FACTORS THAT INFLUENCE PENSION FUND MANAGERS INVESTMENT DECISION MAKING

(2006-2008)

A thesis submitted to the KNUST Business School, Kwame Nkrumah University Of Science And Technology in partial fulfillment of the Requirements for the degree of

MASTER OF BUSINESS ADMINIINISTRATION

School of Business, College of Arts and Social Sciences

By

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AUGUST 2009

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DECLARATION

I hereby declare that this submission is my own work towards the MBA and to the best of my knowledge, it contains neither material previously publicized by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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JOSEPH M FRIMPONG	………………………	21-10-09
(Dean of KNUST Business School)	Signature	Date

ABSTRACT

Pension funds act as a financial intermediary by collecting members' contributions and investing funds on a pooled basis for eventual repayment to members in the form of pensions at the end of their working life. However, there are factors that guide pension fund managers in their investment decisions so as to meet their obligation when it falls due. This study therefore seek to establish these factors that influence pension fund managers investment decisions in the context of Ghana and identify possible risks that associate with pension fund investment. The study employed questionnaires to collect the data and also annual reports were reviewed as part of data collection.

From the face to face interviewed of resource person, it was established that the investment types that pension fund mangers at SSNIT invest or allocate funds to are Government bonds, corporate bonds, Bank deposit, Equities, Loans, Real estate and other investment portfolio including foreign securities. Moreover, pension fund managers indicated the following as the kind of risk they are confronted with: Interest rate risk, Exchange rate risk, Inflation rate risk, Default risk and Risk of non payment of dividend. Additionally, investments are made based on the following guide: safety, high yield, liquidity, maintenance of assets value, harmony with public interest and diversification.

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DEDICATION

To my husband Prince Adu-Afful for all the sleepless nights we shared and to my supervisor for all the supports. God bless you all.

ACKNOWLEDGEMENT

I am thankful to Almighty God for His mercies, kindness and guidance for making it possible for me to finish this work.

I am grateful to my Supervisor, Mr Newlove Asamoah for his constructive criticisms, suggestions, contributions, directions and above all his encouragement towards the realization of this study.

My sincere appreciation goes to the management and staff of SSNIT and GUSSS for responding to the interviews and questionnaires.

Finally, my sincere and heartfelt gratitude and appreciation go to entire lectures of KNUST Business School

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CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

This chapter basically gives brief information on the background, research problem, objective of the study, justification of the study, methodology, scope of the study, limitations of the study, and the organization of the study of the research topic.

1.1 Background

The introduction of pension in Ghana dates back to the colonial times when government introduced pension for a select group of civil servants who were known as pensionable officers.

In the early sixties, Government established a more national scheme to cover all workers both in the private and public sectors. The scheme was initially started as a provident fund to provide lump sum payments for old age, invalidity and survivor's benefits.

During this period the funds generated from the contributions were invested in special governments bonds with very low interest rates and very long maturity periods. As a result of low interest rates and rising inflation at the time the lump sum benefits due to retiring beneficiaries were meaningless (Dei, 2001).

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Conversion of the provident fund into a pension payment introduced some element of adequacy into the retirement package for the shift from investments in special government bonds to investments in a broad portfolio.

The transaction to a very broad investments portfolio required considerations that satisfied the needs of government on the one hand, the need to satisfy some social needs of the contributors and the need to generate commercial rates of return to balance the lower rates from the other portfolios.

The government in 2004 initiated a major reform of the pension system in Ghana. The process started with the establishment of presidential commission on pensions which reported its findings to government in March 2006. To implement the new pension system, an 8 member Pension Reform implementation committee and a consultant was appointed in October 2006.

The committee submitted a proposal for national pension Reform Bill to government in 2007 which was approved and the Bill was passed by parliament and received presidential assent in December 2008, the nation pension Act 2008(Act 766) promulgated in 12/12/08.

The law caters for the establishment of contributory three tier pension scheme with a pension regulatory authority.

The authority will sensitize the public on matters related to the various schemes receive and investigate complaints of impropriety in respect of the management of pension schemes receive and investigate grievances from pensioners and provide for redness advise government on the general welfare of pensions and overall policy on pension matters.

Pension fund managers will be responsible for achieving the best possible returns on the funds within the specific investment parameters set by trustees.

Trustees or pension fund managers are required to invest pension funds in permitted investments in order to obtain safe and fair returns on the amount invested.

Pension reforms are happening all over the world and Ghana is no exception. It is envisaged that new three tier pension scheme will enhance pension benefits and increase the retirement income security of workers both in the formal and informal sectors.

1.2 Research Problem

People support their old-age consumption through public, private pension plans and life insurance policies. To this context some people contribute to pension funds for their contribution to be invested and in effect earn returns on them.

From the point of the researcher, there have been only few researches on pension funds and their investments.

This thesis therefore throws much light on the question of 'what factors do pension funds managers consider when choosing a particular type of investment'

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1.3 Objectives of the Study

The main objectives of the thesis include;

- To determine what investment opportunity are available to pension fund managers.
- To identify the type of risk associated with each type of investment.
- To determine the various factors that the pension fund managers consider when choosing to invest.

1.4 Justification of the Study

After working as national service personnel at SSNIT in Kumasi, I realized that as more people join the pension funds scheme every day, much literature is not available to its contributors on pension funds and their investments. Therefore the aim of this research is to bring to the knowledge of pension fund contributors, the numerous investments that their contributions are tied to and also the various factors and investment opportunities that pension funds managers consider before choosing to invest.

1.5 Methodology

The analysis in the thesis will be from an investor's perspective. In order to achieve the objectives of the thesis, data will be gathered by the use of questionnaires which will be administered to pension fund investment managers and senior members from two main pension fund bodies; GUSSS and SSNIT.

Annual reports of insurance companies that deal with pension funds will also be looked into for information about their funds and investment strategies.

Articles and reports dealing with the pension funds investments in Ghana will be studied.

1.6 Scope of the Study

Geographically, the study will be carried out in Kumasi, Ashanti Region. The places where data will be gathered from are; Social Security and National Insurance Trust (SSNIT) which is a public institution and Ghana University Staff Super-annuation Scheme (GUSSS) which is a private pension fund scheme for KNUST senior staff.

1.7 Limitations of the study

The main setback for the study was the limited time period as well as the fact that it is a pioneer study even though other people have attempted to write on the topic, thus information on the performance of mutual funds are not readily available in Ghana. This setback notwithstanding other relevant data was acquired to bridge the various setbacks encountered.

1.8 Organization of the Study

The chapter in perspective is the introduction and the rest of the chapters are arranged as follows:

- Chapter Two: This chapter reviews the findings and ideas of some researchers, authors and business professionals of financial management about the pension funds investments.
- Chapter Three: It also contains the data collection procedure and the processing of the data of this study.

- Chapter Four: This chapter deals with the analysis of the results of the study.

- Chapter Five: This chapter throws light on the summary of the findings, conclusions and recommendation

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CHAPTER TWO

LITERATURE REVIEW

2.1. Pension fund in context

Pension funds are among the most important financial institutions in certain national financial markets. In the USA and the UK, pension funds and the institutions which manage them hold more equities than do individual investors (Davis, 1995; and Brennan, 1995). While a large proportion of a nation's working populace participates as members of pension funds, their financial operation depends upon the specialist management skills of professional financial intermediaries.

Pension funds act as a financial intermediary by collecting members' contributions and investing funds on a pooled basis for eventual repayment to members in the form of pensions at the end of their working life (Klumpes and McCrae, 1999). In common with other institutional investors pension funds benefit from regular inflows of funds on a contractual basis. But pension funds are unique because most of their investment and administration activities are delegated to professional financial intermediaries.

With assets of over US$1.0 trillion (in the United States) and growing, public pension funds have become a major force in the private sector through their holding of equity positions in large publicly traded corporations (Sethi, 2005). More recently, these funds have been expanding their investment strategy by considering a corporation's long-term risks on issues such as environmental protection, sustainability, and good corporate citizenship, and how these factors impact a company's long-term performance. Conventional wisdom argues that the fiduciary responsibility of the pension funds' trustees must be solely focused on their beneficiaries and, therefore, their investment criteria must be based strictly on narrowly defined financial measures. Sethi (2005) asserted that well-established financial measurements of corporate performance already include long-term risk assessment through discounted present value of future flow of earnings. Consequently, all other criteria are contrary to the best interest of the pension funds' beneficiaries. Sethi (2005) reported that, contrary to conventional wisdom, pension funds, and for that matter other mutual funds, must be concerned with the long-term survival and growth of corporations. He reiterated that these measures are generally referred to "socially responsible investing" (SRI) and when applied to corporations, it is termed "socially responsible corporate conduct (SRCC)."

Sethi, (2005) mentioned that the current measurement of future risk assessment invariably understates, and quite often completely overlooks, these long-term risks because of the inherent bias towards short-run on the part of financial intermediaries whose compensation depends greatly on short-term results. Furthermore, there is ample evidence to suggest that these intermediaries have been engaging in self-serving practices and thus failing in their duties to serve their clients', i.e. pension funds', best interests (Sethi, 2005). Because of their large holdings in the total market as well as individual companies, these funds cannot easily divest from poorly performing companies without destabilizing the companies' stock and overall markets. Hence, they must opt for a strategy of emphasizing investment criteria that encourage companies to take into account long-term aspects of their operations in terms of their impact on environment, sustainability, and community welfare, to name a few. A primary focus on short-term financial criteria is no longer a viable option for pension funds and it should encourage greater transparency and accountability of the entire corporate sector through improved corporate governance.

2.2. Pension Fund Investment Policy

Dei (2001) noted that the development of a policy guideline for investments of the Social Security Fund is guided by two major objectives: (i) the need to maintain financial viability for the scheme and (ii) the need to provide investments, which are development oriented.

2.2.1 Financial Viability

The financial viability is ascertained by ensuring that an optimum Fund Ratio is maintained and also that positive rates of return as determined in the actuarial projections are achieved in the longer term. The major sub – objectives in achieving the above are as follows: (i) ensuring safety of selected investments, (ii) ensuring adequate yield, (iii) ensuring liquidity for meeting obligations when due and (iv) ensuring diversification of the portfolio (Dei, 2001).

In general the investments of the fund are grouped into: (i) Fixed-Income Investments and (ii) Non Fixed-Income Investments.

Fixed Income Investments are those whose returns are predetermined or known at the time of making the investment. The Fixed Income Investment may include the following category of investments: (i) Treasury Bills, (ii) Fixed Deposits, (iii) Bonds, (iv) Bank Deposits, and (v) Corporate Loans

In general this category of investments has been short term in nature. In addition to this is the fact that the economy of Ghana has been running fairly high inflation over the years and as such with the exception of index linked bonds this type of portfolio could suffer from capital erosion over longer term (Dei, 2001).

Non Fixed Income Investments are variable in the value of their returns and tend to have longer gestation periods but in the long term have the advantage of capital appreciation, developmental in nature and generally create jobs within the economy. Included in this category are the following: Equities (Both listed and unlisted), Properties (Both commercial and residential), Unit Trusts and Special Economic & Social Utility Schemes.

2.2.2 Development Oriented Investments

Dei (2001) suggested that for developing countries investment policy guidelines should recognize the fact that contributions are the collective savings of the population and therefore these savings should be directed towards improving some basic provision of services that will generate some return as well as benefit the population. There is the need to be very selective in this sector so as to pick on areas that can be formulated to provide cost recovery and a modest return. Included in some of these sectors are: Housing Finance scheme, Students Loan Scheme and Industrial Estates.

2.3 Investment Patterns of Pension Funds

Investment patterns can be analyzed by examining the composition of pension portfolios asset distribution of public and private pension funds. Barth and Cordes (1981) reviewed the following asset distribution pattern of public pension fund in United States. Government securities accounted for slightly over one-half (51.0%) of all assets for state and local pension plans in 1950, their share was less than one-fifth (17.9%) by the end of 1979. State and local obligations accounted for 30.6 percent of all assets in 1950 but only 2.2 percent in 1979. Since state and local pension plans are tax-exempt organizations, this declining share may partially reflect a realization that tax-exempt pension plans sacrifice substantial interest earnings if they invest heavily in lower yielding, tax-exempt state and local bonds. Holdings of mortgages accounted for only 5 percent of assets in 1979. However, from 1961 to 1972, this percentage fluctuated closely around 10 percent, from a low of 9.1 percent to a high of 12.0 percent. Most of the growth in assets has been in corporate stocks and bonds. These assets accounted for only 12.8 percent of all assets in 1950 as compared to 72 percent in 1979. Of these two types of corporate securities, bonds have always been more important than stocks. In 1970 bonds accounted for 58 percent of all assets versus roughly 17 percent for stocks. At the end of 1979 the figures were 48 percent and 24 percent, respectively.

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Barth and Cordes (1981) indicated that the mix of financial assets held by state and local (public) pensions has fluctuated substantially during the post-World War II period. Factors responsible for this changing portfolio mix include variations in expected rates of return on different assets, changes in the riskiness of various assets as well as the preferences toward this risk, and a relaxation of state and local government regulations. The importance of restrictions imposed by statute is evident when one realizes the form these restrictions typically take. For example, "legal lists," permitted investments, are still found in some states. Furthermore, 60 percent of state and local pension plans limit common stock investments to less than 35 percent of total pension plan assets. Another 10 percent of the public plans are prohibited from purchasing any common stock. It was, for example, not until 1973 that public pension funds in Pennsylvania were permitted to invest any assets in common stock. Pennsylvania also, for many years, restricted pension fund investment in mortgages to property within Pennsylvania. Clearly, these types of restrictions can have an important impact on the composition of state and local pension portfolios. The relaxation of these restrictions during the post-World War II period has been reflected in the mix of assets held by state and local pension plans, particularly a trend towards those assets offering the relatively higher expected returns.

However, Barth and Cordes (1981) reported slight difference in percentage distribution of assets of private pension funds. The share of total assets in corporate stock was 16 percent in 1950, rose rather steadily to a high of nearly 74 percent in 1972, and then fell somewhat to just under 58 percent in 1979. Mortgages followed a similar pattern - starting at 1.5 percent in 1950, rising to 5.1 percent in 1966, and then declining to 1.5

percent by the end of 1979. Holdings of corporate bonds rose to 50 percent of total assets in 1954 from 41.8 percent in 1950, but thereafter tended to decline in relative importance. By year-end 1979 corporate bonds accounted for 23.3 percent of all assets. U.S. government securities represented nearly 30 percent of total assets in 1950 and steadily declined in relative importance during the next two decades, reaching a low figure of 2.1 percent in 1971. Since then, however, the relative importance of federal government securities has risen, as evidenced by the increase in their portfolio share to 10.7 percent by the end of the 1970s. Finally, holdings of demand deposits and currency have declined markedly in relative importance, from 4.5 percent in 1950 to only 0.8 in 1979.

The fluctuations in relative asset holdings of private pension plans indicated above roughly parallel fluctuations in relative rates of return on the various assets. Barth and Cordes (1981) reported that the empirical confirmation is provided by Cummins, Percival, and Westerfield (1979). Based upon the estimation of an asset stock adjustment model, it was found that "most of the portfolio restructuring conducted by private pension plans in recent years was due to general market factors" (Cummins *et al.,* 1979). The portfolio mix of private pension funds is therefore largely explainable by traditional economic factors, subject to constraints imposed by government regulations.

Comparing the two pension plans, Barth and Cordes stated that one finds that unlike state and local government pension plans, private plans do not hold state and local obligations. In recent years one also finds that state and local pension plans invest relatively more heavily in corporate bonds (48.2 vs. 23.3 percent), U.S. government securities (17.9 vs.

10.7 percent), and mortgages (5.3 vs. 1.5 percent) than do private pension plans. The private plans, on the other hand, invest relatively more heavily in corporate equities (57.6 vs. 24.4 percent) than do state and local plans. In spite of these rather marked differences in relative holdings of different types of assets, it is interesting to note that the broad fluctuations over time in holdings of specific types of assets such as government securities and corporate equities have been similar. These broad fluctuations reveal a tendency to adjust the portfolio mix in response to economic factors to obtain a higher expected return on the entire portfolio. In other words, public pension plans, like private plans, have increasingly reacted to traditional factors during the post-World War II period.

2.4 Factors that influence pension fund investment decision

The review of literature shows that there are number of factors that influence pension funds managers' investment decisions. These factors are discussed in turn.

2.4.1 Government Restrictions and Social Mandates

That there is political involvement in the investment choices of public pension funds is well known. This involvement can come in the form of legislation passed on the initiative of trustees or can involve mandates to make certain investments or prohibitions on other investments.

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Regulations: "Prudent man" vs. Draconian

There are basically two different regulatory approaches guiding the investment and management of pension funds: the "prudent man" ("person" in times of political correctness) rule and detailed "Draconian" regulation.

The prudent-man rule requires that pension fund money be invested "for the sole benefit of the beneficiaries" and that investments be made with "the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims" (exact wording quoted in Davis, 1995). The supervisory authorities do not restrict the investment decisions that pension fund managers make *a priori*. Instead, funding levels and other indicators are monitored by the supervisory agency. Often, the trustees of a pension fund will set an investment strategy which gives more explicit instructions to the investment manager. In Hong Kong, for example, pension funds will be required to issue statements of investment policy objectives (SIPO) and submit them to the regulatory agency (Vittas, 1997). The fund managers' adherence to the stated policy objectives is then monitored by the supervisors. The prudent-man rule is applied in the United States, the United Kingdom, Ireland, the Netherlands, Australia and, more recently, Canada.

This rule has been used mostly to regulate Defined Benefit (DB) plans where the investment risks - and thus the risk that a targeted replacement rate might not be reached -

is carried by the plan sponsor, i.e. the employer. For Defined Contribution (BC) plans, particularly where they are mandatory, more detailed regulation is commonly applied. In the context of emerging capital markets where the financial sector infrastructure is only gradually developing and where beneficiaries of pension funds are not used to making investment decisions, a detailed regulatory approach not only can be justified but, in the opinion of many experts, is indispensable.

Under an asset restrictions ("Draconian") approach, the pension supervisor issues investment regulations which list the instruments that are authorized for pension fund investment. They also establish quantitative limits with respect to the share of assets that a fund may invest per instrument as well as limits per individual issuer. Some countries also limit the exposure that the pension fund industry as a whole may have to a certain sector or issue. An important motive for governments to impose quantitative restrictions, apart from safeguarding a pension fund's assets through diversification, is to secure the pension funds' demand for government debt. In several OECD countries, pension funds are subject not only to maximum limits but also to minimum investment limits; in Denmark, for example, they must invest 60 per cent of their assets in domestic bonds.

It is interesting to note that most Latin American governments have resisted the temptation to mandate pension funds' investment in public debt, although financing the cost of the transition from pay-as-you-go to funded pension systems has increased the need to place government debt.

Exceptions are Bolivia and Uruguay, where a certain amount of pension assets must be invested in government bonds, at least initially. Owing to the gradual development of capital markets in the region and the quantitative restrictions on other instruments pension funds may invest in, however, a certain level of demand for government debt is practically guaranteed in all Latin American countries.

In the United States, the use of economically targeted investments (ETIs) was in the 1990s one of the most controversial issues facing public and private pension fund management. ETIs are investments in which the fund managers take into consideration not only the investment return but also the economic benefits to the local community (GAO 1995; Watson 1994). Examples of ETIs include California's investment of US$ 375 million in single-family homes to help increase affordable housing and create jobs, Connecticut's investment of US$ 25 million in a local company to save 1,000 jobs, and Pennsylvania's decision to provide favorable interest rates for home mortgages (Stevenson 1992). Another common ETI practice involves using pension funds to provide venture capital to in-state companies that may not be able to attract the attention of other venture capitalists (GAO 1995). Until recently, the National Pension Fund (NPF) of the Republic of Korea met a requirement to contribute to economic and social development by lending to the government at nonmarket rates and purchasing non-tradable government bonds.

The Singaporean Central Provident Fund (CPF) similarly has many objectives in addition to its core objective of ensuring sufficient retirement benefits. It administers schemes

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covering housing, medical savings accounts, and education; it also permits extensive preretirement withdrawals for investment in real estate, financial assets, and even gold and commodities. The CPF has different accounts to which individual contributions are credited. The ordinary account can be utilized for financing housing purchase, investments in approved shares and stocks and to finance children's tertiary education. The special account is a true pension retirement account. The medical account is used to pay for hospital services, certain outpatient services, and catastrophic health insurance premiums. Contribution rates to the different accounts vary by age and for workers up to 35 years of age the contribution rates to the three different accounts are 26%, 4% and 6%, respectively (Chia and Tsui, 2003).

Advocates of ETIs claim that such investments can be structured to obtain a market rate of return, but they face significant opposition. Proponents of ETIs further argue that gaps in the capital market leave certain socially desirable projects under funded; opponents claim that the true motivation for these pension fund investments is political. In 1992, a lobbyist for California Public Employees' Retirement System (CalPERS) referred to ETIs as "politicizing" pension investments rather than "maximizing" them (Vise, 1992). Nofsinger (1998) argued: "[ETIs] are often highly visible projects that attempt to generate a public good in a concentrated, geographical region. The claimable political benefits of an ETI policy can be large and the costs of claiming them small. The agency cost that taxpayers bear is not visible at the initial investment because the costs are not realized until some distant time when an increase in funding is needed for the under funded pension plan."

ETIs may be able to achieve an acceptable rate of return and taxpayers may be willing to take on the extra risk in exchange for social benefits, but few pension funds have established criteria for selecting ETI projects (Iglesias and Palacios, 2000). They are thus entirely under the purview of the board or of the ruling political party.

In addition to the mandating of certain investments, political interference may also see restrictions placed on the types of investments a fund may make. For example, a pension fund may be restricted from investing in foreign markets or in anything other than government bonds. The difficulties presented by such restrictions are compounded where there are limited investment opportunities in the home country (Iglesias and Palacios, 2000). Even where explicit developmental and social mandates do not exist, prohibitions on certain types of investments may be sufficient in themselves to ensure that funds are invested in social projects. The five public pension funds in Honduras that were surveyed for this paper do not have any explicit developmental mandate, but they are restricted from investing abroad. Attempts to diversify the fund's portfolio within the context of the limited domestic opportunities have seen approximately 30 percent of fund assets invested in housing loans to participants, often at a subsidized rate.

In Ghana, the Social Security and National Insurance Trust (SSNIT) is required to be invested in assets with adequate yield and liquidity and an acceptable risk level. Managers must follow basic portfolio theory rules for asset diversification as they seek to maintain an optimal funding ratio and to secure long-term rates of return for the fund

(Dei, 2001). However, the SSNIT investment policy includes social and developmental mandates in the following areas: housing finance, student loans, and industrial estates. Although returns on these assets were not reported, Dei comments that the student loan scheme has become a burden for the SSNIT. These loans are provided to students (including university students) at a subsidized interest rate. While the number of students has increased considerably, postgraduate unemployment also has increased, creating a further burden on the system. The loans furthermore are indexed to inflation, and as they increase in size government delays in the payment of interest subsidies to the SSNIT again increase the overall burden on the fund.

Hess and Impavido (2003) reported that a survey of public pension funds around the world revealed that the use of restrictions and mandates is widespread. The most common restriction is on foreign investments, with 57 percent of the surveyed funds facing prohibition on investment abroad. Other restrictions include prohibitions on equities (14 percent) and loans (19 percent) (see figure 2.1).

Explicit investment mandates also are common, with 60 percent of the funds operating under at least one type of mandate. These mandates include requirements to invest in government bonds (including national, state, provincial, and municipal bonds) (48 percent), in social projects such as housing (24 percent), and in general economic development obligations (32 percent) (see figure 2.2).

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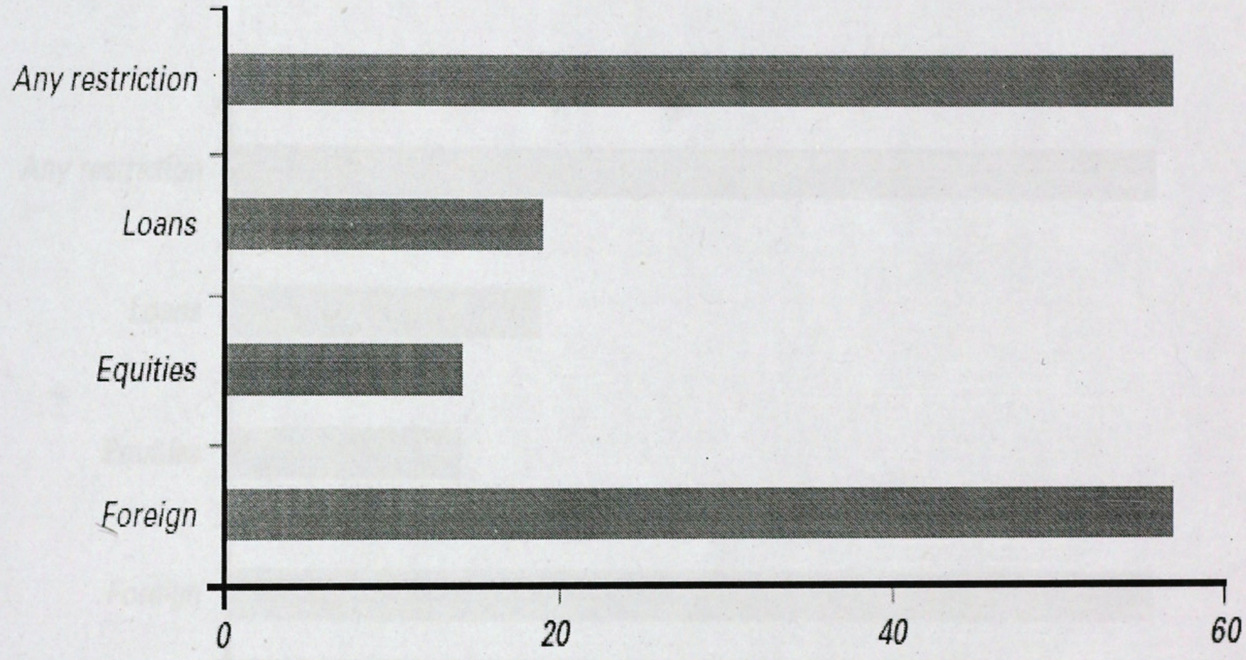
The use of restrictions and mandates furthermore may be more widespread than these figures indicate, as trustees may self-impose these investment practices on the fund in the absence of explicit requirements.

Figure 2.1: Investment Restrictions (percentage of funds surveyed)



Source: Hess and Impavido (2003) "Governance of Public Pension Funds: Lessons from Corporate Governance and International Evidence"

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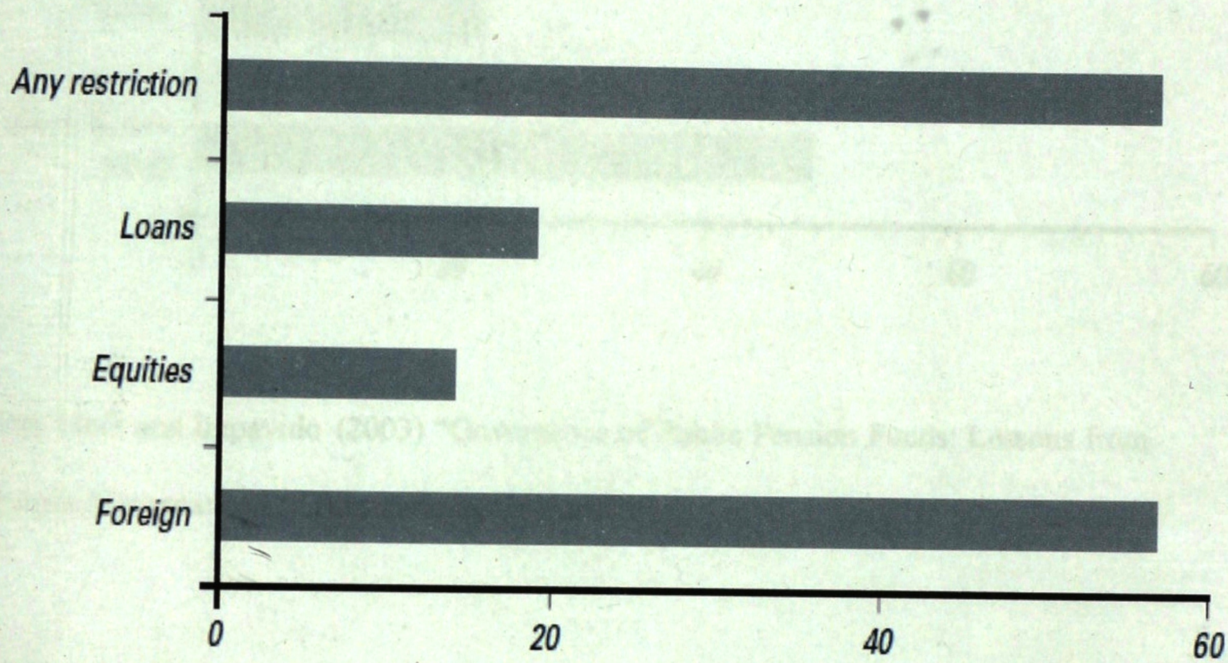

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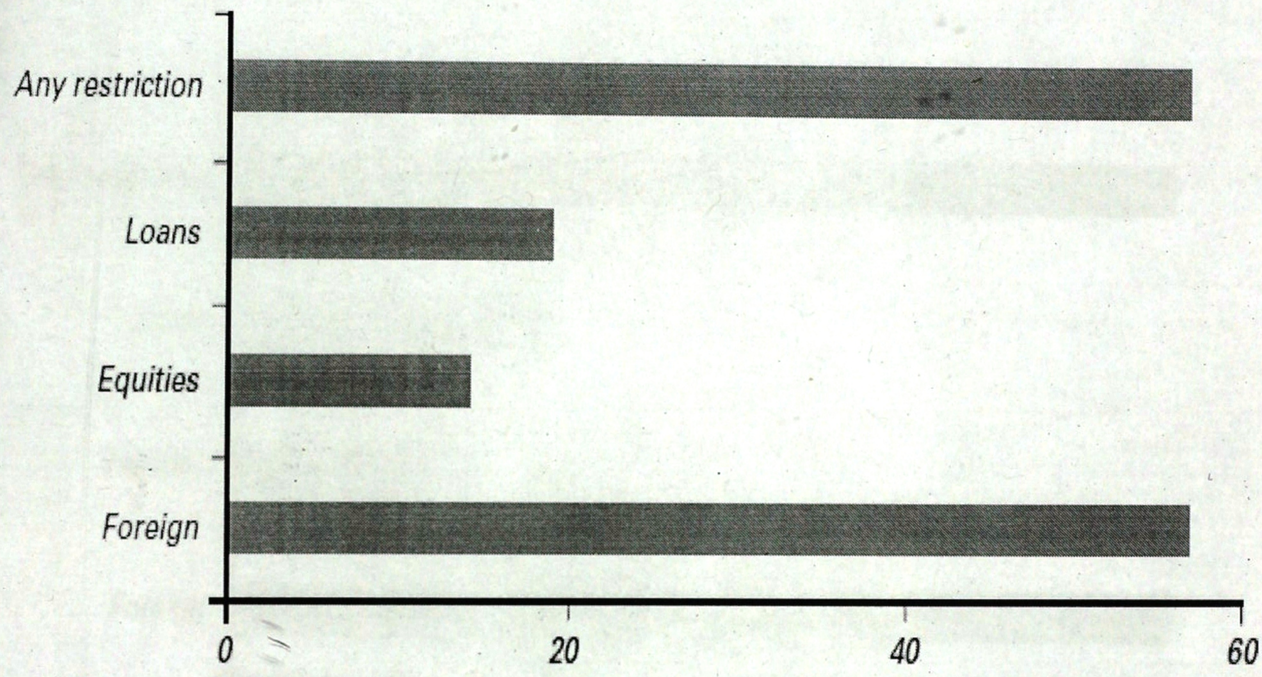

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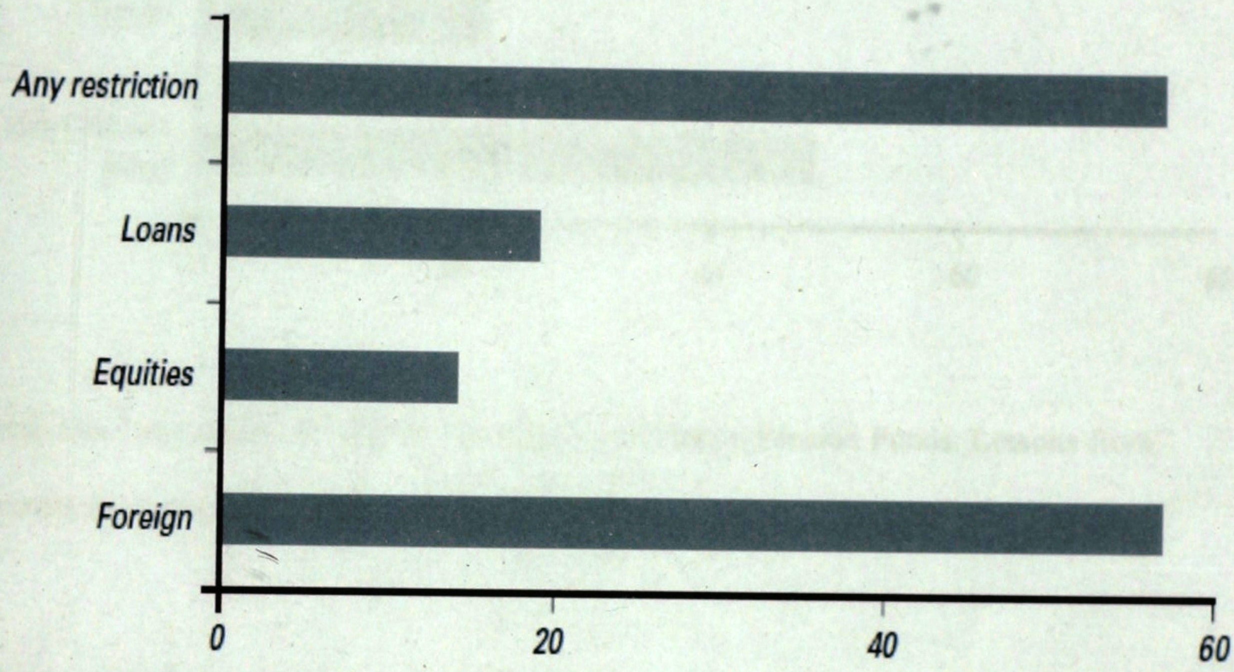

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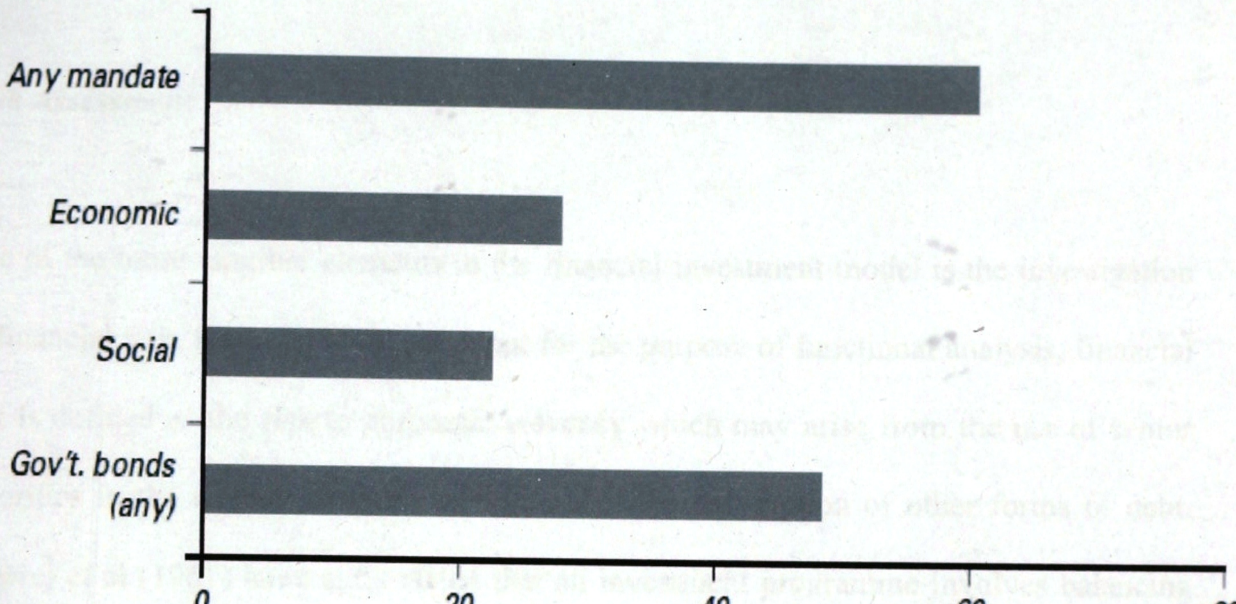
Figure 2.2: Investment Mandates (percentage of funds surveyed)



Source: Hess and Impavido (2003) "Governance of Public Pension Funds: Lessons from Corporate Governance and International Evidence"

2.4.2 Characteristics of Investment Instrument

Cash flows

The investment decisions of the firms are determined by the cash flows. Luenberger (1998) has defined the cash flow sequence as the amount of money that will flow to and from an investor over time. These cash flows occur at known dates. Therefore this means that the investments can be rated according to the magnitude of its cash flows. The best investment decision can be had in terms of the pattern of cash flows of different investment models. These cash flows are defined based on quantitative assessment calculations like Net present value, Internal rate of return, Payback period, Expected monetary value and Expected present value.

Risk Assessment

One of the more tangible elements in the financial investment model is the investigation of financial risk. Hayes (1961) states that for the purpose of functional analysis, financial risk is defined as the risk to corporate solvency which may arise from the use of senior securities in the capital structure or because of the assumption of other forms of debt. Dowrei et al (1961) have aptly stated that an investment programme involves balancing of return against risk. Risk assessment ranges from an analysis of stability and growth to the variety of other factors. Thus as Elton *et al.,* (1991) have also stated the value of a firm is a function of its dividends, growth and risk. The advance commitments of the Pension fund investor makes the assessment of risk a major priority. In this connection the concept of fiduciary duty also comes up which is defined as "relating to or involves a confidence or trust between the investor and person for whom the investment is being done for protection of the finance depending on public confidence for the value of the currency"(Britannica online encyclopedia). Protecting the interests of the person for whom the Pension fund investor makes the investments is what will constitute his fiduciary duty. Therefore the Pension fund investor will take all possible actions to reduce the risk to his capital. The financial risk is based on a ratio analysis like the current ratio which shows the relationship of current liabilities to the current assets, the quick ratio shows the working capital of the company, or the turnover ratio which depicts the rate at which the expenses are turned into cash.

Safety

Related literature states that the safety in a security implies safety of principle and safety of stable income from this principle. But as Prime (1967) has pointed out the two are interwoven in the sense that the inability of the issuer to pay the income sadly affects the value of the principle. Therefore safety becomes a major priority in making investment decisions. "The investors always seek security with high degree of safety adequate with relation to his circumstances and requirements" (Prime 1967). Pension fund investors give more emphasis on the safety of the investments, as they are liable to make future payments. In order to assess the safety the Pension fund investor will assess the long-term duration of the safety.

Growth of investments

An investment is made for appreciation. This is the growth factor. Growth or *investment for appreciation* as Dowrei(1961) has termed it involves investments in securities when the appreciation is expected to be based on increased earning power or improved financial condition. When growth of investment is an essential element or goal of investment then the investor will try to foretell the future instead of just measuring on the basis of prior records. He will try to anticipate important changes and its effect on the investment.

Literature review indicated that growth in values is not simply seen as a characteristic of common stocks but as a particular attribute of a relatively few expanding industries as well as of superior corporate management. Copeland *et al* (1984) stated that the search for new markets or new technologies is the basis for growth. Growth stocks are the equities of expanding firms with well defined prospects, which because of promising products or markets, successful research programmes, managerial skill, or other factors are believed to offer special assurance of continued growth in earning power and hence, market price and ultimate return. As regards the Pension fund investor the long-term nature of the investment makes the assessing the growth more important than a higher rate of return.

Qualitative Investment factors of the firm

The quantitative results portrayed in the financial statements of the firm are to be analyzed taking qualitative factors. An investigation into the financial statement of a company can reveal the performance of the company which can be the major basis for the measurement of the values of securities. Hayes (1961) and Prime (1967) demonstrated the performance of pension fund investment by analyzing the Balance sheet , Assets and the cash flow statements of the firms.

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i. Future sales revenue

As Hayes (1961) stated "an appraisal of the underlying demand characteristics for a companies products is a necessary feature in determining investment quality". Logically speaking the trend of the sales of the products will follow the same trend as the growth of the company. Therefore from this perspective Hayes is correct. But time, as a factor in considering future sales revenue should also be taken into account. Changes in consumer preferences will also have to be anticipated in the longer-term perspective.

ii. Cost and production factors

The cost patterns of industrial firms comprise of varying amounts of raw materials manufacturing and administrative expenses as also interest, taxes and insurance. Superficially these expenses seem not to contribute to the evaluation of the company for investment purpose but these production factors will: -

- Identify potential risks in production flow,
- Include the adequacy of raw material reserves in natural resource companies and ,
- Identify stability elements in the nature of demand

iii. Market conditions

Apart from internal factors like sales and production the market conditions for the sales of the product line is an important area that can help identify potential investment risks.

Hayes stated that an analysis of the competitive edge and competitive advantage will identify the pressures in the free market (for the particular firm) as also the incentives for growth. This statement can also mean that:

• An analysis of the ability to cope with competition will identify the stability factors

• If the firm is able to steer and maintain its position without major changes in the price of the product the firm has a good reputation.

• A deeper analysis will lead to an identification of the negative /positive factors of the internal management involved with research and development, distribution methods and production techniques.

If one does go into a qualitative appraisal of the actual and prospective competitive conditions faced by the firm, it would be advisable to avoid a company with intense competition but on the other hand if this appraisal identifies a strong and effective management dealing with the competition, it will result in the identification of a crucial positive factor for the investor.

Quantitative investment factors

The major quantitative facts of a firm are contained the conventional financial statements. But an important aspect to be noted in the appraisal of the quantitative data is that these statements portray the financial status of the past and the investor should analyze the effect of the financial statements on the future economic activities of the firm. In other words the financial statements could reveal the future risks and opportunities in the firm.

Hayes (1961) introduced the functional approach of quantitative analysis in which he states that the investor should first identify what specific factors are pertinent to a quantitative investment appraisal of the company. The analytical financial framework is then developed accordingly. This will result in a clearer cut review of the strengths and weaknesses of the firm. The quantitative data attempts to help reach a decision on the following grounds: -

- The prospects of long term growth or decline of the firm
- The stability characteristics of the firm
- The absolute and relative capacity of the management.
- The degree of financial risk arising out of the particular means used to finance the resources of the company.
- Depending on the accuracy of the company the financial statements reveal the economic performance and the per share equity of the shareholders
- If the securities are compared with the existing high general standards their quality can be ascertained
- The relative adequacy of the yield and technical position of senior securities at their prevailing prices can be found out.
- The alternative possibilities of the future per common share earning power of the company.
- The probable range of values will thus be revealed based on the earning power estimates, dividend policy, alternative yields and overall quality of the company.

CHAPTER THREE

METHODOLOGY AND ORGANIZATIONAL PROFILE

3.1 Introduction

To substantiate the theoretical understanding to the topic in study, literature review was conducted prior to the design of the research. The analyses in the thesis were from an investors' perspective. In an attempt to achieve the research objectives, data sources both primary and secondary data were gathered through administration of questionnaires and documentary analysis. The questionnaires were administered to pension fund investment managers and senior members from two main pension fund bodies in Ghana; Ghana University Staff Super-annuation Scheme (GUSSS) and Social Security and National Insurance Trust (SSNIT). The primary data provided first-hand information from the service providers on what investment opportunities are available to pension fund managers and series of interviews to assess the type of risk associated with each type of investment and also various factors that the pension fund managers consider when choosing to invest. The secondary data on the other hand included desktop study of annual reports of pension funds for information about their funds and investment strategies and also articles and reports dealing with the pension funds investments in Ghana.

3.2 Sample Technique

Purposive sampling was used for the study because it allows the use judgment to select cases that will best enable you to answer your question(s) and to meet your objectives

(Saunders *et al.*, 2007). This form of sampling is often used when working with very small samples such as in case study research and when you wish to select cases that are particularly informative (Neuman, 2000). Following this argument, all the pension fund investment managers and senior members from two main pension fund bodies; GUSSS and SSNIT at Kumasi office were selected for the study. In all the research population of interest was made up of 3 pension fund investment managers (2 from SSNIT and 1 from GUSSS) and 4 senior members (2 from SSNIT and 2 from GUSSS) were selected for the study.

3.3 Data Collection

The research employed interviews and questionnaires to collect the data. Two set of questionnaires were used, one for the investment managers and the other for the senior managers. Questionnaires with covering letters were delivered personally to potential respondents at SSNIT and GUSSS to eliminate the unreliability of the postal system. SSNIT and GUSSS annual reports were also reviewed to serve as checks and balances to ensure accuracy of responds to the questions asked regards to investment policy and strategies for pension funds.

3.4 Method of Data Analysis

In this study, the researcher used Microsoft Excel in analyzing the data. This program is easy and able to analyze the data in numerical values for producing graphical

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representation and graphical user interface in data analysis. Moreover, the study used exploratory method of research design to discuss the outcome.

3.5 Organizational profile

3.5.1 Social Security and National Insurance Trust (SSNIT)

The Social Security and National Insurance Trust (SSNIT) is a statutory public Trust charged with the administration of Ghana's National Pension Scheme. The Trust is currently the largest non-bank financial institution in the country. The primary responsibility is to replace part of lost income due to Old Age, Invalidity, or loss of life.

The Pension Scheme administered by SSNIT has a registered membership of approximately one million with over 58,000 pensioners who currently collect their monthly pension from SSNIT. The Trust was established in 1972 under NRCD 127 to administer the National Social Security Scheme. Prior to 1972, the Scheme was administered jointly by the then Department of Pensions and the State Insurance Corporation. The Social Security Law (PNDC Law 247) under which the current Social Security Scheme operates was passed in 1991. Until 1991, the Trust administered a provident fund, and this was converted into a pension scheme. The core functions of the Trust are: Collection of contributions, keeping records on members, managing the funds of the Scheme and Processing and paying benefits to eligible members and declared dependents.

The Social Security and National Insurance Trust scheme is a Social Insurance Scheme under which members contribute during their working life and receive benefits in the event of Old age, Invalidity; or in case of death, the member's dependants receive a Survivors' Benefit.

Contribution

All workers are expected to contribute 17.5% of their monthly salaries made up of 5% by the employee and 12.5% by the Employer. The self-employed are also encouraged to contribute but they contribute the whole total of 17.5% themselves.

Benefits: There are three basic benefits and these are old age pension, invalidity pension and death-survivors payment.

Indexation of Benefits:

Pension benefits are indexed annually using the average rate of increase in the contributions inflow for the previous year. This is to prevent any distortions in the financial equilibrium of the scheme.

The SSNIT pension scheme is a defined social insurance scheme. The scheme is autonomous with a tripartite governing board of directors representing the government, employers and workers. The Social Security and National Insurance Trust of Ghana administers the scheme on behalf of the State. The main responsibilities of SSNIT are as follows:

- Register new members and collect insurance contributions from members.
- Keep, maintain and make available, up-to-date members' records of contributions to the scheme.
- Pay out social security benefits as they fall due.
- Invest the social security funds.

These responsibilities are carried out through a network of regional and district offices of SSNIT. The district offices are in direct contact with employers and workers.
Each district office has its database of contributors from which monthly posting are carried out for the update of the central database at the Head office of SSNIT.

Membership of the Scheme

The SSNIT pension scheme, in principle, has a universal scope of coverage. However, the social security law (1991) specifies membership of the scheme to be compulsory for some groups of the working population and voluntary for other groups. Other employees are not allow3ed by the social security law to join the SSNIT pension scheme.
According to the social security law (1991), membership of the SSNIT scheme is compulsory for every person who has an employer-employee relationship with an identifiable employer. Membership of the scheme is however voluntary for self employed persons who opt to join the social security scheme. Those who are not allowed by the

social security law to be members of the SSNIT pension scheme are officers and men of the Ghana armed forces, academic staff of the universities, missions and diplomatic corps. These groups of workers have their own respective pension arrangements. However, individuals employed by these establishments may opt to join the State pension scheme as voluntary contributors.

SSNIT also has internal classification of its members. These are active members, inactive members and paid members. The active members are those on whose behalf SSNIT has received insurance contributions covering the last two years (that is, current year and the previous year). The inactive members are those whose social security accounts have not been credited with contributions covering the last two years. These are largely students and members who have been out of employment for more than two years. The paid members are those who have received social security benefits or on whose behalf SSNIT has paid social security benefits. These include members who have received interim benefits, lump sum payments, survivors' benefits as well as those currently on pension. The information Technology and Communication Services (ITCS) Department of SSNIT, estimates that as at the end of November 2002, there were 624,076 active members, 1,891, 522 inactive members and 318, 831 paid members. The normal retirement age for members of the scheme is currently 60 years for males and 55 years for females and other workers employed in hazardous areas. However, members may opt for early retirement with reduced benefits between ages 55 and 59. Each member of the scheme is assigned a social security number that uniquely identifies him/her. There are two sets of social security numbers; the first set, which is numeric, contains eight digits and the second set

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is alphanumeric made up of thirteen digits. The 13 – digit social security number contains the member's date of birth and a code representing the district of birth.

Categories of Social Security Contributions

The SSNIT pension scheme is partially funded with social security contribution rates determined using the scaled premium method. Accumulated reserves are invested. The current contribution rate is set at 17.5% of insurable income (where "insurable income" is the gross salary before any tax deduction). The 4th actuarial review of the scheme carried out in 1999 projected that if the future follows the demographic and economic assumptions made in that review, then the current rate of 17.5% should be recalculated by the year 2016, assuming that the number of contributors remain constant at the 1999 figures

Mandatory Contributions

These are monthly insurance contributions from members of the scheme who have employer-employee relationships with identifiable employers. In this case, the 17.5% contribution rate is split into two, comprising 5% and 12.5% of employee's monthly insurable income paid respectively by the employee and the employer.

The employer is required to deduct and submit the contribution amounts due together with details of employees (referred to as "contribution report") whose social security accounts are to be credited with the contributions to the nearest office of SSNIT. Payments for each month are to reach SSNIT within fourteen days of the following month. Failure to meet this deadline may result in the payment of penalty. It is allowed to pay in the current year, social security contributions relating to previous years.

Voluntary Contributions

These are mostly social security contributions from self-employed persons who opt to join the State pension scheme. The voluntary contributor is required to pay the full contribution rate (17.5%) with respect to the declared monthly income from his/her profession, business or vocation. Voluntary contributors are required to pay their monthly contributions at the nearest office of SSNIT.

Current employees may also pay voluntary contributions for past years in which they did not contribute to the pension scheme. Similarly, members of the scheme who give up jobs or lose employments before reaching the normal retirement age may pay contributions at the voluntary rate for periods between termination of employment and retirement. Such voluntary contributions may be necessary to enable them either to qualify for pension or to increase their pension rates.

3.5.2 Ghana Universities Staff Superannuation Scheme (GUSSS)

The Scheme is partially funded from contributions by employer (Government) and employees to pay the lump sum benefits. It however relies on the Consolidated Fund for the payment of monthly pension benefits.

Membership of the Scheme is limited to senior members of the public universities and junior staff who were on the GUSSS on 1st January 1976. Others include Research Fellows, University Administrative Staff, Library and professional staff and Teachers of a status, comparable with that of the University.

The Scheme has similar benefits as CAP 30 considering the pension computation formula used. Benefits under the Scheme are as follows:

- Cash lump sum
- Regular monthly pension
- Survivor's Gravity (Cash Lump sum) on the death of a pensioner
- Death – in – Service
- Gratuity for nominated beneficiaries

The GUSSS is financed from monthly payroll deductions from basic salary of members (GUSSS based) and from contributions of the employer. Currently, the contribution rates are 12.5% from Government as employer and 10% from members, totaling 22.5%. Members' contribution rates are subject to variations determined by members from time to time. Contributions are utilized to cover gratuity (Cash lumpsum) payments. As a routine arrangement, the State provides additional budgetary support to pay the regular monthly pensions.

Indexation

GUSSS management teams in the various institutions have complete autonomy over the area of investment and investment policy. The funds are invested by the respective management boards in ventures they consider to be appropriate, using independent fund managers. No government controls or monitoring arrangements are currently in place.

Management and Administration

The operational policy of the Scheme is defined as coordinated by the Committee of Vice Chancellors and Principles (CVCP) – now called Vice Chancellors, Ghana. The Scheme is routinely administered by the Finance Officers of each university under the supervision of a Management Board, comprising the following:

- Two members of the University Council;
- Two persons from outside of the University appointed by the Council;
- Two members of the academic staff elected from among themselves;
- One senior administrative/professional staff elected by his/her peers;
- The Registrar;
- One senior staff (Technician Grade), elected from among themselves;
- One junior staff elected from among themselves.

CHAPTER FOUR

4.0 ANALYSIS OF DATA, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter set to outline and analyze the findings of the research by the use of Microsoft Excel. After analyzing the result findings, appropriate graphical representations with their corresponding useful comments were made.

4.2 Investment Patterns of Pension Funds

To ascertain the investment patterns of pension funds in Ghana, resource persons from the SSNIT and GUSSS were interviewed to expatiate on the activities of pension funds and the review of the investment patterns of pension funds in Ghana. Moreover, annual report of the SSNIT was also reviewed as part of the process to ascertain the investment patterns. Investment patterns can be analyzed by examining the composition of pension portfolios asset distribution of public and private pension funds. Barth and Cordes (1981) used asset distribution pattern to established investment patterns of public pension fund in United States.

The resource person interviewed at the SSNIT observed that the investment portfolio of SSNIT include fixed income investment and non-fixed income investment. He indicated that the investment types that SSNIT has invested or allocated funds to are Government bonds, corporate bonds, Bank deposit, Equities, Loans, Real estate and other investment portfolio including foreign securities. This observation is similar to earlier report by Dei (2001).Table 4.1and figure 4.1 indicates allocation of asset of SSNIT pension fund in 2007.

Table 4.1: Allocation of asset of SSNIT pension fund in 2007

Investment category	**Proportionate investment of asset**
Government bonds	25%
Bank deposit	1%
Equities	50%
Loans	10%
Corporate bonds	3%
Real estate	4%
Other (e.g. foreign securities, etc)	7%

Source: Investment department, SSNIT, 2009

From table 4.1, it can be observed that SSNIT has invested half of its asset in equities. This is followed by investment in government bond which a quarter of the asset of SSNIT has been invested in. the third investment type which 10% of asset has been invested in is loan. SSNIT has allocated 3% and 4% to corporate bonds and real estate respectively. The investment type which has received minimum asset allocation is bank deposit. Only 1% has been invested in bank deposit. SSNIT has also invested in other investment opportunities including foreign securities. With this investment patterns one can deduce that SSNIT has contributed immensely in the development of capital market

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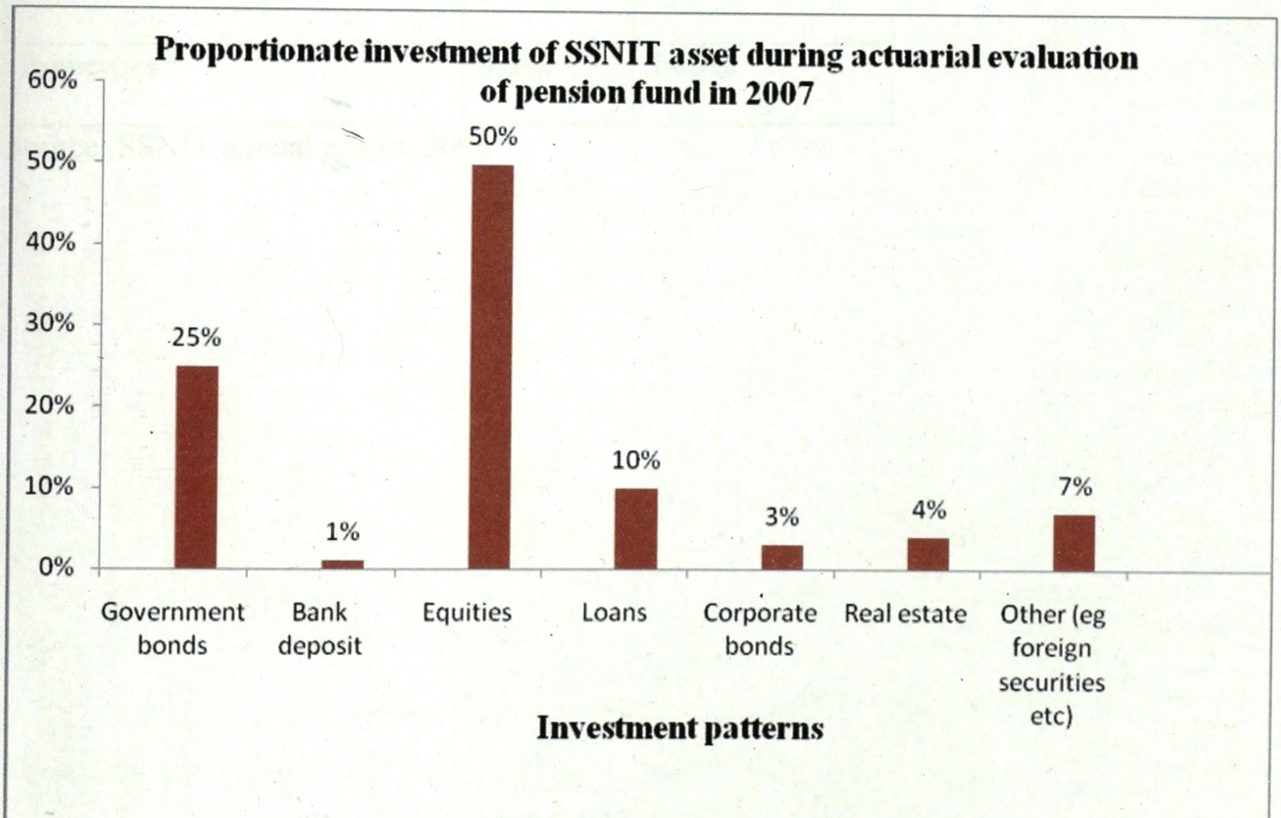
in Ghana i.e. Ghana Stock Exchange. A review of investment policy of SSNIT indicated that the Trust is the largest single institutional investor on the Ghana Stock Exchange that is helping to nurture the development and sustenance of the Capital Market in Ghana. SSNIT held shares in 23 out of 31 companies listed on the Ghana Stock Exchange (SSNIT Annual Report, 2006).

The investment patterns of SSNIT as the public pension scheme is similar to that of public pension investment patterns observed by Barth and Cordes (1981) in United Sates. They indicated that assets are allocated to Government securities, corporate bonds, equities and mortgages.

Figure 4.1: Proportionate investment of SSNIT asset during internal actuarial evaluation of pension fund in 2007



A review of the annual reports showed that the total investment portfolio of SSNIT as at December 2006 was GH¢ 1,195.2 million and that of December 2007 was GH¢ 1,639.8 million. With this the main categories of the investments are Government stocks, bonds, equities, residential and commercial properties, loans and short term cash deposits. Table 4.2 and 4.3 show the composition of the SSNIT investment portfolios and their rate of returns for 2006 and 2007 respectively.

Table 4.2: Composition of the Scheme's Investment portfolio at 31st December, 2006

Investment portfolio	Portfolio	Rate of Return
Short Term Investments	38.5%	12.1%
Long Term Investments	41.0%	18.7%
Students Loans	10.3%	10.3%
Associated Units	0.7%	-
Properties	9.5%	14.5%

Source: SSNIT annual report, 2006

Figure 4.2: SSNIT investment portfolio and their rate of return as at Dec., 2006

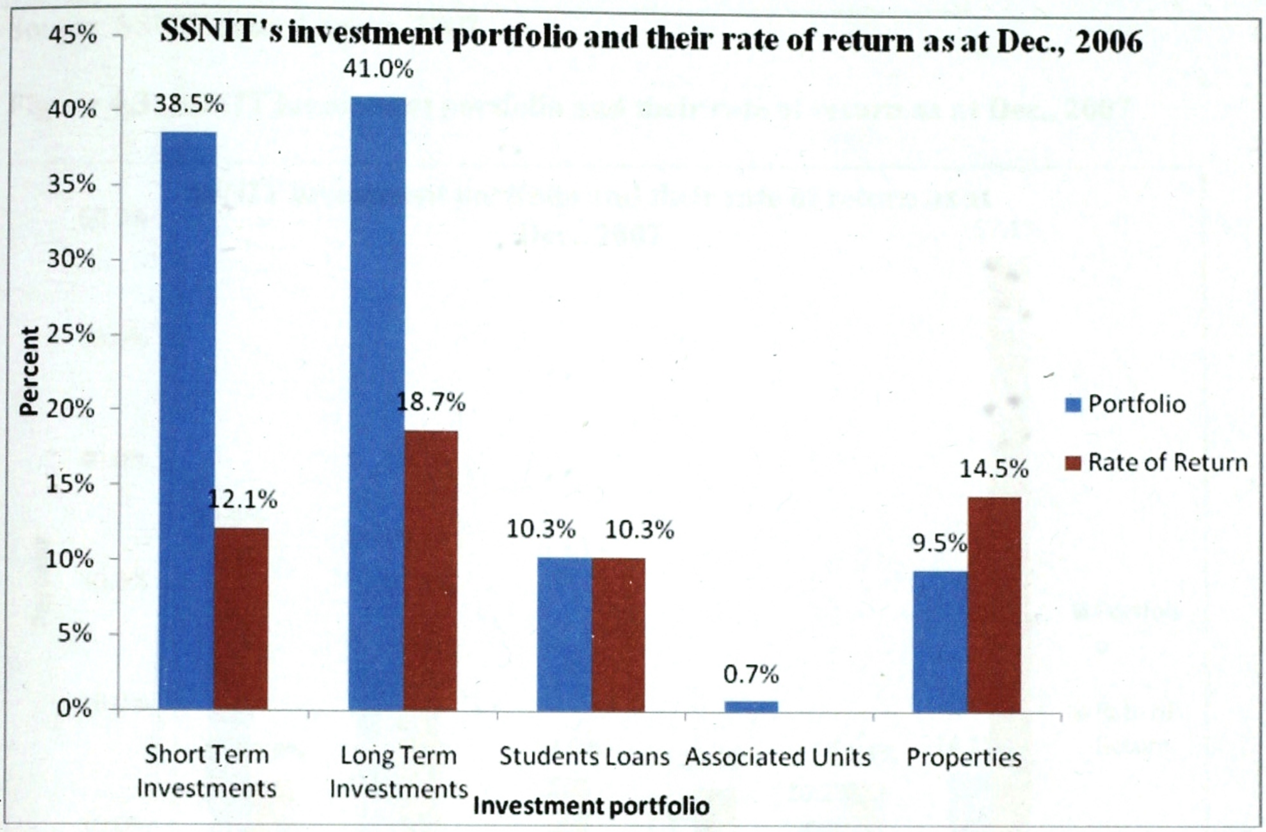


Table 4.3: Composition of the SSNIT Investment portfolio and their rate of return at 31st December, 2007

Investment portfolio	Portfolio	Rate of Return
Short Term Investments	32.9%	13.6%
Investment Available for sale	31.5%	27.5%
Investment Held to Maturity	3.5%	13.9%
Students Loans	7.8%	13.0%
Loans and Receivables	10.2%	13.4%
Investment Properties	14.1%	57.1%

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	100.0%	

Source: SSNIT annual report, 2007

Figure 4.3: SSNIT investment portfolio and their rate of return as at Dec., 2007

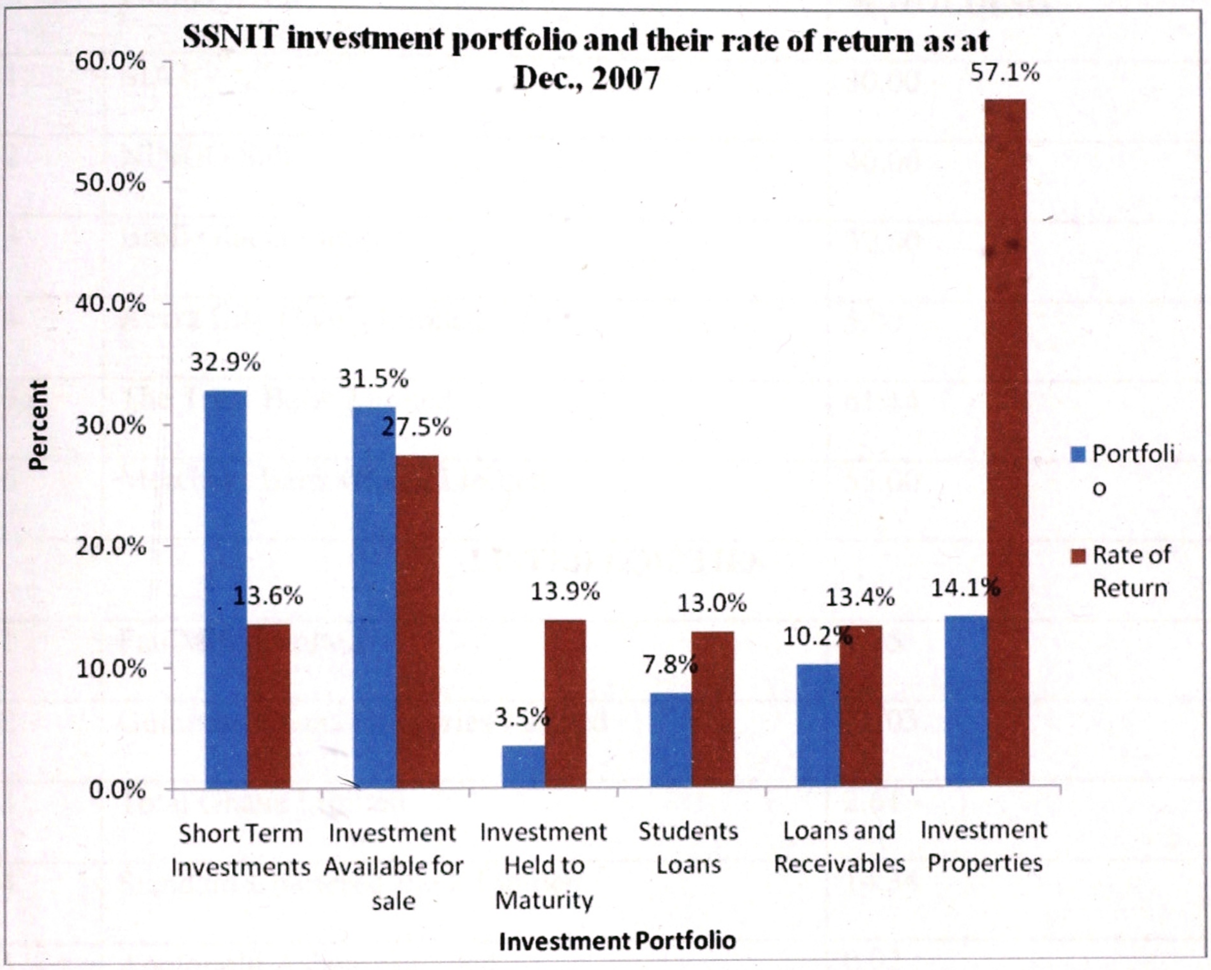

Table 4.4 shows examples of SSNIT equity holding as at December, 2007. One can deduce that SSNIT fund managers had invested across industries and it give an indication that mangers are holding a well diversified portfolio.

4.4: Examples of the SSNIT Equity Holdings as at December, 2007

	UNLISTED EQUITIES	
	COMPANY	% HOLDING
1	SIAT	30.00
2	NINGO Salt	40.00
3	Broll Ghana Limited	32.00
4	Accra City Hotels Limited	5.00
5	The Trust Bank Limited	61.14
6	Merchant Bank Ghana Limited	55.00
	LISTED EQUITIES	
1	Fan Milk Limited	1.25
2	Guinness Ghana Breweries Limited	11.03
3	Total Ghana Limited	2.61
4	Standard Chartered Bank Limited	14.34
5	Anglogold Ashanti Limited	0.02
6	Aluworks Limited	24.90
7	State Insurance Company Limited	13.71

Source: SSNIT annual report, 2007

Actuarial Valuation of SSNIT pension fund

According to the annual report, it is the policy of the Trust to arrange for an external actuarial valuation of the Scheme every three years. The last valuation was as at 31st December, 2005. The Actuary's principal conclusion was that the Scheme as at 31st December, 2005 was financially sound. The Directors considered the Scheme as at 31st December, 2005 to be adequate to pay pensions and other benefits in future. A follow-up interview revealed that the most recent external actuarial evaluation of the SSNIT pension fund took place at 2005 while the internal one took place at 2007.

However, ascertain the investment patterns of pension fund from the perspective of private pension fund face – to – face interview was conducted with resource person at Kwame Nkrumah University of Science and Technology GUSSS. The resource person indicated that as far as KNUST GUSSS is concern, the pension portfolios asset are distributed or invested in real estate and loans.

4.3 Type of risk associated with each type of investment

To identify the type of risk associated with investment pension fund mangers made the resource person were interviewed for their perspective on that. From the face-to-face interview conducted, the types of risk pension fund managers are been confronted with include the following:

- Interest rate risk
- Exchange rate risk
- Inflation rate risk

- Default risk
- Risk of non payment of dividend

He further indicated the type of risk associated with each type of investment. Table 4.3 shows the detail.

Table 4.5: type of risk associated with each type of investment.

Investment type	Associated risk
Government bonds	Inflation rate risk
Bank deposit	Inflation rate risk
Equities	Inflation rate risk, Risk of non payment of dividend, Default risk
Loans	Default risk, Inflation rate risk
Corporate bonds	Inflation rate risk, Default risk
Real estate	Exchange rate risk, Inflation rate risk
Other (e.g. foreign securities, etc)	Exchange rate risk

Source: SSNIT investment department, 2009

SSNIT pension fund managers do invest reasonable proportion of their portfolio (38.5% in 2006) in short term investment. Based on this observation it can be deduce that short term investment portfolio could suffer from capital erosion because the economy of

Ghana has been running fairly high inflation over the years. Dei (2001) express similar opinion by reporting that inflation is one of the major challenges facing SSNIT pension fund investment.

SSNIT investment in equities is mainly on Ghana Stock Exchange. The market hasn't fully developed yet as compared to the one in developed world. There are clearly some instances where the GSE recorded negative real rates of return because of the high rate of inflation in the national economy. Moreover, some company may not be able to pay dividend at the end of the financial year. All these may threaten the income of SSNIT.

According to SSNIT board chairman remark stated in the 2006 annual report, the Student Loans Programme has always been a thorny issue for the Trust. He stated that the Trust was able to recover only 15.84% of the amount due. Dei (2001) made similar comments that the student loan scheme has become a burden for the SSNIT.

SSNIT also engaged in foreign transactions and therefore the exchange rate risk mentioned by the resource person from SSNIT as one of the risk the investment managers are confronted with is anticipated.

Table 4.6 indicates the five-year trend in investment portfolio return and it illustrate how inflation in eroding SSNIT investment. SSNIT recorded -8.4% real returns on its investment in 2005 while the other years saw positive real returns.

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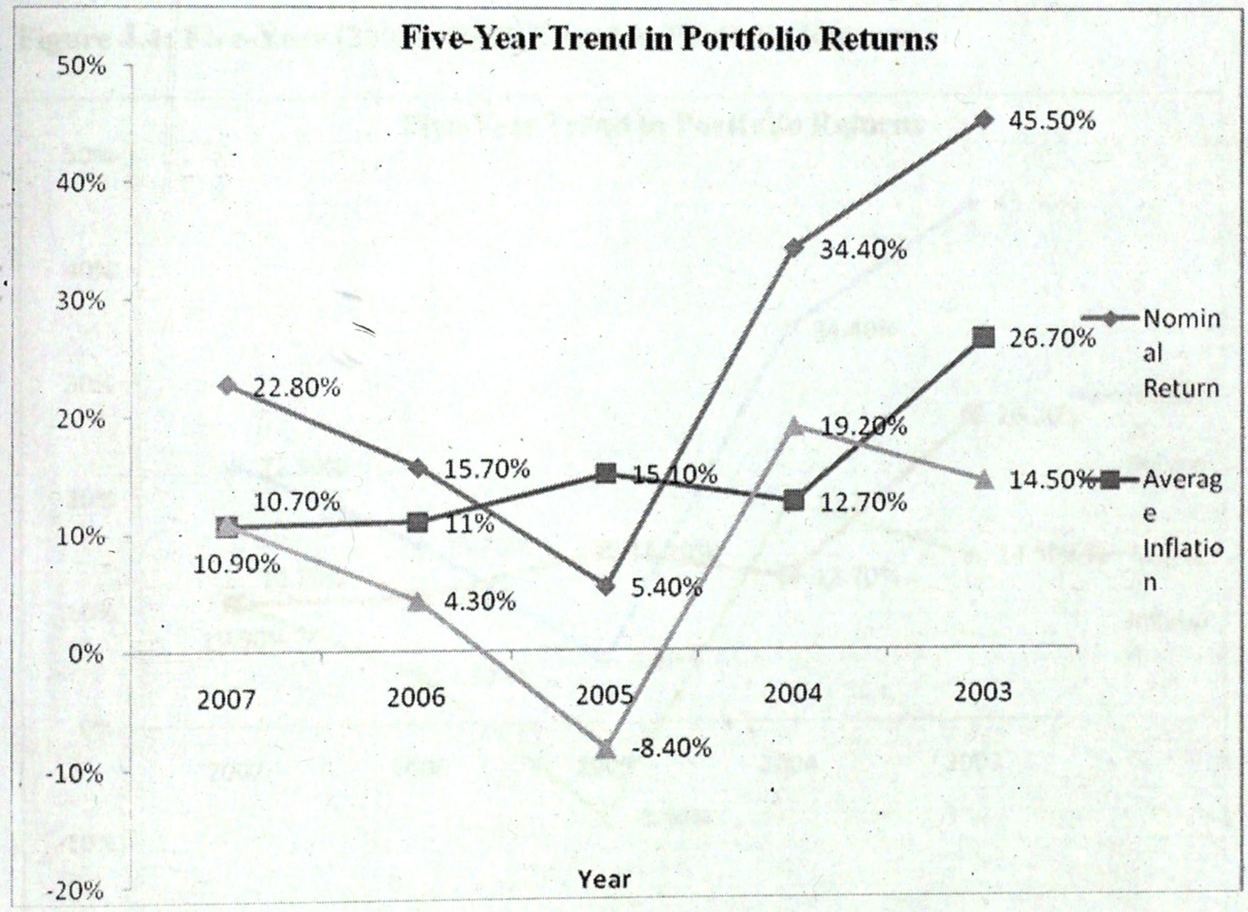
Table 4.6: Five-Year (2003 – 2007) Trend in Portfolio Returns

Year	Nominal Return (%)	Average Inflation (%)	Real Return (%)
2007	22.80%	10.70%	10.90%
2006	15.70%	11%	4.30%
2005	5.40%	15.10%	-8.40%
2004	34.40%	12.70%	19.20%
2003	45.50%	26.70%	14.50%

Source: SSNIT annual report, 2007

Figure 4.4: Five-Year (2003 – 2007) Trend in Portfolio Returns



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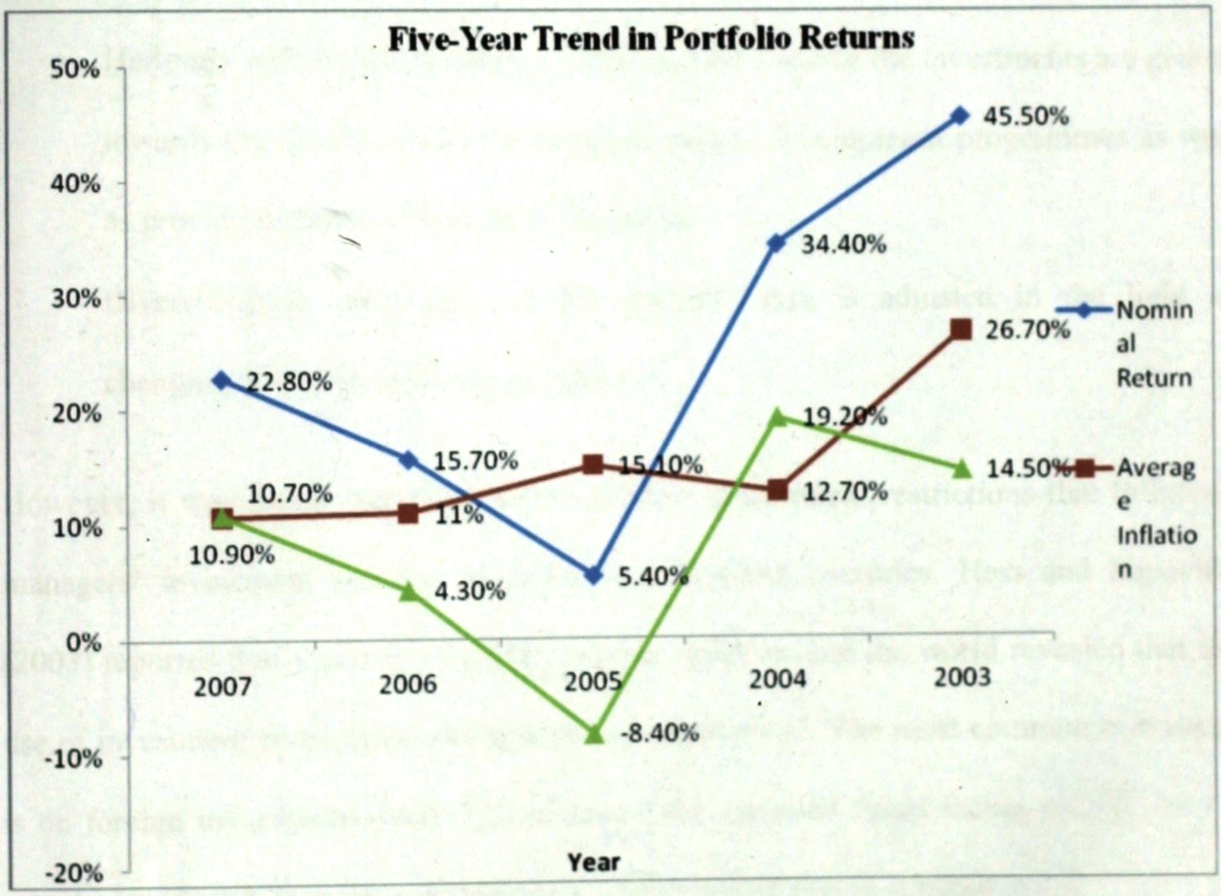
2003	45.50%	26.70%	14.50%

Source: SSNIT annual report, 2007

Figure 4.4: Five-Year (2003 – 2007) Trend in Portfolio Returns



4.4 Factors that influence pension fund mangers investment decision

To determine the factors that the pension fund managers consider when choosing to invest the resource person was asked to indicate these factors. From the face-to-face interview conducted, the pension fund managers consider the following factors when they investing.

- Safety - Investments should be in low risk ventures
- High Yield - The returns on the investments should be appreciable
- Liquidity - Ensuring that a certain level of investment is maintained in cash ratio to enable the Trust meet its obligations when they are due.
- Maintenance of Assets Value - Ensuring that the value of the investments is not eroded by an inflationary economic environment.
- Harmony with Public Interest - Ensuring that some of the investments are geared towards the achievement of national economic development programmes as well as providing physical benefits to the public
- Diversification - Ensuring that the portfolio mix is adjusted in the light of changing environmental circumstance.

However, it was found that there are no explicit government restrictions that influence managers' investment decision as it the case in some countries. Hess and Impavido (2003) reported that a survey of public pension funds around the world revealed that the use of investment restrictions and mandates is widespread. The most common restriction is on foreign investments, with 57 percent of the surveyed funds facing prohibition on investment abroad. Iglesias and Palacios (2000) reported that in addition to the mandating of certain investments, political interference may also see restrictions placed on the types of investments a fund may make. For example, a pension fund may be restricted from investing in foreign markets or in anything other than government bonds. The difficulties presented by such restrictions are compounded where there are limited investment opportunities in the home country.

One can deduce that SSNIT pension fund managers use he prudent-man rule which requires that pension fund money be invested "for the sole benefit of the beneficiaries" and that investments be made with "the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims" (Davis, 1995). The supervisory authorities do not restrict the investment decisions that pension fund managers make *a priori*.

With these factors as a guide to investment the pension fund should sustain itself and be able to meet its obligations when it fall due.

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The last chapter outlined the research findings with their corresponding comments. In this chapter, the research findings are summarized after which appropriate recommendations are made.

5.2 Summary of findings

Investment patterns of pension funds

The investment portfolio of includes fixed income investment and non-fixed income investment.The specific investment patterns of SSNIT include the following:

- Government bonds
- Corporate bonds
- Bank deposit
- Equities
- Loans
- Real estate
- Other investment portfolio (e.g. foreign securities

Type of risk associated with the investment

The types of risk pension fund managers are been confronted with include the following:

- Interest rate risk
- Exchange rate risk
- Inflation rate risk
- Default risk
- Risk of non payment of dividend

Factors that influence pension fund managers' investment decision

The pension fund managers consider the following factors when they are investing:

- Safety - Investments should be in low risk ventures
- High Yield - The returns on the investments should be appreciable
- Liquidity - Ensuring that a certain level of investment is maintained in cash ratio to enable the Trust meet its obligations when they are due.
- Maintenance of Assets Value - Ensuring that the value of the investments is not eroded by an inflationary economic environment.
- Harmony with Public Interest - Ensuring that some of the investments are geared towards the achievement of national economic development programmes as well as providing physical benefits to the public
- Diversification - Ensuring that the portfolio mix is adjusted in the light of changing environmental circumstance.

5.3 Concluding Remarks

The study seeks to examine the factors pension funds managers consider when choosing a particular type of investment. To appreciate the research issues raised in the study and to place the relevant literature in context, as well as to generalize the study to some extent, a thorough review of the secondary data was made. Besides, resource persons from the SSNIT and GUSSS were interviewed to expatiate on the activities and investment process of pension funds in Ghana.

The outcome of the study indicates that pension funds in Ghana are invested in well diversified portfolio and therefore assumed only the market risk. Moreover, investments are made based on the following guide:

- Safety - Investments should be in low risk ventures
- High Yield - The returns on the investments should be appreciable
- Liquidity - Ensuring that a certain level of investment is maintained in cash ratio to enable the Trust meet its obligations when they are due.
- Maintenance of Assets Value - Ensuring that the value of the investments is not eroded by an inflationary economic environment.
- Harmony with Public Interest - Ensuring that some of the investments are geared towards the achievement of national economic development programmes as well as providing physical benefits to the public
- Diversification - Ensuring that the portfolio mix is adjusted in the light of changing environmental circumstance.

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5.4 Recommendations

The analysis has produced some interesting results and one avenue for future research is to extend the investigation to other emerging markets, especially those in the sub region. The incentives for further research on other emerging markets come from the limitation of the studies which currently exist. Further research should look at determinants of pension plan investment return.

Notwithstanding, the following are some suggested recommendations as a follow-up of the study:

I. Pension funds mangers should invest in assets with adequate yield and liquidity and an acceptable risk level. Managers must follow basic portfolio theory rules for asset diversification as they seek to maintain an optimal funding ratio and to secure long-term rates of return for the fund.

II. Pension fund managers should use hedging as financial tool to manage risk exposure.

III. SSNIT should embark on sensitization campaign to educate the beneficiary of student loan to repay their loan. They can also communicate to the guarantors of the student loan beneficiary to pursue them to repay the loan.

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APPENDICES

Appendix I

Questionnaire for Pension Fund investment decisions

Name of the institution .... Date ....

Position of the respondent ....

Type of fund (Public / Private) ....

Investment Policy/Practice

1. What year did the most recent actuarial evaluation of the pension fund take place?

....

2. What were the estimated gross liabilities of the pension fund in that evaluation?

....

3. What was the ratio of assets to liabilities at the time of this actuarial valuation?

....

4. Does the fund have a target funding ratio (i.e., ratio of assets to liabilities) and if so, what is the target? Yes/No ………………… If yes, target ratio…………………………

5. What is the total value of the pension fund? ……………………………………………

Amount…………… Date of valuation…………………………

6. What is the method of valuation of assets used?

Marked to market…………….... Book value …………..Other/combination…………

7. Indicate investment opportunities are available to pension fund managers.

………… Government bonds ……….. Bank deposit ………… Equities

…………… Loans ……………. Corporate bonds ……….. Real estate

………… Foreign securities ………..... Other (describe)

What proportion of the assets of the pension fund at the time of this valuation fell into each of the following categories?

………… Government bonds ……….. Bank deposit ………… Equities

…….. Loans …… Corporate bonds ……….. Real estate …………Other (describe)

9. Indicate the type of risk associated with each type of investment

....

....

....

....

....

....

10. Does the board/governing body produce a written investment policy?

Yes............ No.........................

If so, how often are major revisions made?

At least once a year............ 2 - 5 years....... Only when required...........

11. Does the board/governing body approve new investments or sales of existing assets above a certain value, and if so, what is that value?

Yes........... Value........... No........................

12. Please indicate which of the following items is included in this investment policy?

Short-term target rate of return on assets ....

Long-term target rate of return on assets ....

Quantified asset allocation guidelines ....

Target measures of risk or volatility of returns ....

13. Are there explicit mandates for investment in any of the following assets?

Government bonds………. State/provincial/municipal bonds ……………………..

Social projects (e.g., urban housing) ……….. Economic development……………..

Other (please specify) ……………………………………………………..

14. Are there explicit restrictions against investments in any of the following:

Foreign securities ………… Equities ………….. Loans …………

Other (please specify) ………………………

15. Indicate the general factors that the pension fund managers consider when choosing to invest.

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

16. Are there government restrictions and social mandates influence fund managers investment decision? Yes…………… No ……………

If yes indicate as below

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Government restrictions ……………………………………………………………………………

……………………………………………………………………………………………………

Social mandates…………………………………………………………………………………...

……………………………………………………………………………………………………

17. If quantitative investment limits are used, please indicate the minimum/maximum that apply to the following assets:

Security	Minimum	Maximum
Government bonds	……………	……………...
Corporate bonds	……………	………………
Listed shares	……………	………………
Non listed shares	……………	………………
Mutual funds	……………	………………
Other (describe)	……………	………………
Foreign securities	……………	………………

18. What was the gross rate of return on all assets of the fund in 2007 …….

2008………..

19. What proportion of the investment portfolio is managed externally?

……………………

20. If external asset managers are used, are the criteria for their selection explicit written down?

Yes ....   No ....

21. Are independent performance reviews used on a regular basis? Yes ....
No...............

22. If external managers are used, how often is their performance subject to review?

....

23. Is performance monitored against explicit benchmarks for each type of asset?

Yes.........   No ....

Please use another sheet if the space provided for the questions is not enough.

Thank you for your time and cooperation.