INTERNATIONAL DIVERSIFICATION IN PORTFOLIO INVESTMENTS OF INSTITUTIONAL INVESTORS

INTERNATIONAL COMPARISON WITH FOCUS IN JAPAN

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Abstract

**Background:** The global capital markets have enlarged investment opportunities and thus also the sources of funds for companies which increasingly face global markets for their services and products. Huge capital movements show that investors are constantly searching ways to minimise risk and maximise returns. In the light of the substantial growth of assets in institutional funds, an important question for international finance is the degree to which institutional investors have diversified their portfolios internationally.

**Purpose:** The purpose of this study is to examine the international diversification of portfolio investments of institutional investors in Japan, the US and the UK and deepen into international diversification in portfolios of Japanese institutional investors.

**Conclusions:** International diversification of portfolio investment of institutional investors tend to differ more between countries where the investors are based than between the type of investor in different countries. Institutional investors in UK tend to diversify their investments more internationally compared to Japanese and US counterparts. Japanese institutional investors tend to have very similar international diversification strategies.

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Keyword
Portfolio investments, international diversification, global asset allocation, institutional investors, Japan
CONTEST

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1. INTRODUCTION

1.1 Background to the study

The features of capital markets have changed significantly during the past two decades. Financial assets have accumulated and cross-border transactions have increased substantially. Assets have been accumulating to hands of few investors which has lead to new structures of capital markets. Today’s capital markets are characterised by a small number of investors with large investment assets rather than a large amount of investors with small investments. Institutional investors\(^1\) have become the biggest holders of financial assets in the capital markets where they can have major effect how the assets are allocated. They have a dominant influence in primary and secondary securities markets, in the money market and in the foreign exchange market. To be able to understand the functioning of the markets, it is essential to analyse these actors, their investment strategies and the determinants affecting their strategies.

The global capital markets have enlarged investment opportunities and thus also the sources of funds for companies which increasingly face global markets for their services and products. Investors have become more willing to invest globally and they have also been helped by deregulation, technological improvements and overall economic interdependence between domestic markets. Traditionally, when investment possibilities were regulated and domestic portfolios offered reasonably effective risk protection, the demand for international investment was lower. However,

\(^1\) Collective investment institutions, insurance companies and pension funds. BIS, 68th Annual Report
the recent overall globalisation of products and integration of economies has led to increased interest in international diversification. Huge capital movements show that investors are constantly searching ways to minimise risk and maximise returns. In practice, international diversification has become easier, acceptable and in some cases even necessary in order to meet the objectives of investors. When the foreign investments of Japanese institutional investors significantly increased in the 1980’s, many commentators predicted forecast that Japanese investors would become the investors with the largest proportion of international investment. However, the international diversification of Japanese institutional investors has shown less clear features.

Liberalisation of domestic capital markets and international capital flows accompanied by improvements in information technology has lead to new financial innovations and increasing cross-border capital transactions. In addition, the financial intermediation has globalised in response to growing demand for intermediation: investors have better information and access to greater investment opportunities while companies have access to financial services from a more competitive market with more diverse providers. Evidence of the integration of domestic and international financial systems are more diversified investment portfolios, the growing number of companies raising funds from international capital markets, and sophisticated asset managers who exclusively search arbitrage possibilities around the world. Gross and net capital flows have increased significantly since the 1970’s: gross direct investments are 32 times higher and gross portfolio flows are almost 200 times greater.\(^2\) The underlying fact is that economies and businesses have internationalised and formed a global

economy. In order to understand the globalisation of investments we have to realise that internationalisation has happened in all domains of financial activity. Domestic governments can no longer control markets and the global financial market itself has become the most powerful actor in the global economy. The pressure caused by this is significant for both governments and corporations, who increasingly raise funds directly from capital markets. Institutional investors play a significant role in this process where corporations shift from equities to debt finance. Investors may shift their assets to equities in search for higher returns while the bond is just one item in a portfolio of dozens of products. For companies business opportunities have become global. Global activity consists of increased market growth and profit opportunities, and globalisation offers possibilities for diversification and spreading risk. News and the reaction of financial markets to it spread instantly around the world. This in turn has a great effect on national economies. For example, if interest rate variation between countries almost disappear, investment activities will be affected.3

The increased importance of institutional investors dates back to the beginning of 1980’s. These investors collect savings, invest large amounts in financial assets, are important actors in securities markets and as cross-border portfolio investors, and hold major shares in publicly-owned companies. The growth of bond and equity markets and corporate restructuring can to a large extent be explained by the emergence of institutional investors and their demands. There are four main structural factors behind the growth in institutional investor activities: Since the 1980’s, deregulation in the banking and securities industry has fostered competition among banks and other financial institutions. In particular,

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3 Chorafas, D.N., 1992
banks have stepped into life insurance and investment fund business. Secondly, the growth derives from the increased role of fund management professionals as active institutions in order to improve their share of total assets. Thirdly, the demand for retirement benefit and other investment products among ageing people through life insurance companies and investment companies has increased. Fourthly, the growth of institutional investors has strongly improved due to the removal of restrictions on selling life insurance products and investment funds across borders.⁴

Institutional investors have an impact on international and national capital markets. It is suggested, for example, that the volatility increases when significant players use the same technology and new information, employ similar strategies for portfolio diversification and therefore make similar moves on the markets. In addition, liquidity may be negatively affected if large investments are traded infrequently. On the other hand, some argue that, for example, investment strategies are not similar among institutional investors.⁵

International portfolio investments must be distinguished from foreign direct investments. A significant amount of research has been carried out concerning foreign direct investments as both types of investments have increased significantly, but less research has been conducted into international portfolio investments. It was argued already in the 1980’s, that capital movements rather than international trade was becoming the engine of world economy.⁶

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⁵ Ibid. pages 299-300
⁶ Draper, T., 1986, pages 768-791
Financial assets under management among institutional investors exceed that of the aggregate Gross Domestic Product (GDP) for the industrial countries concerned and makes their role for global financial system very important. In the light of the substantial growth of assets in institutional funds, an important question for international finance is the degree to which institutional investors have diversified their portfolios internationally. This behaviour is an important factor for companies in their search of capital. “As the institutional investors continue to grow in importance, their behavioural characteristics is increasingly significant determinant of domestic and international financial market conditions.”

Deregulation of commission rates allows investors to make significant transactions at a lower cost, pension assets are increasingly managed by professional investment institutions as a result of changes in pension laws. In addition, as individual investors have increased their distribution of assets to pooled funds, the importance of institutional investors has also grown. This development is called institutionalisation.

1.2 Research problem and objectives

Statistics during recent decades show that international portfolio investments have increased. It has been argued that institutional investors are the major actors behind this development. However, there has been little in depth analysis of either international comparisons or the role of each group of investors in regard to the development.

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7 BIS, 68th Annual Report, pages 83-84
8 Ibid., page 95
9 O’Brien, R., 1992
The overall research interest of this study is to investigate and document the role of institutional investors in globalisation of portfolio investments. Portfolio investments are suggested to be well diversified internationally, actual international diversification of institutional investors as dominant participants of the capital markets is of great interest.

Within the main objective, the research work seeks to achieve the following aims and answer the following related questions:

- Are there differences between American, British and Japanese institutional investors’ international diversification?
- Are there differences between international diversification of Japanese pension funds, insurance companies and investment companies?
- Has the growth of financial assets of institutional investors been accompanied by a similar growth in international portfolio investments?

1.3 Purpose of the study

The purpose of this study is to examine the international diversification of portfolio investments of institutional investors in Japan, the US and the UK and deepen into international diversification in portfolios of Japanese institutional investors.

1.4 Target audience

This research is intended to benefit participants in the capital market. These include both investors, who are interested in their interdependence and in each others strategies, and global companies which increasingly use the international capital markets as a source of finance. This study should also
be of interest to academics and international organisations which either
observe and analyse the functioning of capital markets or are affected by
the strategies of institutional investors.

1.5 Demarcations of the study

The increased role of institutional investors has given impetus for a
flourishing debate and academic research. Unfortunately, however, due to
the limited time, space and resources, I have to leave some aspects without
further analysis. Institutional investors can use their power directly in
companies or indirectly through capital markets. In this thesis, I will not
discuss corporate governance issues. Nor is it an aim of this thesis to try to
find the optimal portfolio or the best performing portfolio or to present
recommendations of how the best portfolios should be constructed or to
examine the quantitative benefits of diversification. In the future, it would
also be worthwhile to research institutional investors in the US and the UK.
From the companies’ point of view, it would be interesting to research the
effect of increased portfolio investments on the cost of capital. On the other
hand, from the investors’ side, the diversification and return benefits of the
emerging markets are of greater interest.

1.6 Structure of the study

The study begins with a discussion of the approach, describing the
scientific aspects as well as how the study has been implemented (Chapter
Two). Later, I will present the theoretical framework under which the study
has been conducted (Chapter Three). Relevant theories will be presented,
discussed and analysed to the extent that they will be used in the thesis.
Theories provide the background and help to explain the empirical data which will be presented (Chapter Four). This part describes the recent development of capital markets and institutional investors and presents an international comparison. In the next chapter the study looks more closely Japanese institutional investors and their international portfolio investments (Chapter Five). The analysis is based on both theoretical and empirical parts (Chapter Six). Finally, the conclusions are presented (Chapter Seven). Outline of the study is here in a chronological table.

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2. METHODOLOGY

The methodology used to conduct the study is explained in this Chapter. It begins with the fundamental concepts and a scientific discussion and continues with paradigm and method approaches, which are related to the fundamental concepts. Inductive and deductive methods and quantitative and qualitative methods are also presented, as well as the design of the research. In addition, working paradigm is discussed. Finally, a critique of the method is presented.

2.1 Fundamental concepts

In all research, the problem, method and data are inter-related. The method also has to be based on some fundamental concepts. The choice of method is critical to arrive at satisfactory, and scientific results, which provides new information. Fundamental concepts of an individual developed during their life. These can be seen as a platform on which the individual bases his/her fundamental views. They have an effect on all activities of the individual and, in the context of research, especially in the perception of problems and the way to solve them. They also affect the paradigm and method approach. Thus, the paradigm serves as an interface between the fundamental concepts and the method approach.

For every researcher, it is essential to define what is “good” science. Criteria for doing "good” science are significance, theory-observation compatibility, generalisability, reproducibility, precision, rigour and

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10 Ejvegård, R., 1996
11 Bjerke, B., 1989
verification.\textsuperscript{12} Scientific reporting can be difficult because, for example, verifying findings in a scientific manner may take time, a commodity which is not always available. The responsibility lies with researcher, and, having the criteria in mind from the very beginning and through the research, it is possible to fulfil the criteria of good science.

A scientific report, has to be impartial, objective and balanced both in details and as a whole. The report is \textit{impartial} in the sense that the data and information are true and real. It is researcher’s responsibility to question and control the source of information as well as the information in itself. \textit{Objectivity} refers to the researcher’s responsibility to present a broad picture of a controversial subject – not to present one side more and not to leave out the other. Objectivity is required from choosing the data sources to presenting the research report. \textit{Balance} consists of both an impartial approach and objectivity. The report is required to present the subject in a balanced manner: not to include a generous description of unimportant details, but to concentrate on impartial and objective judgements and conclusions.\textsuperscript{13}

\section*{2.2 Paradigm}

The paradigm plays a central role in theory of science. However, the term can have two, distinct meanings. Firstly, a paradigm refers to the commonly shared constellation of ideas, values, techniques and metaphysical assumptions. This constellation has been called a disciplinary

\textsuperscript{12} Strauss, A., & Gorbin, J., 1990
\textsuperscript{13} Ejvegård, R., 1996
matrix. Secondly, the paradigm can be understood as a specific element, concrete solution or explanation of a problem within the matrix. The components in the matrix are symbolic generalisation, metaphysical assumptions, values and patterns.\textsuperscript{14} The matrix does not, however, refer to the beliefs of a specialised community or the beliefs of an entire discipline. Thus, it can be seen as a subculture in a society.\textsuperscript{15} Furthermore, a paradigm, as a pool of fundamental concepts, can be separated into four categories: concepts about the reality (its objectivity vs. subjectivity), concepts about how to obtain knowledge, concepts about the research purpose and concepts about "good" vs. "bad" research.\textsuperscript{16} Two general paradigms in science, positivism and hermeneutics, are discussed below.

### 2.2.1 Positivism and hermeneutics

Empirical and quantitative approaches have dominated traditional research in natural sciences. In these studies, data are sampled by descriptive and comparative methods and experiments which are carried out using quantitative methods. It is assumed that true information is what an individual can reach by measuring and registering objective data. The aim of science is to form theories or laws as generally as possible in order to be able to find scientific explanations. According to Popper, because a general scientific hypothesis can never be totally verified, it should be tried to be proved false.\textsuperscript{17} In order to reach knowledge, logical models, representative cases and pure cause-result causalities are used. Positivism makes a clear distinction between facts and values, and facts are preferred. Emotions,
which are subjective, are to be avoided and reason should be objective and factual instead.\textsuperscript{18}

Hermeneutics is an approach which argues that the diagnosis of reasons of a phenomenon is not as essential as interpreting the meaning of it is. In order to understand each other the language and interpretation play a significant role. It is not the aim to explain the causal relations but to understand and explain the meanings of cultural phenomena.\textsuperscript{19} Hermeneutics penetrates and makes the abstract reality concrete and argues that understanding the parts makes it possible to understand the whole. Because "truths" result from culture they become relative which makes it unnecessary to search for universal validity.\textsuperscript{20}

My paradigm can be said to fall somewhere between positivism and hermeneutics, however, closer to the latter. General laws in society are difficult to make if not unnecessary because of the risk that they change rapidly. For me it is important to describe significant issues and bring them to the surface. That moves me away from positivism, too. However, it is difficult to understand and make deep interpretation of information received (during interviews) as I am not in the same position and everyday context as they are. This makes it difficult to argue that the study would be fully hermeneutic.

\textsuperscript{18} Andersson, 1979
\textsuperscript{19} Nordenfelt, L., 1982
\textsuperscript{20} Andersson, 1979
2.3 Methodological approaches

Every researcher has the freedom to choose a method when conducting a study. However, there is also an aspect of responsibility: the method of approach has to be relevant in order to meet the objectives of the study. The method of approach is essential and can be categorised into three types: analytical, system and agent approach.

The analytical approach is based on the assumption that the reality is a whole which is the sum of its parts and that developed knowledge depends on the individual. Knowledge is supposed to follow a logical judgement, which consists of verified assumptions, and cannot be dependent on subjective experiences. The systematic approach defines the whole as unequal to its parts. By this definition the parts can result either in negative or positive effects, so the relationship between the parts becomes a point of interest. According to the assumptions, the developed knowledge is dependent on a system. Individuals are seen as parts of the system, in which they and their behaviour can be explained in terms of systematic characteristics. According to the third approach, the agent approach, the whole can be analysed from the characteristics of the part. Instead of explaining, this approach tries to understand the social entities; to understand the role of the individual’s behaviour as a part of the surroundings.21

Due to the fact that these approaches have different assumptions about reality, we have to specify the respective preconditions to be able to understand the forms of explanation, understanding and results, which

21 Arbnor, I. & Bjerke, B., 1994
emerge when each of these approaches are pursued. The analytical approach requires an available analytic theory and given techniques in order to verify or disprove the hypotheses set up. This approach explains the effect by finding the previous or contemporary cause (causality). Results are of a general nature and follow from objective approach to reality. The aim is to find results which are pure cause-effect relations, logical models and representative cases. A precondition of the system approach is an existing system theory and analogies, because the whole differs from the sum of the parts. Any explanation calls for finality relations which explain the effect by a specific driving force. The system approach presents the result as typical examples. The agent approach requires so called metatheories, i.e. theories about theories, which define the consciousness function and social construction. Understanding calls for a description of dialectic correlation where the aim is to understand the correlation between interpretation and the level of meaning. The correlation is inner and external by the nature. The inner refers to better individual understanding of the own situation and the external to innovative understanding. The results of this approach can be characterised as types of description language, for example, different models to interpret different situations.  

My approach can be said to be to a large extent analytical, as it is an objective way of seeing reality. In addition, the reality is explained by some causal connections to see factors leading to certain outcomes. Different parts of the reality become the sum, the whole. However, it can be argued that the parts differ and that the whole is more or less than the parts. Although the parts are used to explain (and understand) the relation of the

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22 Ibid.
parts to the whole, I cannot argue that my approach is a system approach. The main argument for this is that it had been too unfocused if also companies’ points of view would have been taken rigorously to account. Merely, by examining the investors, companies (as they both are parts of the whole i.e. capital markets) may receive valuable data.

2.4 Inductive and deductive approach

For any researcher, it is essential to distinguish between inductive and deductive approach as the difference lies with relation to the theory and empirical findings. Inductive approach emphasises qualitative methods. The researcher acquires empirical findings or observations which are then used to build theoretical frameworks or to conceptualise object of the study. In contrast, in a deductive approach the researcher starts from an existing theory and uses empirical findings as a tool to verify or disprove the hypothesis. This approach is emphasised in quantitative studies in which it is easier to define a hypothesis and then try verify or disprove it.

Comparing experiments and observations are essential in empirical research, but not theoretically unproblematic. First, we tend to assume factors because we do not know them to be true, which can be seen as a problem of cognition: new methods of comparison and observation – new theories – are developed all the time. Secondly, we have the problem of logic i.e. induction. Universal correlation is not limited to specific observations. An inductive argument is only an argument in which the premises are statements about specific facts and the conclusion is universal.23

23 Molander, B., 1983
The problem of induction refers to a discussion of whether inductive conclusions are justified, and under which conditions. The principles of induction are essential in order to find a way of justifying inductive inferences, in form which can be logically accepted. It is not necessary logical or obvious that one can draw universal conclusions from particular statements.\textsuperscript{24}

The general principles of induction concern description and justification. We have to show that our inferential methods are good methods, i.e. justify their use. For a deductive method, a valid argument is satisfactory, but for an inductive method, even a good inductive argument is one where it is possible for there to be true premises but a false conclusion. Justification has to tackle the problem of underdetermination and circularity. The premises have to be compatible with conclusions we make and other, incompatible conclusions. The argument for circularity states that we have to take account of the principles under investigation in order to rule out the unreliability which derives from underdetermination. Even if one has failed to justify the conclusions, it can be of interest to describe them as they are, so that their reliability can be set aside from the description. Still, description is not unproblematic. Sometimes we have difficulties describing what we do, even though we know exactly what we do. Generally, inductive conclusions face the same problem: we are not conscious of the basic principles of inductive conclusions we use, which do not prevent us from partially defending some of our conclusions.\textsuperscript{25} In this study the deductive approach is conducted, as the existing theories are

\textsuperscript{24} Popper, K., 1959
\textsuperscript{25} Lipton, 1991
examined by making empirical findings and it is not an aim to create a new model or theory.

### 2.5 Qualitative and quantitative methods

In order to answer the underlying questions of the research, the data can be organised, worked on and analysed mainly in two ways: quantitatively or qualitatively. The first refers to statistical methods in order to make a numeric analysis of the information, and the latter to methods to interpret and analyse written material.\(^{26}\)

The term “qualitative research” refers to research in which findings are not produced by statistical procedures or other means of quantification. It can refer to research about persons’ lives, stories, behaviour, but also to organisational functioning, social movements, or interactional relationships. Qualitative methods can be used to uncover and understand what lies behind any phenomenon about which little is yet know.\(^{27}\) In addition, qualitative methods can give the intricate details of phenomena that are difficult to convey with quantitative methods. Because many important phenomenon cannot be covered by quantitative methods giving a basis for other perspectives, qualitative methods are relevant for economic studies. Economic studies have a close relationship to social science and are indeed part of the social science family. Therefore, many studies are directly involved with aspects that cannot possibly be covered by mathematics or quantitative methods. For example, studies in leadership, routines, cultures and behaviour are hard to conduct by numeric methods.

\(^{26}\) Patel, R. & Davidsson, B., 1994  
\(^{27}\) Strauss, A. & Gorbin, J., 1990
and, therefore, a qualitative approach is needed to cover areas that are left in the shadow of numeric values.

Qualitative and quantitative methods have traditionally been seen as separate. However, it has been argued that it would be possible to combine these methods successfully. Some argue negatively, based on the underlying philosophical nature of each paradigm, and some positively, based on the benefits of presenting both numbers and words.28 Although most of the empirical data and analysis are numeric and base on own calculations, the method of this study is qualitative.

2.6 Research design

There can be said to be four main types of research designs: explorative, descriptive, diagnostic and proving/disproving hypotheses. The purpose of explorative study is to study a relatively unknown subject. Descriptive study is made in order to describe and create a picture of a specific issue with empirical characteristics. Diagnostic study goes beyond the above-mentioned designs as its aim is to analyse the information and try to find explanations within the problem or information. Hypothesis proving/disproving tries to see if there is causality in carefully designed assumptions.29 Furthermore, a comparative study can be mentioned. This is carried out in order to explain some issue, and try to find similarities and differences. This study is mainly descriptive as it is based on historical data of the global asset allocation of institutional investors. Comparative design is used as different institutional investors in different countries are

28 Glesne, C. & Peshkin, A., 1992
29 Rubenowitz, S., 1980
presented. To a certain extent a diagnosis is also made as the reasons for differences are explained.

2.7 Working paradigm

The working paradigm consists of seven parts: creating a pre-understanding, choosing a method for the collection of empirical data, sampling, designing an interview guide, conducting interviews, organising interview material and finally analysing and making conclusions.\textsuperscript{30}

The basis for the \textit{creation of pre-understanding} for this study could be said to have been laid down in 1997 when I wrote a smaller thesis about the deregulation of financial markets of Japan in the 1990’s. Two years later, I conducted university studies in Tokyo, Japan, and increased my knowledge of the Japanese financial markets as well as their participants and their portfolio investment strategies.

\textit{The method for collection of data} describes how the data were collected for this study. Secondary data are based on several sources from academic literature as well as from public data and statistics. Primary data for this study include interviews and background discussions as well as my own calculations.

Interviews were made in order to obtain more information and make a proper comparison. The interviews were held in Tokyo, Japan. The interviewees, both institutions and persons, were chosen after careful consideration with the objective that they would represent their groupings.

\textsuperscript{30} Arbnor, I. & Bjerke, B., 1994
as well as possible. The interviewees work closely with the issues researched, which guaranteed the high level of knowledge achievable from interviews. The interviews can be divided into qualitative research and in-depth interviews\textsuperscript{31}. The background discussions were more of an unstructured and flexible nature, i.e. qualitative interviews. Also qualitative, though, but merely deepening interviews were the interviews with structural form and same questions.

In order to avoid the possible negative effects of using a recorder, notes were taken during the sessions. With the full awareness of the risks of making notes, they were made very carefully. More informal background discussions were also held. For a list of persons interviewed, see the Appendix 1. In accordance with the expressed wish of the persons interviewed, their anonymity is guaranteed in the text.

\textit{Sampling} was conducted in order to purify the information. I have chosen to examine institutional investors in Japan, the USA and the UK since these countries represent the largest funds in Organisation for Economic Co-Operation and Development (OECD) countries. My aim is not to rank the countries in any way. However, the complexity of the data meant, that sampling was carried out throughout the process, in order to show the most critical data.

\textit{The design of the interview guide} was made beforehand and every interviewee received the questions, which were the same in all interviews, in advance. This was done in order to secure the structure of situations and the quality of achievable information. For questions, see Appendix 2.

\textsuperscript{31} Carlsson, B., 1991
Interview material was organised in accordance to the questions. People interviewed made comments, as questioned, about issues concerning other institutional investors. These comments, and the answers related to the investor in question, are then referred in sections belonging to the current institution.

In the analysis the problem is discussed based on theories and empirical findings. In my analysis, both empirical findings concerning international comparison (Chapter 4.2) and Japanese institutional investors (Chapter 5) are combined. My conclusions are based on theoretical and empirical parts.

2.8 Critic of method

Comparison of any kind is a demanding challenge. Even receiving data can be problematic, and with using it there must be patience and continuous controlling. Defining different institution in different countries has meant lot of work, but it has been possible to make. Some data do not cover the time period that has been my delimitation i.e. 1990’s, but are partly from the 1980’s and partly from the 1990’s, or only partly from the end of 1990’s. However, comparison has been based on same time period. If it has not been possible, there is comment on that. The differences in assets can partly be explained by valuation methods, which makes defining of actual strategies challenging. This aspect, above other objectives, was tried to be coped by conducting information gathering and interviews in Japan. As most of, both secondary and primary data was available only in English, it raises some issues. Consultation has been made in order to secure the

32 Riabacke, A. & Larsson, T., 1996
relevance of the data. If something was not understood, it was studied more. If it was not enough, the issue was left out. Utilising the data has required own calculations, and it has been made carefully. US$ is used when it has been base value in data. In chapter of Japanese institutional investors yen will be used in order to avoid misleading exchange rate effects.
3. THEORETICAL PART

The theoretical references are discussed in this chapter. The investment process is discussed in order to show to which context the asset allocation, and therefore the international asset allocation belong. In addition, the theoretical assumptions of capital markets and institutional investors are presented. Furthermore fundamentals of, firstly, portfolio diversification, and secondly, international diversification and global asset allocation, are shown.

3.1 Investment process

Although the investment process is a continuous process, it can be divided into several steps.33 Even if investors’ actions in the market vary, the investment process as a whole should be conducted similarly regardless of the type of investor. The process describes the portfolio construction and the required actions, presents a structure which helps the investor to understand the background of different investment strategies, and finally presents and points out the importance of a successful strategy, which is the combination of several different concepts.34 A structured outline of the process is described below.

Setting the investment objectives involves examining the liabilities of investor and how to satisfy them in the future.35 Examining investor’s needs and preferences is the first phase in the investment process and can be divided into three major themes: risk, cash and tax status. Every investor

33 Fabozzi, F.J., 1989
35 Fabozzi, F.J., 1989
has a specific risk tolerance and ability to take risk, which can be seen for his/her portfolio composition. Defining risk is a challenging objective due to many different views of risk. Portfolio theory suggests that risk is the deviation of actual returns from expected returns. Other models argue that it is not the total risk of the investment that is rewarded, but only the risk of additional investment in a diversified portfolio. Still, for some investors risk is a more intuitive than statistical measure: the chance of losing on an investment. The need for cash also varies from investor to investor and thus also in their portfolios. Whether an investor is supposed to withdraw or make additional investments in a portfolio, it is suggested that the expected time horizon is shortened respective lengthened. The third characteristic of an investor which has an impact on portfolio construction is the investor’s tax status. This applies especially to institutional investors. For example, pension funds are not subjects to taxation.\textsuperscript{36} Return requirements and risk tolerance are objectives but liquidity requirements, time horizon, regulative and tax aspects are constraints. Combining these elements, an investor sets the investment policy.\textsuperscript{37} The best investment management is based partly on investor’s needs and partly on the market’s drivers.\textsuperscript{38}

The second path in the investment process can be divided into three separate steps: the asset allocation decision, asset selection and execution. The asset allocation decision must be logically related to the needs and preferences of the investor. If the asset mix in the portfolio is determined by the investor’s characteristics, the approach is somewhat passive. The different asset classes represent different risk and return classes and vary over time differently to macroeconomic changes. Diversifying between

\textsuperscript{36} Bernstein, P.L. & Damodaran, A., 1998
\textsuperscript{37} Maginn, J.L. & Tuttle, D.L., 1990
\textsuperscript{38} Chorafas, D.N., 1992
asset classes is supposed to give protection to these changes in comparison to the strategy of investing in one risk class. Furthermore, international diversification offers additional benefits. In order to response to the macro-economic changes, there is an active approach in asset allocation too which can be described as market timing. According to expectations, the relative proportions of a portfolio can be shifted to consist of more of one asset class, for example equities. The asset allocation decision is characterised by examination of two elements: benefits of diversification between asset classes and internationally.39

The financial theory suggests that it is possible to construct an optimal or efficient portfolio, with the highest expected return for a given level of risk or lowest risk for a given level of expected return.40 Asset selection can be divided into passive and active approaches. According to the passive approach the investments are either selected randomly within each asset class or diversified fully across the investments within each class. In the latter case, the investment in each asset is in proportion to its market value i.e. indexed.41 Passive strategies are not based on expectations but follow the movements of the markets, for example by indexing strategy, either on equities or on fixed income.42 Active selection is based on the assumption that some individual assets can outperform the rest of that asset class, and that it is actually possible to define and buy undervalued and sell overvalued assets within each asset class.43 Active strategies involve expectations and thus forecasts about the underlying factors behind the performance of asset classes: in equities there have to be expectations on

40 Fabozzi, F.J., 1989
42 Fabozzi, F.J., 1989
future earnings or dividends and in fixed income portfolios on interest rates and their volatility.\textsuperscript{44}

Portfolio execution contains three dimensions: cost, trading speed and risk management. Trading costs consist of brokerage fees but in closer analysis to at least two other costs. Bid ask cost means that an investor buys at a high price and sells at a lower price. The price impact of a trade refers to the logic of trading: buying pushes prices up and selling pushes them down. Objective of keeping the trading speed fast often conflicts with the objective of keeping the transaction costs low. Short-term investors must generally accept higher costs. The risks related to a portfolio change over time and risk management should be an ongoing process.\textsuperscript{45}

\textit{Evaluation of the performance} is the third and last path in the investment process. In general, three aspects have to be evaluated. Firstly, what was the level of risk taken on in creating the portfolio and has it been in accordance to a model of risk and return where the risk was quantified. Secondly, the level of return must be measured. This begins by measuring expected returns with the help of certain benchmarks. Thirdly, the returns must be set in comparison with market returns. This so-called conditional expected return compares the returns which should have been achieved, given the risk taken.\textsuperscript{46} However, the superior performance is not a guarantee of that the objectives, meet the liabilities, are reached.\textsuperscript{47}

\textsuperscript{44} Fabozzi, F.J., 1989
\textsuperscript{45} Bernstein, P.L., & Damodaran, A., 1998
\textsuperscript{46} Ibid.
\textsuperscript{47} Fabozzi, F.J, 1989
3.2 Capital markets and institutional investors

A capital market is a place, although not necessary physical, where financial assets are bought and sold. The holder of financial asset may postpone the consumption and reserve a right to receive an amount of money at some time in the future. Financial assets differ substantially in conditions: some are receivable any day (bank notes), some at specific dates (bonds), and some only if specific circumstances occur (equities). By postponing the use of a financial asset today, the investor leaves the assets for use of others, and expects these assets to generate future income and accumulate according to an agreement. The allocation of these financial resources occurs in capital markets. It is assumed that the markets are efficient and allocate the resources to the projects which are most capable of generating the highest return. The level of return is decided by those who are able to invest the assets and the assets will be allocated to projects that meet these expectations. Active capital markets also represent liquidity, which allows investors to withdraw their assets from the markets. Capital markets can be divided in to primary and secondary markets: primary markets allocate the newly created financial assets from investors to users (issuers) of capital while in secondary markets, the assets are re-allocated between investors. The liquidation of assets occurs in the secondary markets, which are for existing financial assets. Capital markets can also be divided into national and international markets. In national capital markets, the investors deliver the financial assets, which are mainly of national origin, to national users in the national currency. In international
markets, the assets may originate from and can be allocated to the use of anyone anywhere in the world.\textsuperscript{48}

Foreign investments have to be divided into portfolio investments and foreign direct investments. Portfolio investments are the purchase of domestic debt or equity claims by a foreign actor. Foreign direct investment imposes significant foreign control over the domestic company’s management and real assets as well as subsidiaries of foreign companies.\textsuperscript{49}

Investment objectives and strategies, and portfolio composition vary significantly from investor to investor for several reasons. Institutions are different by their nature: their underlying purposes and principles vary, different liabilities are derived from different ranges of products, the markets they operate in are not similar and regulations affect the portfolio structure and investment management.\textsuperscript{50} Some investors are risk averse, some have higher risk tolerance. Some manage the funds actively, some passively based on indexation. Some are managed in-house, some externally.\textsuperscript{51} Investors can be divided into different sectors by the nature of their liabilities and business. Traditional depository institutions such as banks try to generate income through the gap between returns generated by assets and the cost of liabilities. Life insurance companies and, to some degree property and casualty insurance companies, also try to generate income as other depository institutions. Pension funds, on the other hand, try to minimise the cost of their pension plans in order to meet their

\textsuperscript{48} Van den Berghe, M., 1995
\textsuperscript{49} Makin, A.J., 1994. See also for analysis of causes and consequences of nations external accounts, macroeconomic gains of international capital mobility.
\textsuperscript{50} Blommestein, H.J, 1995
obligations towards pensioners, and not to seek spread benefits. Investment companies are characterised by having no specific future obligations. As mentioned previously, investors can be divided into groups depending on their liability concerns. This method presents the different nature of the amounts and timing of cash payments in order to meet the obligations of investors. Life insurance companies can be included to the first group when they offer a guaranteed investment contract in which both the amount and maturity of the liabilities, and thus the cash payment, are certain in the future. Life insurance companies belong to the second group: the amount to be paid is certain but the actual timing is unknown. Certain products of insurance companies and pension obligations belong into the third group. In this case both the amount and timing of the payment are uncertain. A more theoretical picture of the characteristics of these investors is presented in the following three sections.

3.2.1 Pension funds

The purpose of a pension fund is to pay retirement benefits in the future. Private, state and local entities acting on behalf of their employees, unions acting for their members and individuals acting on their own behalf are so-called plan sponsors when they establish pension plans. These plans are financed through either employer’s or both employer’s and employee’s contributions. The plans can be divided into two groups: defined contribution plans and defined benefit plans. In the first the plan sponsor makes specified contributions, usually as a percentage of the salary of employees, on behalf of qualified members. The actual retirement payment is not unknown, but depends on the performance of the assets of the fund.

52 Fabozzi, F.J. & Modigliani, F., 1992
In the second, however, the retirement payment is known, and depends on how long the employee has served the entity and the level of earnings. The assets of a corporate plan sponsor can be managed: in-house (i.e. by the company itself), by one or more money management entities on behalf of the company, or by a combination of these alternatives.53

The liabilities of the pension fund are the first priority and the investment strategy has to come after these. This means that the volatility in return or value of the assets should not be seen as a risk as long as they are at the same level as the return or value of liabilities. Secondly, the assets and liabilities should be valued according to the same principle: usually assets are valued at historical cost, nominal value, taxation value or market value. The present value of liabilities is measured by several different methods. Thirdly, liabilities should represent the present value of current active or inactive members of the fund, not future members or changes in their work status. The liabilities are met by four different kind of risks: interest rate risk, inflation and real wage growth risk, actuarial risk and pension system risk. The discount rate, whether it is fixed or variable, should be used for both assets and liabilities. The fixed discount rate, if used, calculates the future cash flows of the assets. If assets are valued at market prices, the liabilities should be calculated with a variable discount rate. The interest rate risk refers only to this latter case, since the liabilities may be absorbed by the investments. If a pension fund is seen as a going concern type of organisation, inflation and growth in real wages affect the liabilities. The effects depend on which system the fund is based on: A pension fund may be based on either the final pay or average pay system and be affected by inflation or wage growth on active members, or the indexation system,

53 Ibid.
where the rights/benefits of inactive members are adjusted for inflation of prosperity. Quantitative estimation of actuarial or statistical risks allows a fund to determine the levels of funding or a minimum rate of return on the assets of the pension fund. Probabilities in regard to death, marriage and resignation must not deviate too much from realised figures, otherwise with the number of members it may not be possible to cover deviations. Pension system risk refers to a different kind of factors that affect the liabilities of pension funds. Ageing population and increasing individualisation have an impact on the future liabilities of pension funds.\footnote{van Aalst, P.C., Boender, C. & Guus, E., in Ghosh, D.K. & Khaksari, S., 1995}

### 3.2.2 Insurance companies

Insurance companies can be divided into life insurance companies and property and casualty insurance companies. In case of death, a life insurance company makes a payment for the beneficiary as agreed when making the insurance agreement. However, life insurance companies offer several other products as well. Insurance for death can be combined with an investment policy, where the payment depends on interest rates in the market. Alternatively the payment may depend on the market value of the investment at the time of death. Typically, pension funds apply an investment policy which guarantees a certain payment on a certain day in the future. The contracts of life insurance companies are in most cases characterised by this long maturity which means that these companies have to match their liabilities and investment income at any given point of time.\footnote{Fabozzi, F.J. & Modigliani, F., 1992}
It is argued that, from an actuarial point of view, it is easier to predict the timing and payment for a life insurser than for a property and casualty insurers. The latter faces more factors that are not predictable, such as, the randomness of natural catastrophes, which affects the investment strategies. Property and casualty insurance companies offer insurance protection when: property has been lost, damaged or destroyed; when an individual has lost or diminished the ability to earn money; damages by third parties; or loss as a result of injury or death in the case of occupational accidents. The insured person pays a price (a premium) for this protection, which is invested until a claim made by the insured person is validated.\textsuperscript{56}

3.2.3 Investment companies

Since investment companies are pools of funds of individual investors, they offer the possibility to diversify risk and lower the costs of contracting and processing information. An individual investor can buy shares in an investment company, which are in proportion to the company’s diversified portfolio of investments. Investment companies can be categorised into three groups: \textit{open-ended funds}, \textit{closed-ended funds} \textit{and unit trusts}. Open-ended funds, commonly called mutual funds, sell shares to individual investors and are willing to redeem their outstanding shares on demand. The price equals an appropriate share of the market value of the funds’ portfolio. An open-ended fund, called a mutual fund in the US and a unit trust in the UK, means that the outstanding shares will be redeemed on request, and that the number of shares is not fixed, but fluctuates as new shares are sold and outstanding are redeemed.\textsuperscript{57} Closed-ended funds sell

\textsuperscript{56} Ibid.
\textsuperscript{57} Dobson, G.R., 1994
shares but in most cases don’t redeem the shares. The price of a share depends on the supply and demand in the market place, and can be lower or higher than the net asset value. As is the case of closed-ended fund, the number of shares of a unit trust is fixed. This type of fund invests mainly in bonds, but in a different way from mutual funds and closed-ended funds. Trading in bonds is passive, the termination date of unit trusts is fixed and the portfolio of trust remains.\textsuperscript{58}

3.3 Asset allocation

Asset allocation, as a result of in-depth examination of the preferences and needs of the investor, concerns firstly allocation between asset classes i.e. what proportions will be held in stocks, bonds and other assets. Secondly, decisions concerning international allocation must be taken. All the underlying factors must be examined: there have to be views on the level of interest rates, inflation and overall economic growth. For a more detailed analysis of portfolio construction, risk and return must be defined, measured and suited to the needs of the investor. Furthermore, the risks and benefits of diversification must be analysed.\textsuperscript{59}

Fundamentally, the time-horizon has an impact on the risk strategy: less time for the need for liquidity implies more risk-averse investment behaviour.\textsuperscript{60} How the asset returns are distributed is an issue which has to be examined by identifying both the expected return and variance for each asset and covariances of asset classes in order to find the investment spectrum. In addition, the risk and return preferences (utility function) and

\textsuperscript{58} Fabozzi, F.J. & Modigliani, F., 1992
\textsuperscript{59} Bernstein, P.L., & Damodaran, A., 1998
\textsuperscript{60} Ibid.
risk aversion must be known. There must be an understanding of how much higher a return the investor would want if the level of risk is increased (measured by portfolio variance). The optimal asset allocation can be selected by combining these aspects with market observations.\textsuperscript{61}

In general, two categories of asset allocation can be defined: \textit{policy asset allocation} and \textit{tactical asset allocation}. Policy asset allocation can be seen as strategic, long-term policy, as relatively constant and stable allocation. Shifts within the assets are sometimes required and accepted because risk tolerance and long term objectives do change over time. Policy asset allocation is based on a careful examination of the long term-opportunities of an asset allocation. The main objective of policy asset allocation is to create a balance between the long-term attractive returns which are combined with higher risk and on the other hand modest return assets with low risk.\textsuperscript{62}

Asset allocation also has an active characteristic with the objective of constantly seeking opportunities to add value by shifts in the asset mix. This strategy is called tactical asset allocation, and the changes between asset classes are based on overall market and economic conditions, in order to find objectively priced assets with higher return opportunities. Tactical asset allocation strategies differ in their time horizon, decision rules and implementation approach. Usually the time horizon varies from short term (one year), to intermediate term (one to three years). Some processes seek returns based on long-term cycles in the most attractive market, other more short-term tactics are based on changes in monetary policies or investor

\textsuperscript{61} Winkelmann, K. in Lederman, J. & Klein, R.A., 1994
\textsuperscript{62} Bernstein, P.L., & Damodaran, A., 1998
attitudes. However, there are similarities among tactical asset allocation processes, too. Firstly, they are characterised as quantitative and analytical processes derived from regression analysis or optimisation. Secondly, as follows from quantitative processes, the processes are based on value measures of expected returns. Thirdly, processes are contrary in the sense that they suggest to buy after a market decline and sell after a market rise.63

Behaviour and functioning of financial markets can also be seen as a social phenomenon, and the action can be seen as one form of collective behaviour. The movements depend on both objective economic realities but to even higher extent on subjective perceptions of market conditions.64 Social psychology offers a framework by which it is possible to analyse movements in the markets: all other influences come into reality in performance by human beings. We can define interactions both within and between groups. Following others cones into practice on all levels and in all groups of market participants. Because the information from original sources are in many cases incomprehensible, the market participants have to follow themselves. Both insiders and outsiders create and maintain “groupthinking” which may alter the underlying investment judgements. Copying opinion leader refers especially to insiders towards outsider but also to anonymous participants who either create, get first and deliver the information and thus control the markets.65 Trying to see if this kind of argumentation can be used in capital markets provides deep, more qualitative aspects when conducting research in market participants.

63 Ibid.
64 Klausner, M. in Adler P.A. & Adler P., 1984
65 Adler, P.A. & Adler P. in Adler P.A. & Adler P., 1984
3.4 Portfolio investment theory

A portfolio is defined as a list of stocks, bonds and commercial paper owned by an investor whether it is private, institutional or a bank. A typical portfolio consists of equities, debt, cash and other assets such as gold.66

As the view of risk is important, it has to be well-defined, measured and understood. 67Risk as a subject has interested academics for a long time and has several definitions. The term risk can be divided into risk and uncertainty. Risk is applicable when random events provide possibilities to make estimate of the probability of various outcomes under various conditions. With regard to uncertainty, on the other hand, estimate cannot be made. Risk has been seen as a deviation from the average return and the investor who is willing to take risk also pays the cost of that risk.68 One obvious risk is the surplus volatility: that the investor may not meet the future obligations with the current assets in the way that they are managed.69

While traditional interest was concerned with the risk between two securities, the modern portfolio theory70 makes a distinction between security risk and portfolio risk. The combination of assets and their role for overall risk of portfolio is critical.71

66 Chorafas, D.N., 1992
68 Aldersley, J., in Corner, D., & Mayes, D.G., 1983
70 The first academic approach to analysing fund investment management is known as Modern Portfolio Theory, developed by Harry Markowitz in 1950’s, Curry, S., in Anderton, B., 1995
71 Aldersley, J., in Corner, D., & Mayes, D.G., 1983
There are two fundamental assumptions in modern portfolio theory. An investor is assumed to seek the highest rate of return for a given level of risk and the lowest level of risk for a given rate of return (risk aversion). Furthermore it is assumed that the utility of wealth diminishes: if the same sum of money is expected, a certain sum provides greater utility than an uncertain sum. Provided that utility increases less than proportionately (i.e. at decreasing rate) to wealth, the investor has some degree of risk aversion. Thus, for the same expected return, less risk will be preferred instead of more risk.\(^72\)

Fundamental idea of a portfolio is to avoid any situation where the correlation between the returns of two assets is perfect, i.e. they move in the same directions and have no diversification benefits. If the returns change in opposite directions according to their relative proportions, the total effect is neither positive or negative. In a portfolio which consists of two assets with the same proportions but with different standard deviations and if there is no correlation at all between the returns, the risk is less than if the portfolio would have consisted of only one asset.\(^73\) In the ideal portfolio, the returns are negatively correlated. The return on a portfolio is the same as the return on both assets, but there is no variance in the return. If the return of one asset falls, the return of another rises in the same proportion, as can be seen in figure 3.1.\(^74\)

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\(^{72}\) Curry, S., 1995

\(^{73}\) O’Brien, R., 1992

\(^{74}\) Danielsson, H., 1995
By examining the relationship between risk and return, it is possible to generate an almost infinite number of different portfolios by varying the proportions of assets. For a given level of risk, the efficient frontier (see Figure 3.2.) shows the highest returns. Alternatively, we can see the lowest level of risk for a given return. By adjusting the proportions of risk free, $r_{mf}$, assets and risky assets, $r_{m}$, in a portfolio, an optimal portfolio is found as a tangent of the efficient frontier which represents the investor’s risk preferences and portfolios.\(^{75}\) The investor is not likely to choose any combination below the efficient frontier, but within it. This is shown in Figure 3.2.

\(^{75}\) Curry, S., 1995
Modern portfolio theory can be applied both for stock portfolios and extended portfolios with stocks and fixed income assets. The risk can be further reduced by comprehensive diversification taking into account the correlation of returns of all asset classes.76

Because two investments representing the same standard deviation are unlikely to vary in returns in the same manner at the same time, the risk of a portfolio consisting of two different assets is assumed to be lower than the risk of investing in one asset class. However, it is not possible to diversify all risks, because the market risk cannot be reduced by diversification, since the price movements of all assets are similar to some degree. Thus, the market risk is also called a non-diversifiable risk. The non-market risk can be reduced and even smaller amounts of different assets are enough to give a positive diversification effect.77

Several factors affect risk aversion. The Purpose of the funds and time horizon are just some examples that affect the willingness and capability of taking risks. Moreover, the overall situation in the investment market may have an impact which can be seen as more risk averse at some specific time.78 Combining risk and return leads to different types of investor behaviour. Risk seekers will have the chance to reach higher capital gains and accept lower expected returns. Those who avoid risk, who can also be called diversifiers, accept more risk only if the expected returns are also higher. Interest rate changes affect the allocation in one of three ways: demand for cash depends inversely, more risk can be taken as a result of

76 Corner, D. & Mayes, D.G., 1983
77 O’Brien, R., 1992
78 Ibid.
increased interest rates, or income effect due to the improved possibilities due to the higher yield and thus increased security.\textsuperscript{79}

3.5 International diversification and global asset allocation

The market never guarantees the generation of returns. There is a risk attached to practically every investment. The portfolio of international assets has at least four types of risk, which can not be avoided but managed to a certain extent. Market risk refers to systematic risk, an overall movement in the markets. Due to the fact that the future is uncertain, an investor bases his/her strategies on expectations which represent his/her views of the global market situation, specific conditions and the industry risk in the market to be invested, the currency the investment is made in, the risk associated with the specific stock, bond or other asset, the expected share dividend or bond interest and the cost of leverage to hold a position. Diversification, in order to protect the portfolio from fluctuation in equity and bond prices, contains risk too. Diversification risk can occur if portfolio is spread between too many assets. This over-diversification makes the management of such portfolio very difficult and the risk of mismanagement increases. Both stock prices and bond value in particular are affected by changes in interest rates. Interest rate risk is especially relevant and high in long maturity bonds. However, by avoiding investments in long maturity bonds during high inflationary periods and interest-rate-sensitive stocks, the effects of interest rate risk can be minimised. Investments made in currencies other than investor’s base currency are characterised by foreign exchange risk. When acquiring assets denominated in a foreign currency, an investor can minimise the risk by

\textsuperscript{79} Tobin, J., in Hester, D.D. & Tobin, J., 1967
diversifying the assets across several important currencies. Furthermore, investments may be affected by political risk, liquidity risk, manipulation risk, information risk and inflation risk.

Although international investment increases the risks, it also presents new possibilities. There are five main reasons for investing overseas equities. First, the size of the market is crucial. Market capitalisation offers opportunities for investors. The domestic market capitalisation has to be set in relation to the market capitalisation of the whole world in order to determine the global allocation. Second, performance of the markets has an impact on investors’ behaviour. If attractive new markets are observed, investments are assumed to pour into these markets. However, differences between markets allow various performance outcomes, which lead to the effective allocation of financial assets. The performance of a single market is also interdependent with other markets: if an investor cannot define a best performing single market from year to year, there is a need to invest all over the world. Third, risk diversification is one reason to invest abroad. In theory, diversification serves benefits either by reducing risk or increasing returns. By investing overseas, an investor can diversify his/her overall portfolio risk. As diversifying a domestic portfolio between different sectors spreads the risk, international investment provides a counterbalance to a purely domestic portfolio. Fourth, particular opportunities may be an innovator behind international investments. An investor may identify several outstanding individual investment opportunities abroad, for example a company in the first stage of growth in an emerging economy. Particular opportunity doesn’t necessarily refer to emerging market

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80 Chorafas, D.N., 1992
81 O’Brien, R., 1992
opportunities. In the matured markets, there are three categories of stock investment that are potentially interesting for foreign investors: large capitalisation and liquid market leaders, turnaround situations in different economic cycles, and unique corporate situations in a certain country or market. Fifth, the weight of money also attracts also cross-border investing from at least three points of view: the strategic reallocation of institutional (mainly pension) assets; the ageing of society; and a movement out of cash investments to other investments which offer higher yields or compensatory capital appreciation. Pension funds are increasingly reallocating their assets internationally, especially to emerging markets. As savings increase in ageing societies, returns become attractive overseas as their GNP growth will improve. Low interest rates lead to a shift towards international equity funds and away from money market funds and certificates of deposit.82

There are at least six reasons an investor may want to add international bonds to a domestic fixed income portfolio: returns may be improved, risks reduced, diversification over different monetary policies, diversification of debtors, arbitrage opportunities in different markets and yield curve management.83

As shown in figure 3.2 an investor can achieve a higher return even if the level of risk remains the same. Furthermore, combining an asset which is not perfectly correlated with any existing asset in the portfolio, the slope can be lifted up. Therefore, as shown in figure 3.3, an internationally diversified portfolio presents further benefits. An effective portfolio means

82 Dobson, G.R., 1994
that no other combination of assets can provide a higher return unless the investor is willing to increase the level of risk.\footnote{Danielsson, H., 1994}

**Figure 3.3 International diversification and its benefits**

The lower risk derives from the fact that international diversification eliminates the non-systematic risk without altering the level of expected return. This happens because the domestic market is relatively uncorrelated or negatively correlated with the foreign market. As domestic assets are more closely correlated to each other than foreign assets, international diversification benefits in the form of reduced risk occur faster than domestic diversification.\footnote{Solnik, B.H., 1996} However, internationally diversified portfolios should include not only stocks, but also bonds, because a stock portfolio presents a higher risk at the same level of return than a combined portfolio.\footnote{Solnik, B.H. & Noetzlin, 1982}

The degree of segmentation of capital markets is closely related to the extent to which an investor can benefit from international diversification. There may not be arbitrage opportunities if markets are completely integrated. However there are still benefits of international investment in

\begin{figure}
\centering
\includegraphics[width=\textwidth]{international_diversification.png}
\caption{International diversification and its benefits}
\end{figure}
integrated capital markets as well: the systematic risk in a local context can be reduced by international diversification. In fully integrated capital markets, the arbitrage opportunities disappear and an investor can only gain by having a greater number of securities whereby the risk exposure can be reduced. In segmented markets an investor can benefit in two ways: the investment opportunity set is larger and there are benefits from international arbitrage. For an investor, it is critical to examine the markets and their interrelation, i.e. for example correlation coefficients and interest rate parity. If interest rate arbitrage possibilities exist, the markets are segmented and offer gains for investors. As interest rates can be divided into short- and long-term rates, it should be noted that differences in long-term rates across international markets refer to bond markets, because the differentials are related to growth funds and not to the liquidity considerations, as in the case of short-term interest funds and rates.87

Opportunities, risks and complexity increase when the investor enlarges his/her portfolio to include also international assets. Globalisation offers new allocation choices and increases the interdependence between them. This means that even the increased levels of political, economic and currency risks, have to be integrated to process of global investment strategy. An investor examines the expected returns of an individual asset, and constructs portfolio weights which are in accordance with minimising risk and maximising expected return.88

As modern portfolio theory suggests, an investor can make a trade off between risk and return through asset allocation. By taking the possible

87 Akdogan, H., 1995
88 Chorafas, D.N., 1992
benefits of international diversification carefully into account, an investor may reach excess return with the original level of risk. Which asset classes should be included and their normal weights in the portfolio is a fundamental question, and makes the asset allocation decision the most critical of the investment process. The enlargement of investment possibilities abroad, the global investable capital market, makes the decision even more important. However, as described earlier, risks such as currency and market risk, and the management of the risks, makes the decision much more complex.  

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89 Ibid.
4. EMPIRICAL PART

In this chapter the empirical findings will be presented. The broader context will be described before going into deeper findings. The changes in capital markets, accumulation of financial assets and development of cross-border investments will be presented before the international comparison of Japanese, US and UK pension funds, insurance companies and investment companies in regard to their international investments is described.

4.1. Development of capital markets

The characteristics and relationships between capital market participants have changed recently. Traditionally, banks and securities firms have acted as intermediaries between borrowers and savers, as banks lend depositor’s funds directly to firms, and securities firms distribute new issues of debt and equity to individual investors, pension funds and insurance companies. Nowadays, however, non-bank financial institutions, from the supply side, have been facilitating the securitisation of finance and also offer financial services that have historically been seen as services that banks could offer almost exclusively. On the demand side, on the other hand, bank deposits and securities firms have reduced in importance as holders of people's funds. Instead people have shifted their assets to institutions which can better diversify risks, reduce tax burdens and take advantage of economies of scale. As a result, the size and sophistication of institutions specialising in investing money, increasingly on a global basis, on behalf of people has grown dramatically.90 As institutional investors dominate the investing

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possibilities, investing becomes more sophisticated, as both advanced conceptual and technological tools are used and new market instruments are tested in order to find the optimal risk and return combination. In this capital market structure it becomes more important for both investors and companies to understand the behaviour of each others.

The term internationalisation has different meanings for different participants in the markets. For a securities company, internationalisation may be the opening of a subsidiary and serving customers abroad, for a borrower, it may be possibility to raise capital through primary issuing or listing overseas, and for an investor, it may mean increased opportunities for international diversification. The popularity of both long and short-term debt obligations and bonds through international markets has increased significantly. The changes in the international monetary system in the 1970’s and companies' objectives to minimise the new exchange risk gave an impetus for business in debt securities. In addition, institutional investors wanted to diversify their portfolio risk and companies to avoid using the oligopolistic domestic markets with higher costs of capital.

As a cause of financial market deregulation in US, Japan and UK investors and other participants of the markets have faced easier access to international markets than before. Since many countries reduced or abandoned capital controls completely during the 1980’s, capital has become much more mobile internationally. Short term capital movements dominate the foreign exchange markets and play an important role in the

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92 Sobel, A.C., 1994
93 Coleman, W.D., 1996
94 Sobel, A.C., 1994. A more detailed description and comparison of financial market deregulation in Japan, the UK and US can be found elsewhere.
stability of the global economy. Foreign direct investments, on the other hand, are more critical than the increased portfolio investments at least from national policy-making point of view because they affect, for example, employment directly.\textsuperscript{95}

The growth of institutional investors has implications not only for the financial markets but also for companies throughout the world. As shareholders of companies, they seek returns and influence possibilities. For example, in the UK, institutional investors own nearly 85\% of the listed equity shares. UK equities owned by foreigners has grown significantly: from 3.6\% in 1981 to 11.8\% in 1990 and 16.3\% in 1993. Most of the growth is explained by globalisation of the investments of institutional investors: US-based investors accounted for 41.8\% and European Union countries account for 15\%.\textsuperscript{96}

Pension funds, life insurance companies, and investment companies are the major institutional investors. Typically these investors hold their assets in equities, bonds, property and cash, although the weighting differs over time and from institution to institution.\textsuperscript{97} The investment strategies of institutional investors differ for several reasons: their investment objectives, the nature of their products and liabilities as a result, the conditions in the markets in which they operate and regulations governing the structure of portfolios. The nature of products differs between investment companies on one hand and pension funds and insurance companies on the other which are long term contractual savings institutions. Investment companies have several different investment

\textsuperscript{95} Schulze, G.G. & Ursprung, H.W., 1999, pages 295-352  
\textsuperscript{96} Samuels, J., Wilkes, F.M. & Brayshaw, R.E., 1999  
\textsuperscript{97} Curry, S., 1995
objectives: for example, open-ended funds have to hold a relatively large share of liquid assets due the need to meet the eventual requests for reimbursement of possibly many investment certificates.\(^98\) Even if differences in investment strategies exist, the increasing investment in foreign securities is common to all investors.\(^99\)

As investors increase their international investments there are effects in diversification benefits. An enlargement of investments in foreign assets affects the correlation between the asset classes. It is argued that the correlation decreases because domestic assets are highly correlated with the pure domestic market but less correlated with an international market in which they represent a smaller share of the total market.\(^100\) Stock markets of OECD countries have correlation coefficients of the order of 50\% to 90\%, which shows that the markets are already highly integrated. On the other hand, Asian and Latin American stock markets display negative or low correlation with stock markets in industrialised countries. The correlation between developing and industrialised countries has improved in those countries which have allowed portfolio investments from abroad. Investing in emerging markets not only reduces risk but is also most likely to raise the expected return.\(^101\) Although it is not the objective of the current study to search an optimal portfolio or quantify the benefits of international diversification, it must be noted that integration of capital markets with various effects may have an impact in development of international assets in portfolios of institutional investors.

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\(^99\) Ibid., page 299
\(^101\) OECD, Reisen H. & Williamsson J., 1994
Usually, financial contracts represent an intertemporal transfer of wealth in some form which makes the financial transactions sensitive to shifts in the future expectations and market confidence of market participants. In periods when profitability is enhanced, market confidence is often reinforced as risk taking is encouraged by competitive pressures. Confidence can be shaken, however, and lead to abnormal market conditions if investors become unsure about the borrowers’ ability to meet their commitments and also about the liquidity of securities in the secondary markets. Moreover, the situation can lead to atypical price dynamics and a shift towards safety and liquidity among investors.

Financial market has also shown more vulnerability because the markets and institutions have grown rapidly and their relationship become more complex and interdependent. The evidence shows that the risk-reducing benefits of international investments due to the integration of capital markets have become less strong but remain positive. This is an important argument for international diversification.

Changes in investor attitudes towards risk also affect asset prices. One indicator of this attitude is the average relationship between ex ante perceived risk and ex post actual returns for a cross-section of financial asset classes. During periods when the appetite for higher yield exceeds the risk concerns, the relationship is strongly positive: interest in riskier asset classes, as they historically present higher volatility, is stimulated by the improved investor sentiment. Changes in investors attitudes toward risk have an impact in the composition of borrowers and the issuance volume in the primary market for international bonds: if the creditworthiness of a

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102 BIS, 69th Annual Report, pages 92-93
103 The OECD Observer, 1998, Blommestein H.J.
borrower is lowered, the cost of external finance will increase and financing may even become impossible.\textsuperscript{104}

\textbf{4.1.1 Accumulation of financial assets}

In 1990, financial assets of institutional investors in OECD countries amounted to nearly US$ 14,000 billion. By the end of 1995, the assets had grown to over US$ 23,000 billion. In the US, the assets of institutional investors almost doubled between 1990 and 1995, and reached 11,871 in 1995. Japanese institutional investors represented the second highest share of institutional assets with US$ 3,954 billion in 1995. Within the EU area, UK institutional investors had the biggest assets, US$ 1,789 billion. The development can be seen in Table 4.1. The average annual growth of holdings by all categories of institutional investors reached 10.5\% in the 1990 – 1995 period. In 1995, the total assets of institutional investors was equivalent to 106.7\% of the aggregated GNPs of the OECD countries\textsuperscript{105}.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|}
\hline
 & 1990 & 1995 \\
\hline
US & 6,991 & 11,871 \\
Japan & 2,428 & 3,954 \\
UK & 1,117 & 1,789 \\
OECD Total & 13,857 & 23,388 \\
\hline
\end{tabular}
\caption{Financial assets of institutional investors, in billion US$}
\end{table}

The growth of assets continued even from 1995 to 1996. The average annual growth of financial assets of institutional investors from 1990-1996 was 11\%\textsuperscript{106}. In 1996, the financial assets of institutional investors were worth over US$ 26,000 billion. Institutional investors in the US controlled

\textsuperscript{104} BIS, 69\textsuperscript{th} Annual Report, pages 93-94
\textsuperscript{105} The OECD Observer, 1998, Blommestein, H.J. & Funke, N.
\textsuperscript{106} OECD, Financial Market Trends, 72, 1999
over half of all assets, and investors in Europe over US$ 7,000 billion and in Japan nearly US$ 4,000 billion.\textsuperscript{107}

\subsection*{4.1.2 Cross-border investments}

As noted earlier, international transactions must be divided into foreign direct and portfolio investments. Portfolio investments have taken the actual amount of foreign direct investments.\textsuperscript{108} The growth of international portfolio investment has been faster than the growth of foreign direct investments. During the 1990’s, the net international assets of Japan have increased and, at the same time, US liabilities have increased. This can be explained to a large extent by the fact that Japanese investors were major investors in US government securities. The UK has remained at relatively stable levels. The increase of portfolio investments has occurred by cost of deposits and bank lending.\textsuperscript{109} Gross flows are more informative compared with net flows because, for example, domestic residents diversify their portfolios by increasing their investments in foreign securities at the same time as foreign investors increase their domestic investments. The result may be a significant increase in gross flows without a noticeable change in the net flows.\textsuperscript{110}

The growth of international financial transactions derives from the development of information technology, decrease in the costs of communication, data processing and making transactions, and globalisation of the financial services industry. However the growth of international

\textsuperscript{107} The Economist, pages 107-108
\textsuperscript{108} IMF, Occasional Paper 172. See Appendix 3 for development from 1973 to 1996.
\textsuperscript{110} IMF, Johnston, B., et al, 1997
transactions would not have been possible without deregulation of capital account transactions. Demand for debt has increased as companies have been privatised, trading between nations has increased and thus also the need for financial products such as currency risk hedging.\textsuperscript{111} Competition among countries depends, for example, on the degree of international mobility, and capital is typically more internationally mobile than labour. Capital seeks its highest net returns, adjusted for differences in risk. Due to the free movement of capital to some extent depending on countries, the financial markets are effectively integrated.\textsuperscript{112}

As has been pointed out previously, international diversification offers possibilities for higher returns with the same level of risk. The main factor behind this is that markets move in various directions, i.e., the correlations vary. The clearest example is the market crash of October 1987: markets around the world crashed but the Japanese market rose to new record hight shortly afterwards.\textsuperscript{113} Differences in local conditions, regulation and instruments offers opportunities for investors to diversify their assets and hedge the risks against discrete market behaviour in a single market and reach higher returns caused by different opportunities and conditions of markets. Integration of the markets and information networks between institutional investors may, however, reduce the risk diversification benefits.\textsuperscript{114} These factors are deeply studied by institutional investors as they have an impact in cross-border transactions of them.

\begin{itemize}
\item \textsuperscript{111} IMF, Occasional paper 172, 1998, pages 1-4
\item \textsuperscript{112} Schulze, G.G., & Ursprung, H.W., 1999, pages 295-352
\item \textsuperscript{113} Ibbotson, R.G., Siegel, L.B. & Waring, M.B. in Bruce, B.R., 1990
\item \textsuperscript{114} Sobel, A.C., 1994. Further analysis of integration falls out of the regime of this study, and can be found elsewhere.
\end{itemize}
Risk and return estimations with regard to cross-border investments are usually divided into two phases. Firstly, analysis of the domestic economy and its effects on assets in national currency. For example, an expected decrease in the level of interest rates is assumed to lead to an increase in the market valuation of the stock market. Secondly, the changes in exchange rates have to be analysed. Combining the two phases, returns are measured in both the domestic and foreign currencies. The two risks, market risk and exchange risk, can be managed to some extent by various hedging strategies and products.115

There are many factors which complicate international investments. Cultural differences between institutions, legal and financial traditions, information sources, and legal barriers, higher transaction costs and discriminatory taxation have an impact in the outcome of cross-border investment. Furthermore, economic and financial risks vary from country to country as they are, for example, based on the existence of human and natural resources and their actual management and utility. Political, social, geographic and strategic considerations should also be included in analysis. Thus, diversity of the factors makes an analysis of the potential costs and benefits of cross-border investments difficult.116

Changes in the geographical composition of institutional investors’ portfolios reflect increased international capital flows. Since foreign bonds do not offer the same long-run diversification benefits as equities, fixed income assets are generally less internationally diversified than equity holdings.117

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115 Clark, E.A., 1991
116 Ibid.
117 BIS, 68th Annual Report, page 89
Cross-border transactions in bonds and equities have grown from less than 10% of GDP in 1980 to 213% in US and 96% in Japan in 1997. As the Table 4.2 shows, between 1990 and 1997 transactions decreased in relation to GDP in Japan, but continued to increase remarkably in the US. For example, in 1997 the foreign securities transactions between US and foreign investors totalled US$ 17,000 billion\textsuperscript{118}.

| Table 4.2 Cross-border transactions in bonds and equities as % of GDP |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Japan          | 8             | 62            | 119           | 92            | 72            | 78            | 60            | 65            | 79            | 96            |
| US             | 9             | 35            | 89            | 96            | 107           | 129           | 131           | 135           | 160           | 213           |

The Table 4.3 shows the development of using capital markets as a source of funding. This development can be seen by different borrowing countries. In US the percentage growth has been astonishing, more than 600%. As this international borrowing have increased, the lending, as the source of funding, has increased, which means that also the international investments must have increased. The role of institutional investors in this process is will be discussed later.

| Table 4.3 Fund raising on the international markets, in billion US$ |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| US             | 36.0           | 63.5           | 73.4           | 97.7           | 163.7          | 268.9          |
| Japan          | 57.1           | 72.3           | 57.1           | 61.9           | 39.4           | 39.4           |
| UK             | 41.9           | 38.8           | 45.0           | 37.5           | 58.4           | 61.3           |
| Source: OECD International Capital Market Statistics |

The data shows that companies increasingly turn to international markets in order to raise funds and this is seen as expansion of cross-border trading of

\textsuperscript{118} IMF, 1998, International Capital Markets
financial assets. The development of the international equity issues of companies between 1990 and 1995 in the US, UK and Japan is seen in Table 4.4.

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>900</td>
<td>2200</td>
<td>4200</td>
<td>4700</td>
<td>3700</td>
<td>4500</td>
</tr>
<tr>
<td>Japan</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>UK</td>
<td>3100</td>
<td>4000</td>
<td>3000</td>
<td>1800</td>
<td>900</td>
<td>4000</td>
</tr>
</tbody>
</table>


The nominal increase in the outstanding issues of international debt is even higher than the increase in equity issues. In the US, international debt has increased from about US$ 176 billion in 1993 to nearly US$ 603 billion in 1998.119

### 4.2 International comparison of institutional investors

Institutional investors can be examined in a global context, either from country to country or by type of investors. All types of investors in the US account for more of the overall global assets than their counterparts in other countries. Japanese institutional investors held the second largest amount of assets, followed by UK investors. Compared by type of investors, US pension funds held 62% of global pension assets in 1995, followed by UK pension funds. Of the assets of insurance companies, US companies accounted for 35% and Japanese insurance companies 24%. Investment companies in the US accounted for 57% of the assets of investment companies globally, followed by Japanese investment companies. Figures can be seen in Table 4.5.

119 Ibid.
Table 4.5 Institutional investors in a global perspective, 1995

<table>
<thead>
<tr>
<th></th>
<th>Pension Funds</th>
<th>Insurance Companies</th>
<th>Investment Companies</th>
<th>Aggregate $ bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial assets as a percentage of the global sector total</td>
<td>62</td>
<td>35</td>
<td>57</td>
<td>50</td>
</tr>
<tr>
<td>US</td>
<td>9</td>
<td>24</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Japan</td>
<td>11</td>
<td>10</td>
<td>4</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: US Investment companies include assets of banks, personal bank trusts and estates (740 bn US$) and real estate investment trusts (26 bn US$). Japanese assets do not include trust accounts of trust banks (916 bn US$)
Source: BIS, 68th Annual Report, Page 84

Insurance companies continue to be the most significant institutional investors in the OECD countries, representing 35% of investments in 1995 (35% in 1990). Pension funds accounted for 25% (27%), investment companies 24% (19%) and others 16% (18%). During 1990-1996, the financial assets of investment companies grew 16%, pension funds 10%, insurance companies nearly 10% in OECD countries. The total financial assets of insurance companies increased from about US$ 5,000 billion (1990) to US$ 8,500 billion (1996), pension funds from about US$ 3,800 billion (1990) to US$ 6,800 billion (1996) and investment companies from US$ 2,700 billion (1990) to US$ 6,400 billion (1996).

Portfolio composition differs among institutional investors. Firstly, holdings of equities are limited in most OECD countries, with exception of the US and the UK. However, there is growth in share of equities in institutional portfolios. Secondly, asset allocation may have a strong home market bias, especially among pension funds and life insurance companies, but not in mutual funds. Generally US and UK investors invest mainly in

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120 OECD, Institutional Investors Statistical Yearbook 1997
121 OECD, Financial Market Trends, 72, 1999
equities whereas, for example Japanese investors, are more risk averse and prefer to invest in fixed income assets.\textsuperscript{123} The portfolio compositions in different countries show interesting differences but falls out of the scope of this study. Examining the international investments continues, but for those interested in portfolio compositions, the development in US, Japan and UK during 1990 and 1995 are included in Appendix 3.

Portfolio theory is used to a relatively low extent among institutional investors, especially in the UK. There are several reasons for this. Firstly, the asset allocation decision is based on the money which comes into fund rather than the existing portfolio, which reflects past performance. In some US pension funds, corporate culture rather than financial analysis has a more important role in decision making. Secondly, risk and return are difficult to calculate as they are based on historical data. Thirdly, the diversification of portfolios is too high in many cases, i.e. the portfolio consists of more assets than would be necessary to obtain the benefits from diversification of risk.\textsuperscript{124}

It has been suggested that there is general agreement that high domestic share of institutional assets cannot be fully explained by capital controls and other impediments to foreign investment.\textsuperscript{125} High transaction and information costs, foreign exchange risk, and legal, regulatory and tax issues do not explain the low share of international assets. One important factor explaining the gap are the liability structures of the investors. For example, as insurance companies’ liability structures are characterised by fixed income, the benefits of international diversification are limited. This,

\textsuperscript{123} Economist, pages 107-108
\textsuperscript{124} Curry, S., 1995
\textsuperscript{125} OECD, Reisen H., 1997, page 11
however, is the opposite among mutual funds, whose liability structures are simpler.\textsuperscript{126}

Institutional investors in most countries had invested less than 5\% of their assets in international assets in 1980. In fifteen years, by the middle of the 1990’s, the share had increased to about 20\% on average.\textsuperscript{127} The international diversification of pension funds, insurance companies and investment companies is examined in the following sections.

\textbf{4.2.1 Pension funds}

Defined benefit and defined contribution schemes differ significantly in the distribution of investment risk between the sponsor and the beneficiary. In defined benefit schemes, pension entitlements are calculated on the basis of the employee’s salary profile and formally represent a liability of the sponsor, who is required to cover any funding shortfall. In contrast, in defined contribution schemes, the beneficiary has a choice of alternative investment vehicles among which to allocate regular salary deductions and the sponsor’s contributions. The investment risk is determined by the cumulative performance of the selected portfolio mix by the time of retirement.\textsuperscript{128} Clearly, the asset allocation strategy of pension funds is based on their need for cash in the future, which depends on the age of employees, the number of pensioners and expected salaries. Based on this they conduct a long-term plan with proportions in cash, fixed income assets and equities.\textsuperscript{129} Asset allocation depends on the context of decision making

\textsuperscript{126} BIS, 68\textsuperscript{th} Annual Report, page 89
\textsuperscript{127} IMF, 1998, International Capital Markets
\textsuperscript{128} BIS, 68\textsuperscript{th} Annual Report page 86-87
\textsuperscript{129} Chorafas, D.N., 1992
in different institutions. As motivation and perception of risk and return differs, they result in different investment behaviour. For example in defined benefit plans, sponsors have greater risk tolerance, and thus tend to invest more in equities than bonds and money market assets. Defined contribution plan portfolios, on the other hand, are selected by beneficiaries and they tend to be more risk averse.\textsuperscript{130}

The financial assets of pension funds have grown remarkably during the 1990’s, as shown in Table 4.6. In the US the assets increased from US$ 2,461 billion in 1990 to US$ 4,037 billion in 1995 (and further to US$ 4,800 billion in 1996). The assets of UK pension funds have increased from about US$ 600 billion in 1990 to about US$ 9,000 billion in 1995.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
\hline
Japan & - & - & - & - & - & - \\
UK & 591 & 649 & 585 & 718 & 701 & 814 \\
\hline
\end{tabular}
\caption{Assets of pension funds, in billion US$}
\end{table}

Note: 1990-1995 Japan pension funds assets combined with insurance companies and trust banks

The regulation of foreign investment by pension funds differs somewhat in these countries. In Japan the foreign investment is limited to 30 % in foreign assets, in the UK and in the US there is no ceiling but there is the "prudent man concept".\textsuperscript{131} This means that there is a requirement to follow high fiduciary standards when funds are invested, based on the international investment guidelines of the fund managers.\textsuperscript{132} The table 4.7

\textsuperscript{130} BIS, 68th Annual Report, pages 88-89
\textsuperscript{131} OECD, 1997, Reisen, H., page 32
\textsuperscript{132} The OECD Observer, 1998, Blommestein, H.J. & Funke, N.
shows that UK pension funds are the most internationally diversified followed by Japanese funds. US pension funds are least internationally diversified. The proportion of international assets increased significantly in the 1980’s, and the increase stabilised during the first years of the 1990’s.

Table 4.7 Pension fund holdings of foreign securities as a percentage of total assets

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<tbody>
<tr>
<td>US</td>
<td>4.2</td>
<td>4.1</td>
<td>4.6</td>
<td>5.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Japan</td>
<td>7.2</td>
<td>8.4</td>
<td>8.4</td>
<td>9.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UK</td>
<td>17.8</td>
<td>20.6</td>
<td>19.5</td>
<td>20.0</td>
<td>19.8</td>
<td>19.8</td>
</tr>
</tbody>
</table>


UK pension funds have traditionally been active in international investing for many years. It has been argued that the main reason for this tradition derives from four broad reasons: they have actively operated with their counterparts in distant countries, fund management has an entrepreneurial characteristic, funds have far outgrown the ability of the British stock market to absorb the volume of cash and that political, fiscal and currency uncertainty have taught fund managers the value of international diversification in practice.\(^{133}\) Pension funds in the UK tend to invest 20-30% of their assets internationally if there are no restrictions.\(^{134}\)

The deregulation of foreign exchange controls in Japan and the UK is the single most important reason which explains the significant growth of the foreign assets of Japanese and UK pension funds in the 1980’s.\(^{135}\) This development continued into the 1990’s and UK pension funds' foreign securities were mostly invested in equities as they provided diversification.

\(^{133}\) Dobson, G.R., 1994
\(^{134}\) OECD Technical Paper No 98, page 20
benefits.\textsuperscript{136} Development of Japanese pension funds are discussed more deeply in Chapter 5.

The portfolios of pension funds in the US consisted of only bonds in the 1950’s but, due to their low performance, the assets were gradually shifted to equities in the 1960’s. International investments were added in the 1970’s and, in the 1990’s, it became important to match the assets and liabilities of pension plans.\textsuperscript{137} In 1990’s, US pension funds have began to accept international investments as a strategy for diversification and risk reduction. However, only 10.4 % of total assets of US pension funds are invested internationally, which is not in proportion to the world’s total financial assets. The global portfolios of pension funds still differs remarkably from a well-diversified international portfolio consisting of domestic and foreign equities in proportion to their share of the total financial assets in the world. 16 % of equity assets were invested internationally, in contrast with only less than 6 % of debt holdings. In accordance to market capitalisation, the funds should invest about 40 % in foreign stocks and 17 % in foreign bonds.\textsuperscript{138}

\textsuperscript{136} Curry, S., 1995
\textsuperscript{137} Arnott, R.D., in Fabozzi, F.J., 1989
\textsuperscript{138} Institutional Investor, Jan 1997, v 31 n 1, pages 41-46
4.2.2 Insurance companies

The growth of assets in insurance companies in the selected countries is significant. From 1990 to 1995, the assets increased in all countries: in US from US$ 2,000 billion to US$ 2,900 billion, in Japan from US$ 1,100 billion to US$ 2,100 billion, and in UK from US$ 500 billion to US$ 900 billion.

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</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>1,966</td>
<td>2,143</td>
<td>2,281</td>
<td>2,494</td>
<td>2,635</td>
<td>2,908</td>
</tr>
<tr>
<td>Japan</td>
<td>1,137</td>
<td>1,329</td>
<td>1,433</td>
<td>2,036</td>
<td>2,072</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>530</td>
<td>602</td>
<td>568</td>
<td>724</td>
<td>721</td>
<td>854</td>
</tr>
</tbody>
</table>

Note: Japan includes also pension assets.

Japanese insurance companies are less internationally diversified than their UK counterparts. In comparison with UK insurance companies and UK pension funds, the latter are more internationally diversified. Japanese insurance companies reduced their international assets significantly during the 1990’s.

<table>
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</thead>
<tbody>
<tr>
<td>US</td>
<td>3.6</td>
<td>3.6</td>
<td>3.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Japan</td>
<td>13.5</td>
<td>12.5</td>
<td>11.4</td>
<td>9.0</td>
<td>6.7</td>
<td>6.9</td>
</tr>
<tr>
<td>UK</td>
<td>10.7</td>
<td>12.2</td>
<td>12.4</td>
<td>13.3</td>
<td>13.5</td>
<td>14.2</td>
</tr>
</tbody>
</table>

Note: Japan, only bills and bonds

US life insurance companies tend to use portfolio theory and techniques more than UK insurance companies. The pressure of improved
performance has also been relatively high in US.\textsuperscript{139} Generally, however, the UK insurance companies are allowed to invest more freely compared to insurance companies in other countries.\textsuperscript{140}

### 4.2.3 Investment companies

Investment companies can have products with an enhanced risk-return profile and better liquidity because the assets are pooled from a large investor base and transaction and management costs are lower than in the case of an individual investor. Minimum investment requirements are low, and the investor has agreed to bear all associated risks. However, institutional investors are also seeking inexpensive access to the expertise of mutual funds, and increasing their investments through them.\textsuperscript{141}

The assets of investment companies increased in all three countries from 1990 to 1995. Thereafter, only the assets in US investment companies continued to increase, as can be seen in Table 4.10. In Japan, the decline is likely to be caused by the unsatisfactory performance of the stock market in the first half of 1990’s\textsuperscript{142}.

| Table 4.10 Total assets of investment companies, in billion US$ |
|-----------------|---------|---------|---------|---------|---------|---------|
| US              | 1,155   | 1,376   | 1,624   | 2,041   | 2,187   | 2,730   |
| Japan           | 390     | 374     | 407     | 504     | 481     | 500     |
| UK              | 128     | 146     | 142     | 195     | 206     | 242     |


\textsuperscript{139} Frost, A.J. & Henderson, J.S. in Corner, D. & Mayes, D.G., 1983
\textsuperscript{140} Curry, S. in Anderton, B., 1995
\textsuperscript{141} BIS, 68th Annual Report, pages 85-86
\textsuperscript{142} Ibid.
Investment companies may diversify their portfolios by choosing between different kinds of mutual funds. As they represent several investment strategies, such as investing only to stocks, bonds or money market products, they have their own particular risks and other characteristics. It is necessary to determine whether a mutual fund offers some excess benefits compared to individual assets in the markets.\textsuperscript{143}

UK investment companies are the most internationally diversified compared to their counterparts in the US and Japan. UK investment companies had more than 30\% of their assets in foreign investments during 1990-1995. In 1992, US and Japanese investment companies had about 10\% of their assets invested internationally. This can be seen in Table 4.11.

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<tbody>
<tr>
<td>US</td>
<td>6.6</td>
<td>-</td>
<td>10.1</td>
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<tr>
<td>Japan</td>
<td>7.9</td>
<td>13.0</td>
<td>9.9</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>UK</td>
<td>31.0</td>
<td>34.3</td>
<td>35.2</td>
<td>35.8</td>
<td>36.4</td>
<td>34.5</td>
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</tbody>
</table>

Japan: Investment trusts
Source: IMF, 1998, International Capital Markets, (- i.e. no information)

There may be several explanations why an investor does not invest internationally: currency risk, risk of overdiversification which can lead to portfolio chaos, particular circumstances (because the US, Japan, the UK and Germany account for 70\% of market capitalisation and provide 95\% of the return and variability, diversification to these countries may be enough), transaction costs (which are higher outside the US) and pension boards (which want to invest in the US due to the particular market opportunities and support domestic corporations).\textsuperscript{144}

\textsuperscript{143} Seidle, N.T. & Snider, W.J., 1998
\textsuperscript{144} Institutional Investor, Jan 1997, v 31 n 1, pages 41-46
Firstly, pension funds are seeking not only maximum returns but also stable real purchasing power for their assets. Investors from large countries can invest less internationally than investors in small countries, because their domestic market offers greater possibilities for diversification. Secondly, the pension fund trustees (and insurance companies) are characterised as more low-risk tolerant than mutual funds in industrial countries. Thirdly, pension funds have to have their assets and liabilities in balance, unlike mutual fund assets which are, by definition, fully funded. If a pension fund is at risk of insolvency, it will not invest in assets with currency risk but prefer domestic bonds. Fourthly, historical high real returns of domestic bonds and loans justifies a domestic based, conservative asset allocation. However, the greater the integration of capital markets, the more difficult it becomes to achieve higher bond returns.\textsuperscript{145}

\textsuperscript{145} OECD, Reisen H., 1997, pages 11-12
5. JAPANESE INSTITUTIONAL INVESTORS

Japanese pension funds, insurance companies and investment companies are discussed in this part. The development of financial assets\textsuperscript{146} is shown in order to understand the development of foreign financial assets as part of the total assets. The interviews conducted are included and give greater insight into the issues.

Japanese savings are traditionally mostly held in deposit accounts and insurance contracts, and less in other institutional forms. The investments have been characterised as high-quality, domestic and fixed income securities, and "buy and hold" investment strategies have been applied to high extent. The institutional investment industry is segmented without competition and professionalism among domestic fund managers. In the 1990's institutional investors have faced difficult problems: low yields forced investors to take additional risk in order to improve the returns. Big investors are assumed to take rather limited foreign exchange risk than additional credit risk\textsuperscript{147}.

Japanese portfolio managers have traditionally been strongly averse to international investments, based on conservative investment principles with a strong familiar home bias without currency risk. Domestic markets have had satisfactory returns, which has lessened the interest in overseas investments. The managers have also lacked the expertise to follow foreign securities markets\textsuperscript{148}.

\textsuperscript{146} In order to avoid misleading comparison between Japanese investors, Japanese yen is used.
\textsuperscript{147} The OECD Observer, 1998, Blommestein, H.J. & Funke, N.
\textsuperscript{148} Viner, A., 1988
Most of the acquisitions of foreign securities in Japan have been done by corporations and retail investors, and their share of total acquisitions has increased during the 1990’s. This can be seen in Table 5.1. This puts the role of institutional investors in globalisation of investments into new light. In 1990 corporations and individuals acquired about 28% of total foreign security acquisitions, and in 1995 nearly 90%. Institutional investors account only for the remaining share, which have to be divided with different kind of institutions.

| Table 5.1 Acquisitions of foreign securities by Japanese investors in billion yen |
|-------------------------------------------------|---------|---------|---------|---------|---------|---------|
| Corporations, individuals and others            | 2,000   | 8,000   | 5,000   | 7,000   | 11,000  | 8,000   |

Note: About figures as the source presented them.
Source: Nomura Research Institute, Koo, R.

Foreign securities purchases of Japanese institutional investors are regulated by legislation. Life and non-life insurance companies and pension funds may not exceed the 30 %, and Kampo, national life insurance company, 20 % limit of total assets.

5.1 Pension funds

The financial assets of Japanese pension funds increased from the beginning of 1990’s and reached in 1995. These assets included Welfare Pension funds (employees’ pension funds) and tax-qualified pension funds. Exchange rate fluctuations, however, affect the figures:

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149 Koo, R., 1996, page 13
150 Arora, D., 1995
151 OECD, Institutional Investors Statistical Yearbook, 1997
percentage increase measured in Japanese yen is nearly 39%. For exchange rates, see Appendix 5.

<table>
<thead>
<tr>
<th>Table 5.2 Japanese pension assets, in billion yen</th>
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<tr>
<td>Total assets</td>
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<tr>
<td>Source: OECD Institutional Investor Statistical Yearbook 1997</td>
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Traditionally, Japanese pension fund assets have been to a large degree managed by domestic trust banks and life insurers. Mandates have been based on group affiliations, cross shareholdings and relationships with customers. There has been a lack of investment policies, target allocations and relevant benchmarks for performance comparisons among most plan sponsors.152

Japanese pension funds had many problems in the 1990’s: The number of pensioners increased and many companies were not making profits and could not fund the pension fund shortfall. Return requirements had to be increased since bonds as primary investments were not generating sufficiently large profits. Until 1995, the pension funds had to invest 50% of the assets in fixed income investments. The proportion invested in equity increased, although the majority was still invested in cash and fixed income.153

The investment strategies of pension funds have been conservative154 and tend to seek risk-reducing portfolio diversification rather than expectations of long term returns. The approach can be seen as a neutral long term

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152 Investment and Pensions Europe, May 1999, Newell, R.
investment position with assets in equities, fixed interest and real estate. Although the focus have lied in domestic assets, the proportion of international investments has been increasing, mainly in form of equities. Usually these foreign equity investments have been limited to North America, Europe and Asia Pacific.\textsuperscript{155}

The difficulties of pension funds in the 1990’s was confirmed in interviews, too. However, explanations behind the increase of foreign assets of Japanese pension funds in the beginning of 1990’s are contradictory. Since they have been unfunded, they have been forced to seek higher returns. In this kind of situation they should have been more risk averse but, on the other hand, more aggressive to gain higher returns. According to one interviewee, the latter happened in the beginning of the 1990’s as the pension funds began to invest more internationally. This may have continued even to the present day, and will be extended further, according to another interviewee, because pension funds have moved from centralised asset allocation decision making to a situation (due to changes in legislation) in which individuals can choose the investments according to their own priorities. However, according to the same person, this development is not certain. Since Japanese people are not generally familiar with portfolio investment theories or diversifying methods, the pension funds will probably be more domestic based with regard to investments.

As another interviewee said, one reason behind Japanese institutional investors’ high levels of domestic investments has been pressure, especially in public funds, from the government or local authorities, which to some

\textsuperscript{155} OECD, Reisen, H. & Williamson, J., 1994
extent have forced funds to invest in local bonds. However, pension funds’ domestic investment opportunities were narrowed and international investments became more attractive in the 1990’s as domestic interest rates did not give acceptable levels of returns. According to one interviewee, the Japanese companies earnings were also not showing an attractive improvement, which may have led to a higher level of international investments in order to get higher returns. One interviewee identified the way the investors see the relationship between risk and return as the biggest dilemma. In order to meet the future payments caused by, for example, an ageing society, they should increase the level of returns. On the other hand they should be careful, and not take additional risks to be able to cover the liabilities. As the state of the domestic economy was bad, they had to seek opportunities abroad. The high level of savings has led to similar effect.

The pension funds are showing a particularly home bias which can be explained by their tendency to finance domestic investments in order to promote the domestic growth.\textsuperscript{156} This tendency was at least temporarily forgotten in the beginning of the 1990’s, when Japanese pension funds increased their foreign investments. In the future, increasing competition in the financial services industry is expected to lead to a growing role for professional fund management and the share of equities and international assets\textsuperscript{157}.

\textsuperscript{156} Ibid.
\textsuperscript{157} IPE, Newell, 1999
5.2 Insurance companies

There are three main types of life insurance in Japan: insurance against death, i.e., term insurance; endowment insurance, such as a saving insurance by which is possible to receive payment if the insured party has no accidents; and a combined insurance consisting of both the previous types of insurance (endowment insurance and term insurance with survival benefit). Due to the increased awareness of interest rates among individuals, saving type insurance schemes have increased in popularity.\textsuperscript{158}

The life and non-life insurance companies are a major group of Japanese non-bank financial intermediaries. For example, in 1994 they accounted for about 20 % of the personal savings of Japanese people, and were active institutional investors. The international portfolio investments of the insurers played a major role in the increase of capital flows from Japan in the 1980’s.\textsuperscript{159}

Total assets of Japanese life insurance companies increased from about 129,000 billion yen in 1990 to nearly 185,000 billion yen in 1995, as shown in Table 5.3. Foreign securities represent 13,3\% of total assets in 1990 and 7,5\% in 1995. Thus, the growth of assets was 43 \% between 1990 and 1995, measured in yen. Measured in US\$, the increase is even more significant: nearly 122 \%.

\textsuperscript{158} Suzuki, Y., 1994
\textsuperscript{159} Arora, D., 1995
| Table 5.3 Total assets of life insurance companies, in billion yen |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total assets    | 128,989         | 140,389         | 153,377         | 166,599         | 175,314         | 184,807         |
| Foreign securities, % | 13.3       | 12.5            | 11.0            | 8.4             | 7.4             | 7.5             |

Note: for exchange rates, see Appendix 5.

There have been changes in the investment objectives and constraints of Japanese life insurance companies. Return requirements and risk tolerance i.e. objectives, decreased as expected interest rates were lowered and the market began to decline in the early 1990’s. In terms of constraints, the investment horizon became shorter and liquidity needs “inched up” because the growth of assets slowed down and the uncertainty of future increased. The investment policy was emphasised with low risk and low return policy. The Yen remained strong, domestic and foreign interest rates decreased and domestic stock prices stagnated, which affected investments: the stock and foreign exposure were lowered while domestic bonds and loans increased.

Life insurance companies have several similarities with pension funds. For example, products like annuities and guaranteed investment contracts for specific needs of customers. Moreover, in Japan, insurance companies can act as portfolio managers and administer pension funds. One of the interviewee said that, while life insurance companies have long-term policies, non-life companies have only short-term policies of up to one year. Thus, as a clear contrast, life insurers prefer less safety and liquidity in investments than non-life insurance companies. The security and liquidity of funds are the main concerns in regard to the non-life insurers' investments. Internationalisation and deregulation have increased risks and

\[160\] Ibid.
forced investors to improve the efficiency of their investments. Substantial part of investments have been in public bonds and loans, which is explained as fulfilling public responsibility.\textsuperscript{162} In this, they have acted in line with the Kampo national life insurance company. It is under management of Ministry of Posts and Telecommunications and is one of the largest in the world, with strong emphasis on the interest of the public\textsuperscript{163}. According to one interviewee Kampo has invested in foreign bonds because they offer higher returns than domestic bonds. In order to minimise the currency and credit risks, the bond investments are diversified. Long term bonds and secure bonds such as foreign government bonds, foreign local government bonds and international organisation bonds are preferred depending on the long term characteristics of the fund.\textsuperscript{164} International investments are seen positively due to higher yield, and negatively due to the currency risk. There is a regulation that investments in foreign bonds cannot exceed 20\% of total assets. Although strong public interest and low risk investments are preferred, it was mentioned in one interview that, although investments in equities are not allowed, they have effectively been able to make such investments by giving loans to special companies which then invest in equities.

Investment attitudes among Japanese investors have been diverging in the 1990’s. Insurance companies have invested less in foreign securities and Japanese equities and more to yen-denominated bonds. On the other hand, pension funds and investment trusts have continued to invest mainly in equities.\textsuperscript{165}

\begin{flushleft}
\url{161 BIS, 68th Annual Report, page 87}
\url{162 Non-life insurance in Japan, Factbook, 1995-1996, page 9}
\url{165 www.ibjs.co.jp/e/reports/scenario.html, 2000-03-11}
\end{flushleft}
The reasons for the strong home bias among insurance companies are similar to those for pension funds. According to one interviewee one reason why Japanese insurance companies have invested mainly domestically may be the cross holdings between companies (zaibatsu). By investing domestically the investors have retained control and, on the other hand, companies have met loyal and stable owners.

Currency risk was identified in all interviews as an impediment to making international investments. On the other hand, according to one interviewee, foreign investments should have been higher, even though they are regarded as more risky, because the low actual interest rate has not brought sufficient returns. According to the interviewee, insurance companies in particular have begun to seek higher yields to be able to pay dividends. This is because they are still coping with huge foreign exchange losses. Even though insurance companies have been attracted by high-yielding international investments, they have remained cautious toward less liquid foreign investments\textsuperscript{166}.

Lack of skills with regard to international investments also came up in interviews. As one interviewee said: "Japanese investors simply don’t have sufficient skills to make international investments". Japanese investors tend to be unfamiliar with portfolio theory. There are several factors behind this, as it became clear in many interviews. Understanding the development of the last decades creates confusion, because of their very special features. In the 1980’s, Japan experienced a growth period in financial markets which led to a bubble and collapse. In the beginning of the 1990’s, the

\textsuperscript{166} Koo, R., 1996, page 15
markets have been poor for investors. As one interviewee added: "It has been very difficult for Japanese investors to have a rational view on investment strategies". There is no access to relevant, historical data and it is very difficult to calculate expected rate of returns in order to use different kind of techniques.

5.3 Investment companies

Japanese investment companies are divided into stock investment trusts and bond investment trusts. Stock investment trusts concentrate their investments in stocks but can also invest in other assets such as bonds, deposits and call loans. These funds are further divided into unit-type investment trusts and open-ended investment trusts. In the former, the funds are treated as a unit for the purposes of investment, liquidation and distribution of earnings. In open-ended trusts funds can be added after the trust has been established. Public and corporate bond investment trusts invest only in bonds and not in stocks. Call loans or discount bills may become in question in case of excess funds. Bond funds are also divided into unit-type trusts and open-ended trusts, depending on whether new funds may be added into trust or not.\textsuperscript{167} Japanese investment trusts have had a relatively short investment time horizon.\textsuperscript{168} Institutional investors have been cautious but retail investors have become active in investing in foreign securities, mainly in bonds.\textsuperscript{169}

The total assets of Japanese investment companies increased moderately from 1990 to 1995, about 4\% measured in Japanese yen. Measured in

\textsuperscript{167} Suzuki, Y., 1994
\textsuperscript{168} Koo, R., 1996, page 13
\textsuperscript{169} Ibid. page 11
US$, the growth was significant: about 62%. Foreign assets decreased by 18% during the same period. This can be seen in Table 5.4.

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<tbody>
<tr>
<td>Total assets</td>
<td>46,000</td>
<td>41,500</td>
<td>43,300</td>
<td>50,700</td>
<td>43,400</td>
<td>48,000</td>
</tr>
<tr>
<td>Foreign assets</td>
<td>3,400</td>
<td>5,400</td>
<td>4,200</td>
<td>3,700</td>
<td>2,900</td>
<td>2,800</td>
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Source: Mr. Kijima, Investment Trust Association, non published

According to one interviewee, the share of foreign investments in investment companies’ assets has been low. However, he added that: "This has to be put in relation: Japanese are not investors but savers". According to him, in Japan, only about 2% of personal assets are invested through investment companies and 6% through time deposits and postal savings, compared to the US, where about 10% of personal assets are invested through investment companies. One interviewee explained the domestic orientation of investments and gave three main reasons: most of the assets of investment trusts have been invested by bond funds, which prefer domestic bonds. Secondly, from the risk point of view, currency risk is still considered to be the major obstacle for international investment. Thirdly, and perhaps most importantly: Japanese people as customers of investment companies are both very risk averse and tend to have a lack of knowledge of both investment companies and the benefits of international investments.

According to one interviewee Japanese investment companies have one main characteristic. In 1990, the bond funds accounted for about 24% of the combined assets of both funds. Interestingly, the situation began to
change in the first years of the 1990’s and, in 1995, the bond funds had assets of about 69 % and stock funds about 31 % of the combined assets.\textsuperscript{170}

As mentioned previously, deregulation has led to an increase in international diversification, but it still remains well below the limits. In 1993, approximately 15 % of total assets were held in foreign bonds and 2.9 % in foreign equities.\textsuperscript{171} Consequently, the effectiveness of deregulation was limited because these restrictions did not constitute a restraint on institutional investors.\textsuperscript{172}

In Japan's case, the international investments have resulted from the higher expected rate of return and lower expected level of risk of foreign assets, decrease of risk aversion of domestic investors, and cross-border transaction deregulation, which enlarged the investment opportunities.\textsuperscript{173} One explanation is also the high rate of prosperity of Japanese people to save and the lack of profitable domestic investment opportunities. The investment behaviour of individual savers has not changed much since the 1980’s and by the mid 1990’s, so the beneficial tax conditions of savings accounts and foreign exchange risk keeps individuals' interest in deposits high.\textsuperscript{174}

Compared to other institutional investors, investment companies most clearly represent the personal savings. The role of the internationally high personal savings of Japanese people also came up in one interview. As the

\textsuperscript{170} Nomura Interview Material, non published
\textsuperscript{171} Arora, D., 1995
\textsuperscript{172} Arora, D., 1995
\textsuperscript{173} Ibid.
\textsuperscript{174} Ibid.
financial assets have accumulated to hands of senior citizens, there has been uncertainty about their views on risk and return. Risk aversion of older people has traditionally led to significant cash holdings, although they could take more risks. According to the interviewee this shows that Japanese investors have not managed their risk in a proper way or understood the meaning portfolio diversification. One proposed reason may have been the absence of alternative financial products when financial markets were regulated. According to the same interviewee, the role of investment companies in the globalisation of portfolio investments should have been positive because people who invest through them are generally aware of the risks of investing and also prefer riskier investments instead of highly secure domestic investments. However, the empirical data from the beginning of 1990’s shows that assets in Japanese investment companies were to a large extent shifted into bond funds with low risk instead of riskier stock funds.

The level of globalisation of assets is similar among Japanese institutional investors. According to one interviewee, Japanese institutional investors have shown a tendency to invest with a focus on their asset sides, as opposed to what the principles of investment would suggest, which has led to the same kind of strategies. Another explanation was given by the same person: Japanese investors have followed the trend in the markets and have perhaps not had very original or independent strategies.
6. ANALYSIS

The empirical findings are analysed in this chapter. After evaluating the international comparison, the Japanese institutional investors are addressed. There are three main issues analysed in this chapter. As institutional investors are claimed to be the most significant participants in the capital markets, international diversification of their portfolios is analysed in order to find similarities and differences. Secondly, as international diversification was said to have clear benefits, the actual international diversification of Japanese institutional investors is analysed in detail. The third main question is: have their international investments increased in accordance to their total assets.

During 1990 and 1995 U.S. institutional investors accounted nearly half of all the institutional assets in OECD countries. Japanese represented about one fifth and UK institutional investors less than one tenth. Increase of assets was significant in all countries during the time period. U.S. institutional assets increased nearly 70 %, Japanese about 63 % and U.K. about 60 %.

Because previous figures are aggregates\(^{175}\), it is important to separate institutional investors and examine their relative shares of financial assets. This can be done in several ways: firstly, one may focus on the relative shares of the world financial assets. Insurance companies have most assets compared to other institutional investors. In 1995 their assets were 35 % of all financial assets in OECD countries, followed by pension fund assets (25%) and investment companies assets (24%). Thus these investors held 84 % of total financial assets in the world.

\(^{175}\) Japanese pension fund assets subtracted from insurance companies. All non-life insurance assets subtracted in Japan, USA and UK. For exchange rates, see Appendix 5.
Secondly, the role of specific institutions of one country in relation to world assets of the group can be analysed. If we look at the assets of insurance companies in the world in 1995, the US companies accounted for 35%, Japanese 24% and UK companies 10%. US pension funds had 62% of world pension assets, followed by U.K. (11%) and Japanese pension funds (9%). US investment companies accounted also more of world investment companies’ assets than their counterparts. In 1995 the US assets were 57%, Japanese 8% and U.K. 4% of total assets.

Thirdly, relative share of assets of all investors within one country shows that in US the biggest holders of assets are the pension funds (45 % of combined assets in 1995) followed by investment companies (30 %) and insurance companies (25 %). In Japan insurance companies hold 63 % of these institutions assets, pension funds 20 % and investment companies 17 %. In 1995 in UK pension funds held 46 %, insurance companies 40 % and investment companies 14 % of combined assets.

When comparing the of globalisation of portfolio investments among institutional investors in USA, Japan and UK and analysing the percentages of total assets invested abroad, there seems to be a tendency that international diversification is country contingent. This is interesting because needs and preferences of various institutional investors are different which is argued to lead to various investment strategies. For example, in 1992, UK investors had invested highest proportion in international investments, the percentage within 12,4 % (insurance companies) and 35 % (investment companies). In Japan, representing the next most internationally diversified investors, the differences between the
level of international investments were smallest, 8.4% (pension funds) and 11.4% (insurance companies). USA, represented two of least diversified groups: insurance companies (3.7%) and pension funds (4.6%). US investment companies had invested 10.1% of assets abroad. Interesting point to notice is that both in U.K. and USA investment companies have most, pension funds next most and insurance companies least international assets. This would, on the other hand implicate that institutional investors have somewhat similar international diversification strategies. However, actual differences in percentages are quite significant which means that their international investment strategies vary significantly within groupings (pension funds, insurance companies and investment companies).

In Japan the picture of relative globalisation of portfolios among institutional investors is less clear. Portfolios of insurance companies are most internationally diversified (11.4%). Investment companies have 9.9% of their assets in international assets, and pension funds 8.4%. Thus, the differences between Japanese institutional investors in regard to international investments are small, very small when compared to institutional investors in U.K. and USA. This is strong evidence for noticing that in regard to international investments country plays significant role, not the type of investor. The difference between least and most internationally diversified investor is relatively bigger between different types of investor than between other types of investors in different countries. For example, the difference between least and most internationally diversified pension fund in the countries relevant to my study, is greater than the difference between least and most internationally diversified investor within one country. Arguments for common impediments inside a country get some prove from these findings. Cultural
background, grouping within the country, level of knowledge, view of currency risk (which is of course same to investors in one country), domestic opportunities or lack of them, as well as domestic diversification benefits are all strong reasons and explain how international diversification is applied in and to which extent in different countries.

Analysing the development of financial assets and international diversification, we find that in the beginning of 1990’s in all studied countries international assets in pension fund portfolios increased faster than the assets. Between 1990 and 1992 US and Japanese pension fund assets grew by 22 % and 9 % respectively (calculated in dollar terms), while the international assets grew by 33 % and 27 %. In UK assets actually lowered by 1 %, but international portfolio investments increased by 8 %. Life insurance companies in UK saw their assets increase by 81 % during 1990 and 1995, and the international investment increased by 240 %. Assets of investment companies in USA rose by 41 % and international assets by 215 % during 1990 and 1992, while UK investment companies saw increase by 11 % in assets and 26 % in international assets. During 1990 and 1995 the increase in UK was significant: for assets 89 % and international assets 210 %.

Despite the theoretical founding which supports greater international diversification and the increase in international investments of institutional investors the level of international investments as percentage of total assets is low. Between the year 1991 and 1993 in Japan pension fund assets increased by 19 % (calculated in yen terms), life insurance assets by 19 % and assets in investment companies by 22 %. However, only pension funds increased their international assets, by 45 %. Foreign assets of insurance
and investment companies decreased during the period by 20% and 31% respectively. This may indicate that pension funds really became more aggressive and began to accept more international assets in their portfolios in order to meet the liabilities. This can either be seen as a more aggressive strategy, or pure diversification strategy, in order to secure the future payments. If we enlarge the period and comparison for those institutions where data is available, we notice that life insurance companies financial assets increased 43% and foreign assets decrease by 20% between 1990 and 1995. Thus, relatively, life insurance companies have decreased their international investments even more significantly during 1990’s first half. Investment companies assets have increased by 4% between 1990 and 1995, and foreign assets decreased in their portfolios by 18%. Thus, in the longer period, the growth of assets has been rather small, and decrease of international assets have been still significant. Interestingly, investment companies and insurance companies which according to my theoretical material are claimed to be less risk averse than pension funds, actually decreased their international investments.

There have been two main features of Japanese institutional investors, although their behaviour during the first years of 1990’s was less clear. Major obstacles of international diversification are risk aversion, currency risk, strong home bias attitude and lack of skills. As a result, their international diversification tend to be low, which applies to all institutional investors. It is worth mentioning that regulation is not an obstacle since international investments of all investors are very low in comparison to maximum percentage allowed by investment regulation. In 1993 pension funds invested abroad only 30% of the maximum share. Life insurance companies actual international investments are just 25% of the limit and
investment companies’ assets only 19%. Thus, there would be all possibilities for Japanese institutional investors to increase their international portfolio investments significantly. However, their behaviour remains unclear. The role of Japanese institutional investors in globalisation of portfolio investments is somewhat overestimated. Most of the international transactions were made by companies and private persons in 1990’s. Secondly, even though pension funds have increased their foreign investments, their assets are near the size of non-life insurance companies, and only about 30% of those of life insurance companies. Thus, the decrease of foreign assets of Japanese institutional investors becomes even more clear.
7. CONCLUSIONS

Based on the material in this study international diversification of portfolio investment of institutional investors differs more between countries where the investors are based than between the type of investor in different countries. Far reaching conclusions cannot, however, be made because the comparison is not easy due to the lack of data from a longer period. In addition, the relative shares of institutions’ assets differ between countries which may lead to a more dominant role of one institution in one country. Institutional investors in UK tend to diversify their investments more internationally compared to Japanese and US counterparts.

In the light of the international comparison, different types of Japanese institutional investors tend to have very similar international diversification strategies. This can be explained by cultural aspects which traditionally have promoted risk averse and focused domestic investment strategies. Furthermore, there are reasons which make investment strategies more country contingent. Currency risk, level of knowledge and domestic investment opportunities have critical impact on international investments. Domestic opportunities, or lack of them, explains not only Japanese circumstances, but this may partly explain the low level of international diversification among US institutional investors: some of them do not have to seek investment opportunities in foreign countries. The explaining factors behind the international investments seem to vary among investors. However, some factors such as risk aversion may remain characteristic to some institution over time.
The role of Japanese institutional investors in international portfolio investments has been somewhat overestimated since most of the transactions have been conducted by companies and individuals. The international portfolio investments decreased in the 1990’s, pension funds as only exception, although the total assets increased. This widened the gap between the level of actual international investments and that of allowed by legislation. Japanese institutional investors do not use the possibilities to invest more of their portfolios abroad. In general the level of international investments is only about 20 % of the allowed level, which leaves huge possible to Japanese institutional investors to enlarge their investment spectrum to consist of more international investments. Whether this will happen and in which time frame, is only up to the Japanese themselves. Like in other fields of economics, “outside world” has never been, will be or should be able to tell the Japanese how to pursue their strategies.
LITERATURE:


**REPORTS:**


**PERIODICALS:**


Draper, T., (1986) “The changed world economy”, *Foreign Affairs*, 64, No. 4


**ELECTRONIC SOURCES:**


# Appendix 1

## Interviews

<table>
<thead>
<tr>
<th>Organisation</th>
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<td>Sophia University</td>
<td>Mr. Nobumitsu Kagami, Professor</td>
<td>Tokyo</td>
<td>2000-03-31</td>
<td>English</td>
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<tr>
<td>The Life Insurance Association of Japan</td>
<td>Mr. Seiichi Yamada, Assistant General Manager, Research Department</td>
<td>Tokyo</td>
<td>2000-04-03</td>
<td>English</td>
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<tr>
<td>The Marine and Fire Insurance Association of Japan, Inc.</td>
<td>Mr. Jun-Ichi Sugita, Manager, International Department, Mr. Makoto Kawagoe International Department</td>
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<td>Investment Trust Association, Japan</td>
<td>Mr. Kijima, Acting manager, Research Department</td>
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<tr>
<td>Kampo Postal Life Insurance Ministry of Posts and Telecommunication</td>
<td>Mr. Kenji Arimura, Chief of Fund Planning Section, Fund Management Division</td>
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<tr>
<td>Nomura Securities Investment Trust Management Co. Ltd (Japan Investment Trust System Research Institute Ltd.)</td>
<td>Mr. Yukihiro Terada, President</td>
<td>Tokyo</td>
<td>2000-04-18</td>
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<tr>
<td>Nomura Asset Management Co., Ltd</td>
<td>Mr. Akira Inagaki, Senior Manager, Performance Analysis and Risk Management Department</td>
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## Background discussions

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<td>Mr. Hideki Maruyama, Chief Representative</td>
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<td>Profit Research Center Ltd.</td>
<td>Mr. Richard Werner, Chief Economist, Managing Director</td>
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<td>Daiwa Securities SB Capital Markets Co. Ltd</td>
<td>Mr. Tetsuo Sugiyama, Deputy General Manager, Public Institutions Department</td>
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**Interview guide**

<table>
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<tr>
<td>How have the financial assets accumulated during the 1990’s?</td>
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<td>How have the assets been invested?</td>
</tr>
<tr>
<td>- asset allocation by asset classes</td>
</tr>
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<td>- international diversification in total of all assets</td>
</tr>
<tr>
<td>- asset allocation of international investments</td>
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<tr>
<td>On what factors are the international investments based?</td>
</tr>
<tr>
<td>Are some countries or currencies preferred?</td>
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<tr>
<td>Do investors prefer low risk instead of high return expectations? Any changes through the years?</td>
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<tr>
<td>Are there some particular reasons to invest mainly domestically?</td>
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<tr>
<td>What is the recent development of international investments: have they increased or decreased? Are there any particular reasons for changes?</td>
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<td>Are there from your point of view some differences between global investment strategies institutional investors (such as pension funds, insurance companies and investment companies)? How can these differences, or in case of similarities, be explained?</td>
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<td>What is your view of risk and return in the current global markets? How do these views affect the investment strategies?</td>
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<td>What are the future prospects and possible trends in investment strategies?</td>
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### Portfolio composition in selected countries, 1990-1996

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Source: OECD, Financial Market Trends, No. 72, 1999
**Appendix 4**

**Portfolio and direct investment flows, in billion US$, annual averages**

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Source: IMF Occasional Paper 172
### Appendix 5

**Yen-US$, Spot rates, Monthly averages**

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<td>Average</td>
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<td>110.53</td>
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