equity to a large extent are established by a second mover approach, which infers to copy the behaviours and decisions of other investors who are perceived as having high skills and thus have attained prominence in the market (Söderblom, 2011). None of the public pension funds considered supporting domestic growth as important despite previous research where capital from private equity investments is considered to have positive effects on job creation and economic growth (Phalippou, Gottschalg, 2009). One explanation is that the Swedish national pension funds have a restriction of maximum five percent for investments in unlisted assets, which foreign pension funds do not have (SOU 2012:53).

## 7.4 Motives

According to finance theory the motive for investing in alternative assets is to diversify investment portfolios with assets that provide risk adjusted returns and low correlation with other assets. The wealth management investors in the survey confirm this motive and recommend allocation in alternative assets to a high extent due to attractive diversification effects. Another reason why investors recommend allocation towards alternatives was because it to some or high extent provides an attractive risk-return profile. However, high returns were not the most significant motive among our respondents but it was used up to some extent.

The motives for investors of the insurance companies and pension funds to invest in alternative assets are based on an expectation of high returns, attractive risk-return profile and portfolio diversification. However, the motives for the asset classes may differ since one pension fund stated that investments in private equity only occur with the expectations of high returns and the desired diversification effects is

generally achieved by investments in real estate. The motives for the institutional investors to invest in alternative assets are indeed similar and any outstanding heterogeneity across the institutions has not been discovered in this report.

## 7.5 Correlation

In addition to finance theory, we can conclude that one of the main motives for investments in alternative assets among our respondents is the diversification aspect in order to achieve low correlation with other traditional assets. By analysing the data from Bloomberg, we have identified significant high levels of correlation with stocks and bonds. The high levels of correlations that have occurred during the last eight years are mainly derived from the financial turmoil. In times of high macro uncertainty, the prices of these assets are largely driven by changes in the macroeconomic outlook. We can conclude that the increased correlation between the alternative assets and traditional assets has since 2008 diminished some of the diversification value to the investors' portfolio. However, bonds have usually lower correlation with alternative assets than equities but the modest and high levels of correlation we have experienced the last eight years might not reflect the long-term low correlation benefits that might be expected in the future.

## 7.6 Limitations and possibilities for future research

Throughout the research process our intention was to perform and provide a statistical analysis of how different types of institutional investors e.g., family offices, insurance companies, pension funds, and banks differ in their performance when investing in private equity funds. Further, delimitate the institutions of interest to Luxembourg, Switzerland, Germany and Sweden in order to investigate heterogeneities. To approach this question we wanted to use data from the databases Preqin or Capital IQ. After thoroughly investigating the different possibilities to get access to the databases we contacted a professor from Stockholm School of Economics (SSE), businesses and organizations in the field of private equity, and client support at Capital IQ. We managed to get an extended version of Compustat database. Here, the data was not sufficient enough to add value to our purpose and ultimately, ruled out a significant and comprehensive discussion regarding performance across institutional investors. Moreover, when it finally became clear what kind of information we had for disposal, the empirical part is absent resulting in difficulties of using empirical support for our arguments regarding performance.

Our intention was to provide an explorative study on this research area and lay the ground for further research. Since we received scarce data from the wealth management firms and the sample for the insurance companies and pension funds is too small, we cannot draw any conclusions that are

statistically significant. Our choice of research method was not optimal in order to collect data from these firms; the quality might have increased if we had more resources for disposal. This can be a framework for further research as well as performing research on other countries. Our data from the Swedish insurance companies and pension funds is representative of the total population but further research can be made on these business types in other countries as well. One more interesting angle for further study can be to compose a new survey and collect the respondents' opinions and awareness of the increase in correlation that occurred after the financial crisis and analyse the impact on their allocation strategy.

Institutional investors dedication to alternative assets has grown considerably throughout the years and has started to play an important role in private clients portfolios as well. We believe that this thesis has contributed to one small but significant part of this larger investment vehicle.

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# Appendices

## Appendix 1. Overview of respondents, qualitative study

| Respondent # | Business Type | Position | Orgin |
|---|---|---|---|
| R1 | Private Banking | Senior Account Manager | Luxembourg |
| R2 | Private Banking | Managing Director | Luxembourg |
| R3 | Private Banking | Head of Asset Management | Switzerland |
| R4 | Family Office | CEO | Luxembourg |
| R5 | Family Office | Member of the Managing Board | Germany |
| R6 | Family Office | Managing Director | Germany |
| R7 | Private Banking | Partner | Luxembourg |
| R8 | Private Banking | Vice President | Sweden |
| R9 | Private Banking | CEO | Switzerland |
| R10 | Private Banking | CEO | Switzerland |
| R11 | Family Office | Vice President | Switzerland |
| R12 | Private Banking | Relationsip Manager | Germany |
| R13 | Private Banking | CIO | Switzerland |
| R14 | Private Banking | CEO | Sweden |
| R15 | Private Banking | Analyst | Sweden |
| R16 | Private Banking | COO | Germany |
| R17 | Private Banking | Analyst | Luxembourg |
| R18 | Famliy Office | Analyst | Switzerland |
| R19 | Private Banking | Analyst | Switzerland |
| R20 | Private Banking | CIO | Switzerland |
| R21 | Family Office | Managing Director | Switzerland |
| R22 | Private Banking | Client Relation Officer | Luxembourg |
| R23 | Private Banking | CFO | Switzerland |
| R24 | Family Office | Assistant to the Chairman | Switzerland |
| R25 | Private Banking | Senior Vice President | Luxembourg |
| R26 | Family Office | CFO | Luxembourg |
| R27 | Private Banking | Administrator | Luxembourg |
| R28 | Private Banking | Analyst | Switzerland |
| R29 | Family Office | Analyst | Switzerland |
| R30 | Family Office | Director | Switzerland |
| R31 | Private Banking | Head of Investments | Luxembourg |
| R32 | Private Banking | CEO | Sweden |
| R33 | Private Banking | Head of Investments | Switzerland |
| R34 | Insurance Company | Head of Asset Management | Sweden |
| R35 | Insurance Company | Portfolio Manager | Sweden |
| R36 | Insurance Company | Head of Investments | Sweden |
| R37 | Insurance Company | Head of Investment Operations | Sweden |
| R38 | Insurance Company | CEO | Sweden |
| R39 | Insurance Company | Investment Manager | Sweden |
| R40 | Insurance Company | CIO | Sweden |
| R41 | Insurance Company | Head of Fixed Income | Sweden |
| R42 | Pension Fund | Head of Private Equity | Sweden |
| R43 | Pension Fund | Head of Private Equity | Sweden |
| R44 | Pension Fund | Head of Alternative Investments | Sweden |
| R45 | Pension Fund | Investment Manager | Sweden |
| R46 | Insurance Company | Head of Equity | Sweden |

## Appendix 2. Interview questionnaire, qualitative study

| | |
|---|---|
| Company name<br>Respondent's name<br>Focus area<br>Position | |

**Company information**

| | |
|---|---|
| Type of business | |
| Private banking/wealth management | ☐ |
| Family office | ☐ |
| Pension fund | ☐ |
| Insurance company | ☐ |
| Why should clients choose your company? | |
| Size of the company | ☐ |
| Financial products offered | ☐ |
| Customer satisfaction | ☐ |
| Attractive historical return | ☐ |
| Reputation | ☐ |
| Adhoc services | ☐ |
| Other | ☐ |
| Would you agree that your supply of alternative investments products are important factors for new clients? | |
| Not imp. | ☐ |
| Somew imp. | ☐ |
| Important | ☐ |
| Very imp. | ☐ |
| What is the wealth of your average client (in million Euro)? | |

Appendix 2, continued

Portfolio Allocation

| Do you have a porfolio allocation rule? | Target Allocation | Current or Typical Allocation |
|---|---|---|
| Equity (%) | | |
| Bonds (%) | | |
| Cash (%) | | |
| PE/VC (%) | | |
| Hedge Funds (%) | | |
| Real Estate (%) | | |
| Other (%) | | |

| First PE/VC investment (year) |
|---|
| |
| Number of PE / VC relationships |

Why do you recommend allocation to alternative investments?

| | Very low ext. | Low ext. | Some ext. | High ext. |
|---|---|---|---|---|
| Expected high returns | ☐ | ☐ | ☐ | ☐ |
| Attractive risk-return investment | ☐ | ☐ | ☐ | ☐ |
| Portfolio diversification | ☐ | ☐ | ☐ | ☐ |

Other viewpoints or comments on previous question?

Appendix 2, continued

**Investments Focus**

Do you have any specific geographical or sector focus within Private Equity / Venture Capital?

Assets

| | 2005 | 2012 |
|---|---|---|
| Asset under management (million Euro) | | |
| Investments in PE / VC funds (%) | | |
| Investments in Hedge Funds (%) | | |
| Investments in Real Estate (%) | | |
| Investments in Commodities (%) | | |

Performance

| | Last 5 years | Last 3 years |
|---|---|---|
| Average annual return in aggregate portfolio (%) | | |
| Average annual return in capital allocated to PE / VC (%) | | |

What geographic regions do you focus on in your PE / VC investments?

| | Never done | Not any longer | Sometimes | Often | Very often |
|---|---|---|---|---|---|
| Nordic | ☐ | ☐ | ☐ | ☐ | ☐ |
| European | ☐ | ☐ | ☐ | ☐ | ☐ |
| US | ☐ | ☐ | ☐ | ☐ | ☐ |
| Emerging markets | ☐ | ☐ | ☐ | ☐ | ☐ |

How has the PE / VC investment focus evolved over time?

**Investment decisions**

| | | | | |
|---|---|---|---|---|
| Which are the major steps in the decision making process regarding alternative investments? | | | | |
| Typical duration of the investment decision process? | | | | |
| Who decides on investments in specific funds? | | | | |
| Investment team | ☐ | | | |
| Individual investment managers | ☐ | | | |
| Other | | | | |
| Decision factors when investing in PE / VC funds | | | | |
| | Not important | Somewhat imp. | Important | Very important |
| Past fund performance | ☐ | ☐ | ☐ | ☐ |
| Diversification needs | ☐ | ☐ | ☐ | ☐ |
| Investor team quality | ☐ | ☐ | ☐ | ☐ |
| Quality of existing limited partners | ☐ | ☐ | ☐ | ☐ |
| Good citizenship/National development | ☐ | ☐ | ☐ | ☐ |
| What is the typical incentive contract with your general partners? | | | | |
| Management fee (%) | | | | |
| Perfomance share (%) | | | | |
| Other | | | | |
| How has incentive contracts changed over time? | | | | |

Appendix 2, continued

**Contributions**

How satisfied are you in general with returns?

| | Very disappointed | Disappointed | Satisfied | Very satisfied |
|---|---|---|---|---|
| In alternative investments | ☐ | ☐ | ☐ | ☐ |
| In Private Equity / Venture Capital | ☐ | ☐ | ☐ | ☐ |

How has this changed over time? Comments.

If insurance company, how will solvency II affect strategies within alternative investments?

| | |
|---|---|
| No extent | ☐ |
| low extent | ☐ |
| Some extent | ☐ |
| High extent | ☐ |

Other viewpoints or comments on previous question?

Appendix 2, continued

**Forecast**

Will you increase your allocations to alternative investments in the near future?

| | Very low extent | low extent | Some extent | High extent |
|---|---|---|---|---|
| Private Equity | ☐ | ☐ | ☐ | ☐ |
| Hedge Funds | ☐ | ☐ | ☐ | ☐ |
| Commodities | ☐ | ☐ | ☐ | ☐ |
| Real Estate | ☐ | ☐ | ☐ | ☐ |

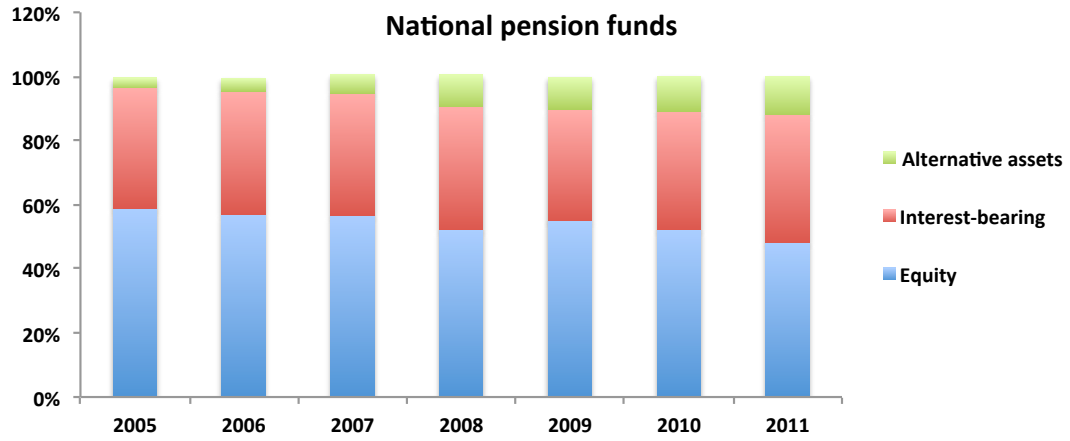
Comments on previous question

Please share your views or comments on the development of the alternative investments market in the last few years? What do you expect performance to be in the future?

Private Equity / Venture Capital
Hedge Funds
Commodities
Real Estate

## Appendix 3. Asset allocation

Asset allocation within the national pension funds




Asset allocation within property insurance


Asset allocation within life insurance