

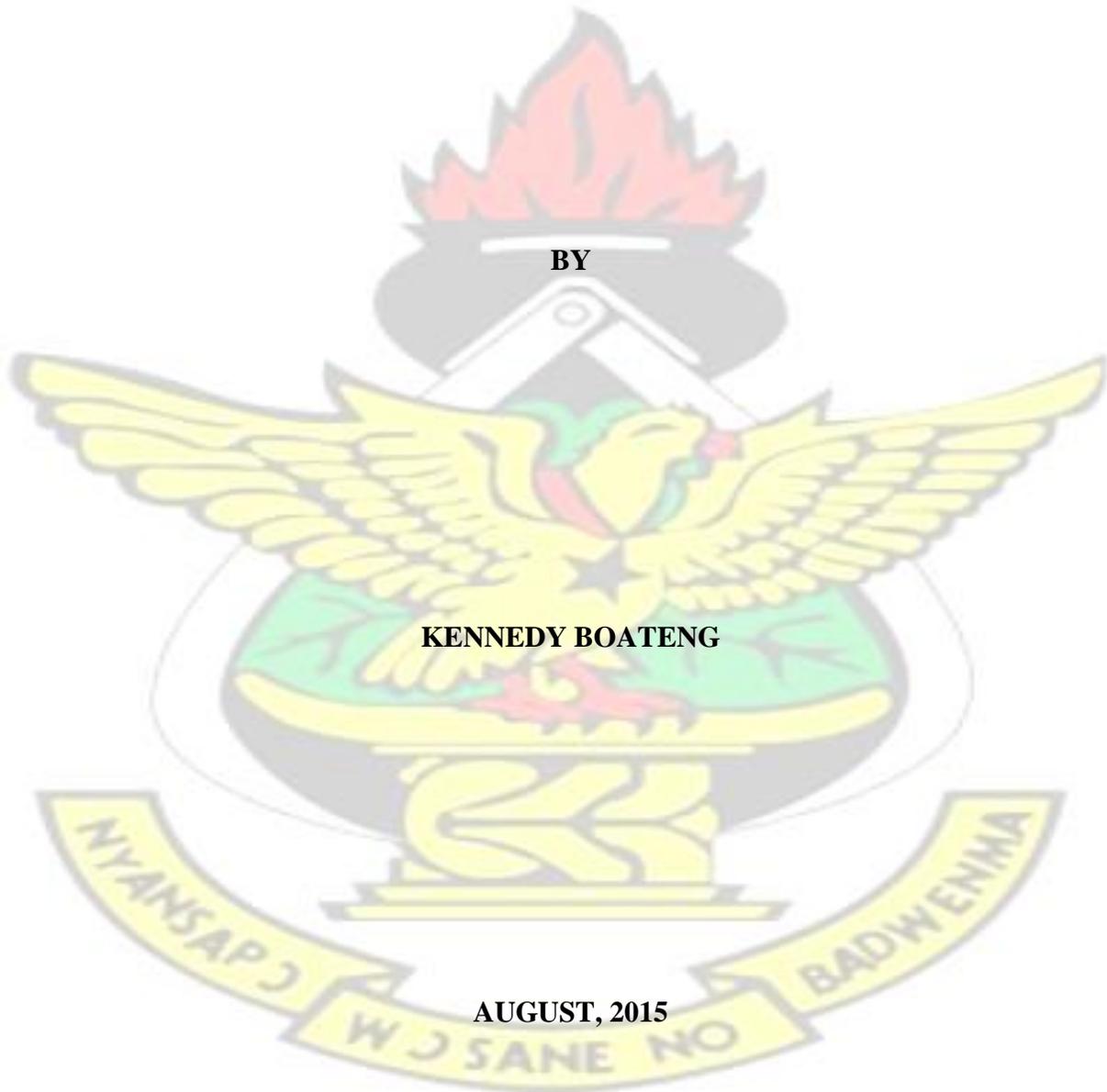
**EVALUATING THE PERFORMANCE OF PENSION FUNDS:  
A CASE STUDY OF SOCIAL SECURITY AND NATIONAL INSURANCE TRUST  
(SSNIT)**

**KNUST**

**BY**

**KENNEDY BOATENG**

**AUGUST, 2015**



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**A THESIS SUBMITTED TO THE SCHOOL OF BUSINESS, KWAME NKRUMAH  
UNIVERSITY OF SCIENCE AND TECHNOLOGY IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION IN FINANCE**

**AUGUST, 2015**

## Declaration

I hereby declare that this submission is my own work towards the MBA and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any degree of the University, except where due acknowledgment has been made in the text.

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(Supervisor)

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**JOSEPH M. FRIMPONG**  
(Dean, KNUST School of Business)

.....  
Signature

.....  
Date

## **DEDICATION**

This work is dedicated to my parents, Mr. S.K. Boateng and Mrs. Vida Serwah for their support.

Secondly, to Anita Adu-Gyamfi for her moral support and prayers.

Finally, to Mr. Raphael K. Tuffour, former Controller & Accountant General, Ghana for his endless love and support.



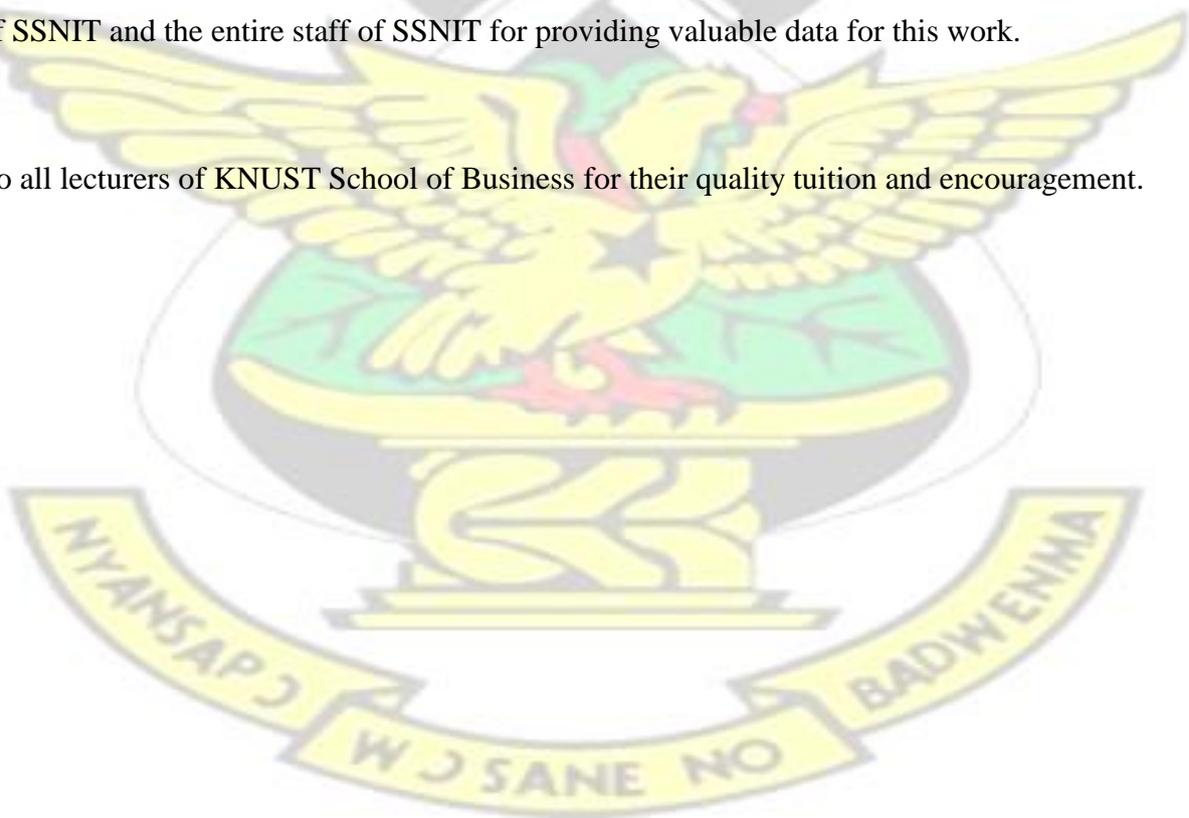
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Special mention must also be made of Ms Evangeline Amegashie, Corporate Affairs Manager of SSNIT and the entire staff of SSNIT for providing valuable data for this work.

To all lecturers of KNUST School of Business for their quality tuition and encouragement.



## ABSTRACT

The Social Security and National Insurance Trust (SSNIT) has a primary responsibility to collect contributions to pay pensions and other benefits as they fall due. In fulfilling this responsibility, the funds collected are invested to generate additional income to add to the contributions of members. However, in recent times concerns have been raised on the scheme's low investment returns. This research sought to evaluate the performance of SSNIT investments returns from 2004 to 2013. The Evaluative research design was adopted in this research and the results showed that the returns on SSNIT investment were generally below the general market returns (Ghana Stock Exchange) on absolute basis. The effect of inflation on the returns of the fund was significant with the fund recording negative real return in some years. It was also found that inadequate investment expertise at SSNIT may have contributed to the low returns recorded by the organization. However, further measure of performance on risk-adjusted basis using the three widely used indexes (Jensen alpha, Sharpe ratio and Treynor index) revealed that, SSNIT portfolio manager outperformed the market. Again, SSNIT portfolio was found to be less risky than the market. It was also found that Investment Monitoring Capacity, Industry and regulatory challenges, Currency risks, Silence of the pension law on foreign investments, Political interference and others are some of the challenges encountered in the investment of SSNIT funds.

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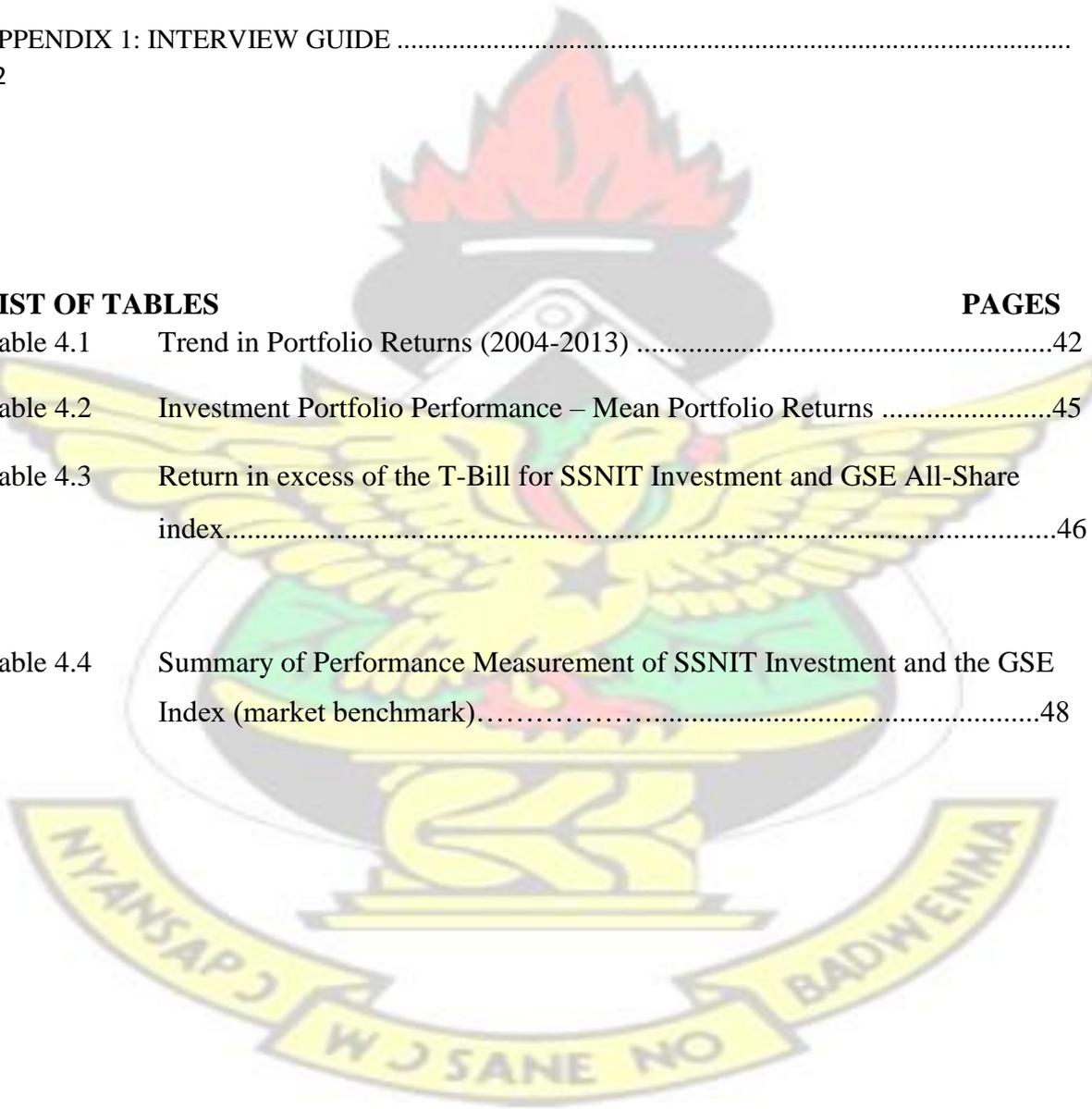
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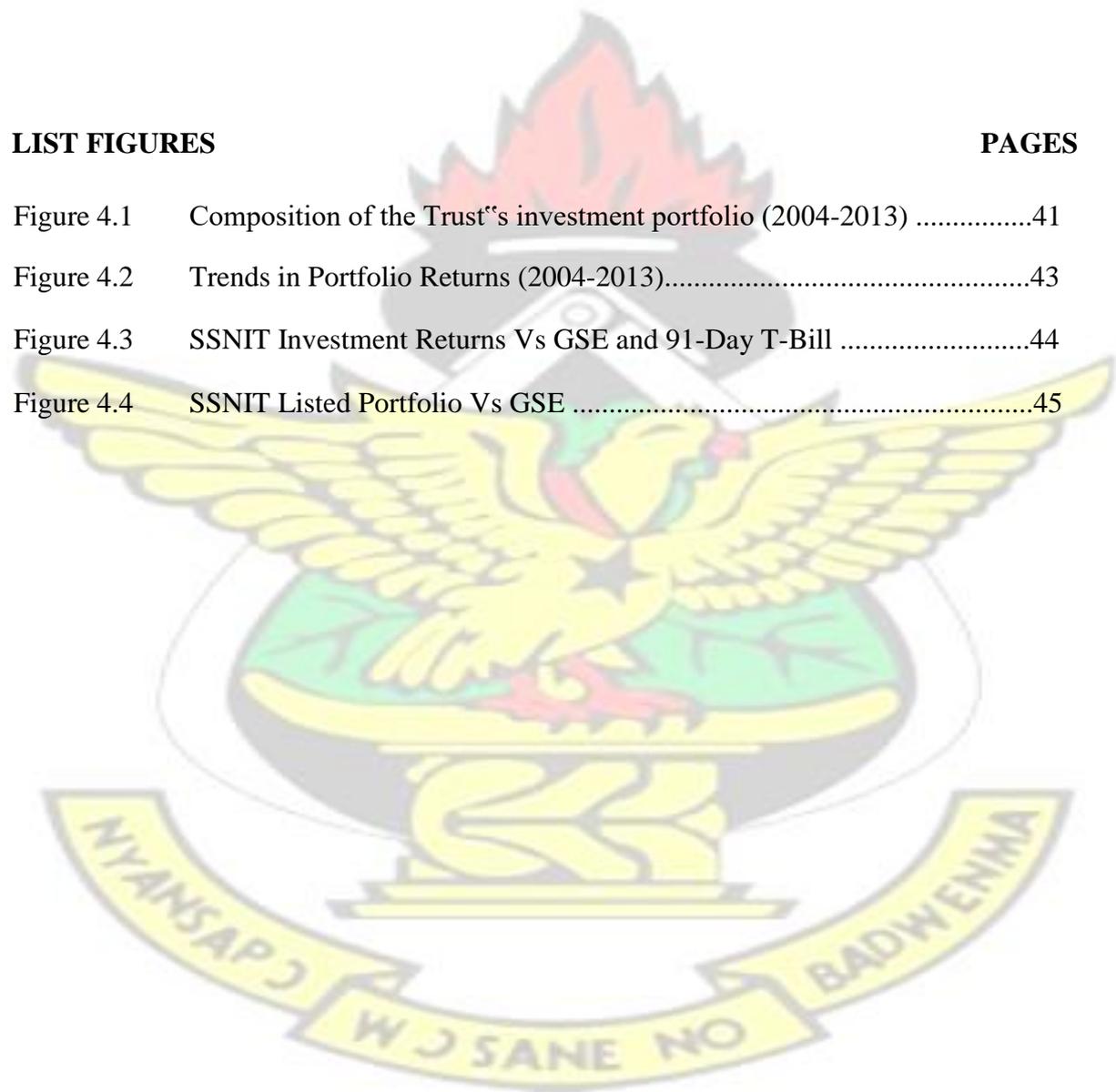
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## LIST OF ACRONYMS/ABBREVIATIONS

- CAP 30 - Capitation grant
- CAPM - Capital Asset Pricing Model
- GDP - Gross Domestic product
- GRE - Guardian Royal Exchange Assurance Group
- GSE - Ghana Stock Exchange
- ILO - International Labour Organization

- LAPF - Local Authorities Provident Fund
- NSITF - Nigeria Social Insurance Trust Fund
- NHIF - National Health Insurance Fund
- NSSF - National Social Security Fund
- PAC - Public Accounts Committee
- PND - People's National Defence Council
- PPF - Parastatal Pension Fund
- PSPF - Public Service Pension Fund
- RSA - Retiree Savings Account
- SSNIT - Social Security and National Insurance Trust
- T-Bill - Treasury Bill
- UK - United Kingdom



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

For many people in the world, pension funds serve a principal source of retirement income. Alliance Global Investors (2007) estimates that among the elderly population in Australia, Austria, France and South Africa 45%, 44%, 80% and 75% rely on pension income respectively. In reality, transferring wealth to later stages in life is done by saving up in earlier stages in life. This is to ensure regular consumption over a lifetime so that a certain standard of living for the individual can be maintained at retirement. Balancing income and wealth accumulation is through retirement savings in pension funds (Lise & Line, 2011).

In this light, governments in many countries worldwide recognize the importance of providing pension funds to cater for the ageing population as well as their dependants.

The management of pension funds in many countries is done by government institutions or private firms and are commonly run by a financial intermediary on behalf of the company and its employees. However, some larger corporations operate their pension funds in-house. Pension funds represent the largest institutional investors in many nations due to the relatively large amounts of capital they control. There are two main types of pension funds management that are widely used; defined benefit plan and defined contribution plan. There has been a gradual shift from defined benefit systems to other types of arrangements in which the provision of pensions is backed by assets, either in individual accounts or in collective schemes in an attempt to provide retirement income since the early 1980s. This change has been motivated principally by governments across the world seeking to lessen the fiscal impact of the ageing populations and to diversify the sources of retirement income. As a result, many pension systems are now

becoming asset backed. This has provided an increasing link between retirement incomes and the performance of these assets. The result is that, contributors are now exposed to the investment markets (with uncertainties) of to determine the level of benefits that they will receive.

.Many people do not have the interest or the knowledge to manage their retirement savings properly. Since pension funds are specialised in evaluating investment opportunities and the associated risks, a higher performance of its investments and thus utility maximisation is expected. As a result, the responsibility of accumulating and managing their wealth opportunities are transferred to institutional investors by way of pension funds. In Ghana, the Social Security and National Insurance Trust (SSNIT) is the statutory public organization in charge of the administration of National Pension scheme.

A pension fund's primary function is to invest contributions as optimally as possible, given selected investment strategies and the legal restrictions to portfolio management. Portfolio management according to Bodie & Marcus (2008) is defined by investments in asset markets, both domestic and foreign, where the objective is to provide adequate returns on investments at an acceptable risk level in order to finance the consumption needs of pension contributors in retirement. In line with this objective SSNIT invests in many areas of the economy such as the financial sector, real estate development, the hospitality industry, building of modern markets etc. in the country.

The introduction of pension payments in Ghana started in the colonial times when government introduced pension for a group of civil servants who were known as pensionable officers. A more national scheme was established by government which covered all workers

(both in the public and private sectors) in the early 1960's. Although the Trust was established to administer the National Social Security Scheme in 1972, it administered a provident fund until 1991 when this was converted into a pension scheme (SSNIT Annual Reports). The Social Security and National Insurance Trust is a contribution pension scheme where members contribute to a pool of funds throughout their working lives and receive pay outs after satisfying the qualifying conditions. In simple terms, the Social Security and National Insurance Trust is financed by the contributions of members and the investment income on the assets held by the Trust. Replacing part of income due to old age or loss of life is the primary responsibility of the Trust. As a result, there is the need to consider how much they should invest in risky assets in order to maximise the utility of the savings of contributors.

## **1.2 Problem Statement**

The main interest of investors as well as pension contributors is to maximize utility of their savings. At the same time they are bound by their risk profile. It is the primary function of pension funds to invest contributions as optimally as possible given selected investment strategies and the legal restrictions to portfolio management. Elton *et al.*, (2007) defines portfolio management as investments in asset markets, both domestic and foreign, where the objective is to provide adequate returns on investments at an acceptable risk level in order to finance the consumption needs of pension contributors in retirement. The debate with respect to the underlying principles of relating asset performance to benefits due to a rapid decline in asset values has been renewed recently. As a result, a considerable attention has been drawn to enhancing the organization and operation of pension funds. Most importantly the resources should be invested in viable projects with high returns to secure the future of workers.

As mentioned earlier, SSNIT have the authority to invest employees and employers contributions in order to pay adequate post-employment benefits (as pension) in Ghana.

However, reports in recent times indicate that returns generated from SSNIT's investments are inadequate and have undermined the profitability and utility of the scheme. The Chronicle newspaper on 19<sup>th</sup> August, 2013 had in its caption „PAC Grills SSNIT over Bad Investments“. According to the paper, the management of SSNIT was highly criticized by members of the Public Account Committee (PAC) of Parliament when they appeared before it to answer questions raised by the Auditor-General in relation to their 2010 finances audited report. This follows staggering revelations that some companies owned by the Trust were no longer profitable, after investment of huge sums of pension contributions into them.

Factors such as increases in pensions contribution pay out, increases in private pension fund management, low enrolment, lack of contribution by some private companies and small & medium scale enterprises highlight the need for good investment decisions and returns by the scheme to maintain the confidence of the people. This research seeks to evaluate the performance of investments made by SSNIT over the period from 2004 – 2013 taking into consideration risk.

### **1.3 Objectives**

The research seeks to achieve the following objectives;

1. To examine the return on the investments made by SSNIT.
2. To assess the risk associated with the returns on investments using the Capital Asset Pricing Model (CAPM)
3. To examine the challenges associated with the investments of SSNIT.

#### **1.4 Research Questions**

1. Are the returns on investment made by SSNIT satisfactory when compared with the prevailing market rates and the GSE All Share Index of return at the time?
2. Comparing the risk and return on investments, are workers contributions in danger?
3. What challenges does SSNIT encounter in their investments that affect returns?

#### **1.5 Justification**

In Ghana, SSNIT has the mandate to invest employees and employers contributions. Therefore, the organisation is required to invest in assets that are liquid and has the potential to yielding adequate returns at an acceptable risk level. According to Dei (2001) “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”.

This research would therefore help to answer the question of whether the Trust would be able to sustain the benefits paid to contributors based on the returns received from its investments.

This research on the investments performance would guide future decisions by employers and employees on whether to invest all their pension contributions with SSNIT or invest some portion with other private pension fund managers.

Secondly, it would help policy makers in identifying optimal portfolio decisions

Finally, this research will contribute to knowledge in pension fund management.

#### **1.6 Scope of the Study**

This study covers the period of 2004 to 2013.

Emphatically, the study will be restricted to figures from the audited financial statements provided by SSNIT. This is because until recently SSNIT has been the major pension fund scheme for most employees in Ghana until recently. That is, the research had to be restricted to SSNIT alone.

The study involved a desk research on issues relevant to the returns on the investments made by SSNIT to obtain primary data. However, secondary data was obtained from annual reports of SSNIT, treasury rates by Bank of Ghana and Ghana Stock exchange.

### **1.7 Limitations of the Study**

In conducting a research like this, several problems and constraints are expected. The main setbacks for the study include limited time that underlies the use of other financial models and the direct inquiry from officials of the SSNIT. This is due to the fact that, information depends on the goodwill of the officials involved, and the availability of relevant information and data.

### **1.8 Organisation of the Study**

This is where the structure of the final project is described.

This study looks at the performance of SSNIT by way of its investment returns. It is divided into five chapters. Chapter one opens the report and covers the background to the study, problem statement, the objectives of the research, methodology, justification, scope and limitations, and organization of the remaining chapters.

The second chapter examines the literature review and acknowledges what other authors have said about management of pension funds and their performance measurement tools. In

Chapter Three, the research methodology has been discussed.

Data Presentation and Analysis is found in the fourth chapter. It presents the analysis of performance of SSNIT using trend analysis and graphs. Chapter Four also focuses on the

discussion of findings. An examination of the performance of SSNIT is also carried out in this chapter. The findings, conclusions and recommendations are then given in chapter five.

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## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter gives a theoretical and empirical review of literature on pension funds. It highlights the performance indexes used to evaluate portfolios in literature and the risks

associated. It continues to describe the historical development of pension funds, the types of pension funds and their features, the investments of pension funds and their performance and concludes by reviewing the risks associated with pension funds' investments.

## **2.2 Risk and Return**

Investments are made with the anticipation of earning some returns. However, investors face variability in their capital gains and dividends as companies encounter variability in their project cash flows. To earn the return, the investor must accept the possibility of loss. Generally, all decisions involving investment takes into account a trade-off between risk and return. Investments differ widely in their risk and return characteristics. For instance, a bank savings account may offer immediate returns with little risk while others such as share may not offer immediate returns and may have a substantial risk. As the Capital Asset Pricing Model puts forward, return and risk are positively related; the higher the return, the higher the risk. Therefore, investors cannot expect higher returns without being willing to assume larger risks. With the assumption that all investors are rational, minimizing the risk they face for a given return will be their aim. According to Haslem (2003), empirical test of CAPM generally find that the trade-off relationship between risk and expected return is an upward positively sloped straight line. In the interest of investors to make sound investment decisions, it is important to evaluate the return and risk of various investment alternatives.

The concept of risk and return provides a convenient way of expressing the financial performance of an investment. According to Simons (1998), funds return can be expressed as changes in a fund's net asset value (assuming that all income and capital gains are reinvested) divided by the original net asset value.

### **2.2.1 Excess Return**

Investors evaluate returns of a mutual fund and other investment funds by comparing to some alternative investments.

In doing so, the fund should meet some minimum requirement, such as a return on a completely safe and liquid investment available at the time known as the risk-free rate of return. The 90-day Treasury bill is usually used as the risk-free. However, the rate of return in excess of risk free rate is not the only alternative for comparing funds return with other investments. Domestic funds are normally compared to the market indices like the S&P 500 (the most widely used benchmark for diversified equity funds). For some type of funds, other benchmark may be more appropriate. In the case of Ghana, the Ghana Stock exchange (GSE) would be the appropriate benchmark. To calculate a fund's monthly excess return, the monthly risk-free rate is subtracted from the fund's monthly return. It is also known as the risk premium ( $r_p - r_f$ ).

### **2.2.2 Risk**

Fund's returns are not the only interesting factor for investors, the risk taken to achieve those returns is also important. Risk plays a key role in the decision making process of both investors and companies. Therefore, it is important to quantify the risk associated with an investment. Risk often focuses on portfolio risk (mutual funds) as well as security risk. Risk is defined in different ways. The Business dictionary defines risk as the probability that an actual return on an investment will be lower than expected. It may also be defined as the uncertainty of the expected return and the uncertainty is usually equated with variability. As variability increase, investors also demand higher returns. Risk can also be defined as possibility of suffering harm or loss, since we would not perceive variability that brings greater returns as a risk. Risk is measured by the standard deviation ( $\sigma$ ) of the returns. It is calculated using either historical returns or the expected returns. Using historical returns, the standard deviation is given by;

$$\sigma = \frac{\sqrt{\sum (R_i - R)^2}}{n}$$

Where  $(R_i - R)$  is the difference between the returns ( $R_i$ ) and the mean return ( $R$ ),  $n$  is the number of time periods.

The standard deviation of excess returns over the risk-free rate is also used to measure a fund's risk.

In portfolio context, relevant risk is not an asset's own risk, but its effect on portfolio systematic risk. Investors are not rewarded with a risk premium for bearing the unsystematic risk. They are just rewarded for assuming the risk that cannot be eliminated through diversification. The total risk of a portfolio can be expressed as:

$$\sigma_{2i} = \beta_{2i}^2 \sigma_{2m} + \sigma_{2e}$$

Where;

- $\sigma_{2i}$  is the variance of the portfolio
- $\beta_{2i}^2$  is the systematic risk of the portfolio
- $\sigma_{2m}$  is the variance of the market portfolio
- $\sigma_{2e}$  is the variance of the portfolio's random error

### 2.2.3 Portfolio Theory and Capital Asset Pricing Model

According to Markowitz (1952) investors build their portfolios by choosing appropriate positions in risky assets and risk free assets depending on correlations between returns on risky assets and investors' attitude to risk.

The Capital Asset Pricing Model is an equilibrium model for expected returns of assets and relies on the following assumptions:

- Investors are rational and want to maximize their utility; risk are not taken for risk sake.

- All investors plan to invest over the same time horizon
- All information is freely available to investors and arrive at similar expectation
- There are no transaction costs
- Investors are able to borrow and lend at the same risk-free rate without limits;
- Investors hold diversified portfolios, eliminating all systematic risk.
- Capital markets are perfectly competitive
- Investment occurs over a single standardized holding period.

These assumptions imply that investors are rational and that all investors hold the same risky market portfolio. When asset market is in equilibrium, demand equals supply and the following relationship holds for all the assets in the market:

$$E(r_p) = r_f + \beta_p(E(r_m) - r_f)$$

Where

- $E(r_p)$  is the expected return on asset p;
- $r_f$  is the risk-free rate
- $r_m$  is the expected market return;
- $E(r_m)$  is the expected market return;
- $\beta_p$  is the beta of the portfolio (a measure of the relationship between asset's expected rate of return and the market expected excess rate of return).

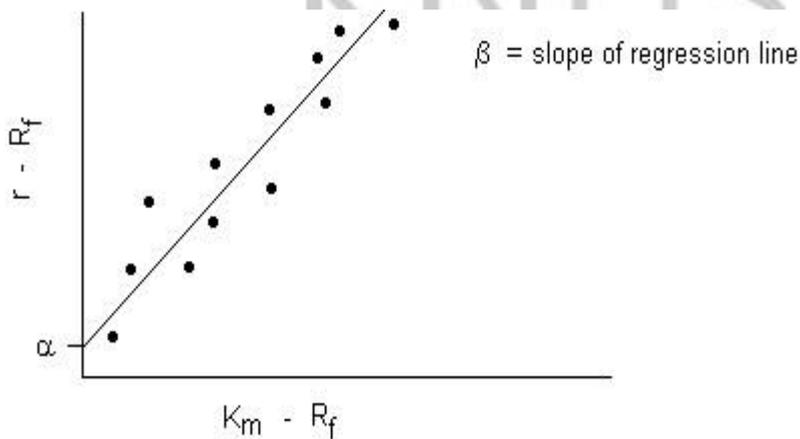
$$\beta_p \text{ is defined as: } \beta_p = \frac{\text{Cov}(r_p, r_m)}{\sigma^2}$$

Where;  $\sigma^2$  is the variance of the market portfolio. The CAPM measures the risk of an asset

by determining the asset's contribution to the market portfolio risk. This contribution is

measured by the asset's beta, and thus beta governs the expected rate of return on the asset

Another technique used to compute the beta by regression. This is done by comparing the historical risk-adjusted return (that's the return minus the return of risk-free rate) of the fund against those of an appropriate index. The least-squares regression is then used to fit a straight line through the data points as shown in the diagram below.



The general equation of this type of line in the above diagram is

$$r - R_f = \text{beta} \times (K_m - R_f) + \text{alpha}$$

Where;

$r$  is the fund's rate of return  $R_f$

is the risk-free rate of return

$K_m$  is the return of the index.

It should be noted that, except for alpha ( $r - R_f = \text{beta} \times (K_m - R_f)$ ), this is the equation for CAPM. Thus, the beta you get from Sharpe's derivation of equilibrium prices is essentially the same beta you get from doing the least-squares regression for the data.

From the diagram above, the slope of the line is the Beta. However, the vertical intercept, Alpha, indicates how much better the fund did than CAPM predicted. A negative alpha indicates much worse it did, probably due to high management fees).

By definition, the beta of the market is always 1 and act as a benchmark against which systematic risk of securities can be measured. The beta of a security measures the sensitivity of the returns on the security to changes in systematic factors. For example, if the beta of a security is 0.5 (that is, less systematic risk than the market) and the market returns increases by 10%, the return of the security will also rise by 5%. On the other hand, if the market returns falls by 10%, the return of the security will also fall by 5%.

### **2.3 Portfolio Performance Measurement**

Generally, measuring portfolio performance means, determining whether portfolio managers add value with respect to passive or naive investment strategies. “Under the assumptions of the Efficient Markets Hypothesis, it is difficult for managers to add value, so it should not be surprising to find that the different pension systems have had performances similar to their benchmarks”(Walker & Iglesias, 2010).

The question as to whether portfolio restrictions (given by regulations and the level of capital market development), coupled with the aggregate portfolio decisions have added value with respect to feasible alternative investment strategies is vital when considering the performance of aggregate pension funds. “Unfortunately, it is not possible to separate the impact of investment decisions from the impact of investment restrictions, which jointly affect performance”(Walker & Iglesias, 2010). Traditionally, much emphasis has been placed on short rates of return in the attempt to evaluate the performance of pension. It is the objective of mandatory funded systems to ensure adequate retirement income to individuals. In this regard,

monthly or annual returns of pension are not totally meaningful if they are not measured against a benchmark or against an objective.

As Walker & Iglesias (2010) puts forward, “it is important to keep in mind that all performance measures are relative measures that have to be compared against some kind of benchmark. To see if a pension system is doing a reasonable job in terms of the welfare offered to its members, using a (set of) benchmark(s) for comparison purposes is unavoidable”.

Two major issues come up in any performance ranking; how to choose an appropriate benchmark for comparison and; how to adjust a fund’s return for risk. In literature, there exist a number of performance measures that measure fund’s return relative to risk. However, they differ in how they define and measure risk and, consequently, in How they measure and define risk-adjusted performance brings about their differences. The commonly used of performance used measures are the Jensen Alpha, Sharpe index and the Treynor index.

### 2.3.1 Sharpe Index (SI)

Sharpe ratio is a widely used risk-adjusted measure of performance introduced by William Sharpe (1966). It is also known as the reward- to-variability ratio. It is given by;

$$SI = \frac{r_p - r_f}{\sigma_p}$$

Where;

- $r_p$  is the return on the portfolio
- $r_f$  is the risk-free rate of return
- $\sigma_p$  is the standard deviation of the portfolio.

This ratio captures the excess return generated by the portfolio in comparison to the amount of risk taken defined as standard deviation of portfolio. That is, a risk-adjusted measure of performance that standardize the return in excess of the risk-free rate by the standard deviation of the portfolio return. Since the Sharpe ratio evaluates a portfolio based on total risk, this ratio

is appropriate for not-well diversified investments. This is due to the fact that non-systematic risk contained in the portfolios standard deviation, cannot be diversified away. The Sharpe ratio is based on the MPT, and this ratio for the market portfolio is the slope of the capital market line. The reward-to variability ratio for any asset is the slope of the capital allocation line. “A portfolio that has a higher Sharpe Ratio than the market portfolio indicates that funds manager of this portfolio has outperformed market and the reverse is true” (Simons,1998).

### 2.3.2 The Treynor Index

This is a measure of portfolio excess return relative to its systematic risk ( $\beta_p$ ). The Treynor index is appropriate measure for well diversified investors since they are just interested in systematic part of the risk represented by  $T_p$ . “Treynor introduced the concept of the characteristic line whose slope measures the relationship between relative volatility of mutual funds returns  $\beta_p$  and the expected excess return” (Haslem, 2003).The Treynor index is calculated as follows:

$$T_p = \frac{r_p - r_f}{\beta_p}$$

Where;

$T_p$  = portfolio p’s Treynor index;  $\beta_p$  = the estimate of portfolio p’s beta.

As the market beta is 1, Treynor’s index ( $T_p$ ) for benchmark portfolio is  $(r_m - r_f)$ ; where  $r_m$  is the market return. “If  $T_p$  of the fund portfolio is greater than  $(r_m - r_f)$  then the portfolio has outperformed the market. However, if  $T_p$  of the fund portfolio is less than  $(r_m - r_f)$  then the portfolio has underperformed the market” (Treynor & Mazury, 1966).

### 2.3.3 Jensen's Alpha

“The Jensen (1968) Alpha or Jensen's differential return is the difference between a portfolio's actual return and its expected return given the portfolio's systematic risk and that CAPM holds” (Haslem, 2003). Jensen coefficient is not a relative value, but an absolute value. Significantly positive and negative alpha values are evidence of superior and inferior portfolio manager skills respectively. Higher manager skills represent the ability to select securities, low expense, and market timing. Statistically, if Alpha is equal zero, it indicates that performance is equal to that of the market index on a risk-adjusted basis. “A mutual fund's Jensen Alpha is correctly interpreted only relative to the market index's defined zero alpha. This is due to that fact that each asset's beta normally differs in size, and it makes performance comparisons among assets difficult” (Haslem, 2003).

Because the alpha is the difference between the realised and risk-adjusted return that should have been earned, the numerical value of alpha indicates superior or inferior performance. If the portfolio manager consistently does better than the Capital asset Pricing Model, Alpha takes a positive value. The Jensen measure is appropriate for funds whose portfolio are well diversified.

The Jensen Alpha equation is computed as follows:  $\alpha_p$

$$= r_p - [r_f + (r_m - r_f) \beta_p]$$

Where;  $\alpha_p$  is the Jensen Alpha

### 2.4 Historical Development of Pension Funds

The American Express Company in 1875 started Pension funds in United States of America. Although established in the 1800's real growth in retirement programs came after world war two. The rapid growth was attributed to high-profit taxes imposed on corporations which

encouraged some of them to establish pension plans; since the employer's contributions to qualify pension plans were not tax-deductible and therefore could be funded inexpensively.

Another factor that made the people in America conscious of the need to provide for their future economic security was the Depression of the 1930's. "The depression swept away the life savings of millions of people and created a feeling of insecurity" (Avrahampour, 2006).

The history pension funds in the United Kingdom dates back to the 1900's. Lloyd George, the Chancellor of the Exchequer under the government of Herbert Asquith. He raised government revenues by an additional £16million per year to pay these pensions. "The 1909 budget known as the People's Budget included increases in taxation. It was originally designed to help the poor and payable by age 70" (Avrahampour, 2006). By 1936, active membership of private pension funds had risen substantially. According to Avrahampour (2006), this was associated with a shift in benefit design from defined contribution to defined benefit. April, 1978 saw the introduction of an additional state pension which payable on top of the basic state pension (an earnings related pension). To provide guarantee to ensure the adequacy of pension funding, the Guarantee Minimum Pension was also introduced.

By 1891, it was possible for people In Germany who were over 70 years of age to obtain an old age pension. The imperial insurance code in 1911 introduced additional benefits. A few decades later the pension scheme was reformed – specifically in 1957. The pay-as-you-go scheme was introduced as well as a pension formula which calculated the earnings during old age based on the earnings obtained during the years a person was in gainful employment. Further changes in 1970 allowed the self-employed, students and housewives to profit from pension cover (Andrews, 2006).

In Nigeria, the National Provident Fund was established by an Act of Parliament in 1961. It was set up to provide protection for employees against income loss as well as to meet the

requirements of the International Labour Organization Social Security Convention 102 of 1952. The National Provident Fund covered only the private sector workers but was converted to a limited social insurance scheme in 1993. The new scheme administered by the Nigeria Social Insurance Trust Fund (NSITF) is self-financing and sustains itself from revenue generated from its operations.

In 2004, a law was passed by the Federal Government which assigned the administration, management, and custodian of the pension fund. “The Act mandated the Nigeria Social Insurance Trust Fund (NSITF) to set up its own pension fund administrator to compete with other fund administrators in the emerging pensions industry. As a result the NSITF incorporated the Trust fund Pensions Plc as a pension fund administrator in collaboration with other institutional investors and social partners” (Abubakar, 2009).

In Kenya, a system of pension fund was established after independence in 1963. The first post independent pension fund body, the National Social Security Fund (NSSF), was established in 1965 (RBA 2000). Prior to reforms, the pension fund system provided benefits workers retired who attained the mandatory retirement age of 55. “The guarantee was fixed as the worker’s full basic salary throughout his life or that of the widow as the law did not envisage a situation where the wife would support the husband. This law was embodied in the NSSF Act and the Pensions Act (Cap 189)” (Kakwani *et al.*, 2006). An independent body, Retirement Benefits Authority (RBA) supervised the pension fund system in Kenya since 2000 and continue to work to develop the industry and advise the government on pension policy reforms. Kenya’s pension fund system is made up of four schemes; the NSSF, Civil Servants Pension Scheme (CSPS), Occupational Retirement Schemes (ORS) and Individual Retirement Schemes. Overall the system is estimated to cover about 15% of the labour force and have accumulated assets of 18% of the GDP. “The pension fund system covers an estimated 2

million workers leaving an estimated 5 million workers uninsured under any retirement scheme, of which at least 10% are at or near the retirement age” (Kakwani *et al.*, 2006).

In Ghana as mentioned earlier, the Social Security and National Insurance Trust was established to administer the National Social Security Scheme in 1972. The institution administered as a provident fund until 1991 when this was converted into a pension scheme. A new reform bill has been passed which will allow the participation of private funds managers in the industry.

## **2.5 Types of Pension Funds and Features**

The difference in pension funds largely depends on who instituted them and the benefits derived. The process that each type of pension fund uses to decide on policies relating to investing and financing etc. is different from other competitors. Pension funds may be classified into two; defined benefit or defined contribution.

### **2.5.1 Defined Benefit**

A defined benefit plan is a pension plan that defines a benefit for an employee upon retirement. The pension paid to the retiree under this plan is calculated taking into consideration certain factors such as the number of years a person works, the members salary at retirement, age at retirement and a factor known as the accrual rate. According to The International Accounting Standards (IAS) 19, “for defined benefit plans, the amount recognized in the balance sheet should be the present value of the defined benefit obligation (that is, the present value of expected future payments required to settle the obligation resulting from employee service in the current and prior periods), as adjusted for unrecognized actuarial gains and losses and unrecognized past service cost, and reduced by the fair value of plan assets at the balance sheet date”. This means that the risk remains with the employer. Therefore the employee is obligated to provide the agreed amount of benefit to current and former employers. In a case where

pension plan allows for early retirement, payments are often reduced to reflect the fact that retirees will receive pension payments for longer periods. A defined benefit plan may be funded or unfunded. A funded plan is one which invests the contributions of both employers and members towards meeting the benefits to be paid in later years. On the other hand, an unfunded defined benefit pension sets no assets aside for investments. The benefit is paid for by the pension sponsor as and when they fall due. Most state pensions in the world are unfunded with benefits directly paid out of workers contributions and taxes. In a defined benefit plan any investment risks or rewards are assumed by the sponsor and the individual takes no responsibility for it. Under this arrangement the contributions made by each member are paid into his or her individual account. Contributions are then invested on money markets and other viable sectors of the economy. Again, the returns on the investment (which may be positive or negative) are also credited to the members' account. Therefore upon retirement, the benefits are paid based on the sum accrued to the individual member.

### **2.5.2 Defined Contribution**

Defined contribution plans have become widespread all over the world. Under this plan, a fixed amount of pension contribution is paid into a separate entity (fund). In the event where the fund does not have sufficient assets to cater for employees benefit in relation to the employee service in the current or periods, there are no legal or constructive obligation to pay further contributions. Under this plan, investments risk and rewards are assumed by the employee and not the sponsor. Many employers are avoiding the large expenses associated with using a defined plan and are instead offering a defined contribution plan to employees.

An occupation or employer pension is one created by an employer (company) for the benefit of its employees. A closed or open pension funds may also be identified. Open pension funds

support at least one pension plan with no restrictions on membership but a closed pension fund supports only pension plans that are limited to certain employees.

A public sector pension fund is regulated under public law while a private pension fund operates under private sector law. Public sector sponsored defined benefit plan covers employees working for federal states and local governments. Private sector sponsored pension plans are employment based plans established by firms. “Government-sponsored pension plans are countrywide, compulsory programs such as the social security system in the United States and the Canada and Quebec pension plans in Canada”(Masulem and Palacios, 2003).

However, both the public and private sector pension plans are subjected to the same financing, investment and organizational principles. It is the decision and policy implementation process that that differentiate them. For example investment policy decisions for public sector plans are made at public forums while the same decisions for private sector plans may be made behind closed doors by individuals with strong investment background.

### **2.5.3 Features of Various Pension Funds**

In the United States, the publicly provided pension benefit known as social security has a progressive benefit formula. There is also a means-tested top payment available for low income pensioners. “The current normal retirement age in the United States is between sixty five (65) and sixty seven (67) years. Eligibility depends on the number of years of contribution, with a minimum requirement of 10 years. Early retirement is possible from age 62 but with lower benefit. The first \$592 a month of relevant earnings attracts a 90 percent replacement rate. Earnings between \$592 - \$3567 a month are replaced at 32 percent. The ceiling for contributions and benefits is \$84,900 a year” (Whitehouse, 2007).

The United Kingdom has a two tier pension scheme as well as a large private pension sector. The two tier pension is made up of a flat rate basic pension and an additional earnings related pension. An income related pension aimed at helping the poorest pensioners was also introduced. Age sixty-five is the pensionable age and one need to pay social security for about 44 years(nine-tenth) of their working lives to qualify for state pension. However, there is a reduced pension available to those who do not meet the full condition. “The full basic state pension for a single pensioner was £3896 for the calendar year of 2002” (Whitehouse, 2007).

In Germany, age sixty five (65) is the pensionable age but can retire at age sixty three (63) with thirty five years of contribution. Germany has a single tier pension. “A year’s contribution at average earnings earns one point. Contributions are levied on monthly earnings between €325 and €4500 (2002 values). The floor and ceiling are equivalent to 12% and 163% of average earnings, respectively. The ceiling also applies to the number of points earned. Average covered earnings were €28,626 in 2002 equivalent to 86% of the earnings of the average production worker. For social assistance the benefit values is determined regionally. The government pays the health and long term care contributions of older social assistance recipients” (Whitehouse, 2007).

In Morocco, there are three separate schemes that cover civil servants, the military and other public sector workers. “Morocco's pension system currently includes a number of funds. There is a fund for public workers in civil and military fields (Moroccan pension fund, or CMR); a fund for private sector workers (CNSS) complemented by a scheme managed by the CIMR (Moroccan inter professional pension fund); and an organisation for those on State contracts (RCAR). Added to this are the various internal funds owned by certain public enterprises such as ODEP, ONCF, OCP and others” (Touahri, 2008). The pensionable age is sixty (60) years for both sexes but those who want to retire early can do so at age fifty five (55).

However, the employer must pay their pension between ages 55 and 60. Exceptions to this sixty year pensionable age are miners who have a pension-eligibility age that is lower than sixty (60) years. To qualify for a pension, one must have contributed for 3,240 days.

In Ghana, SSNIT operates a retired contribution plan with each member having a separate account. The scheme is financed by a combined contribution from employers and employees. Membership is compulsory for people who are not self-employed and work for companies or other employers and voluntary for the self-employed. It excludes members of the Armed forces, Diplomatic missions and Universities as these institutions have different schemes to cover the retirement needs of their members.

Currently the Trust pays old age pensions, invalidity pensions, survivors' benefits or health insurance benefits. The retirement age is between 55 and 60; one needs 180 months contribution to qualify for a pension. The lump sum is paid to members who would have qualified for a pension but did not meet the number of months' contribution required. The survivors benefit is paid to nominated or dependent members of the family of a deceased member who was receiving an invalidity or retirement pension or was still a contributing member before his or her death.

“Under the new three-tier system which became operational on 1st January, 2010 SSNIT now manages the first tier. The second and third tier will be privately administered by approved Trustees licensed by the National Pensions Regulatory Authority” (NPRA, 2015). The appointment of pension fund managers is by the Trustees. The pension fund managers will be required to achieve the best returns on the funds within specific investment parameters set by the Trustees.

## 2.6 Investments of Pension Funds

Pension funds invest in capital markets to make profit. The need for a lasting future economic recovery makes it appropriate for most pension funds to invest for the long term. In many countries, pension fund resources serve as the domestic source of long term capital. Initially the pension funds are channelled into safe investment areas. “As the funds mature some turn towards alternative investment vehicles, which in general have had better returns than pension fund portfolios, albeit with greater risk” (Vives,1999).

“The case of Chile, with its longer history, is illustrative of the possible evolution as funds mature and tends toward riskier portfolios, even within the very conservative limits set by regulations. At the beginning, most assets were invested in essentially risk free securities, as is the current case in Mexico. As time went by and capital markets developed, funds started to invest in mortgage bonds and corporate securities, to the point that in 1994 these represented a proportion similar to public securities.” (Vives, 1999).

The United Kingdom pension funds have increased their investments in hedge funds by significant proportions since the year 2006 and often outperform the broad stock market by wide margins. “The pension funds in Canada, Portugal, Holland, Switzerland, the United States and many others have also invested in hedge funds for profit. Though estimates vary, up to 20% of European and American pension funds and 40% of Japanese pension funds are thought to invest in hedge funds” (Stewart, 2007).

Two prime examples: “As of January 2, 2009, the two largest (United States) government pension funds investing in hedge funds were the California Public Employees Retirement System with a total market value of \$188 billion and the Ontario Teachers’ Pension Plan with \$108 billion in net assets” (Agarwal, 2010).

Other pension funds have taken to socially responsible investments and invest in areas like the energy sector. These investment strategies that seek to maximize financial return are thought to have the potential to yield the higher returns than those earned from investments in capital markets.

“Pension Danmark and PKA, two of Denmark’s biggest pension funds, acquired a 50 per cent stake in the Anholt wind park to be built by Dong Energy, the Danish utility, off the country’s north-east coast. The deal highlights growing interest in the investment opportunities surrounding renewable energy as well as the increasing importance of pension funds as a source of funding for the sector. Average annual returns from Anholt are expected to be at least double current Danish bond yields of just above 3 per cent over the wind farm’s 20-year lifespan” (Ward, 2011). In March 2009, the Danish labour market pension scheme, ATP invested \$400 million in the Hudson Clean Energy fund adding that investment in clean energy could grow to 2 to 3 percent of the portfolio. Denmark has been involved in clean energy research and technical development and its wind turbine technology is highly rated and used all over the world.

About 7 per cent of Danish teachers’ pension fund Laerernes Pension was invested in forestry by the last quarter of 2009; this is expected to produce a stable annual return of 10 per cent.

“Pension funds are increasingly moving into new asset classes in a search for yield. Infrastructure is a type of investment being frequently discussed, given its potential to match long-term pension assets and provide diversification. Previously, pension funds exposure to infrastructure has been via listed companies, or via real estate portfolios. However, some larger funds globally are beginning to invest via private equity funds, or occasionally even directly. Australian, Canadian and Dutch pension funds may be considered leaders in this field” (Inderst, 2009).

“In Canada, the Ontario Municipal Employees Retirement System (OMERS) has several billions of Can\$ invested in infrastructure through its subsidiary Borealis Infrastructure set up in 1998. The big US pension, CalPERS, adopted a new investment policy in 2008 with a target of 3% allocation of assets, or US\$ 7.2bn in infrastructure. Other US pension funds with infrastructure allocations or intentions include CalSTERS, the Washington State Pension Plan, Alaska Permanent Fund Corporation, Oregon PERD, and the World Bank. In the UK, a number of big pension funds (USS, BT and RailPen) have announced going into infrastructure in recent years” (Inderst, 2009).

Argentina, Columbia and Chile allow their pension funds to invest in infrastructure projects. “Pension fund managers in those countries are able to participate in infrastructure development programs and public services only indirectly by purchasing paper issued by specialized infrastructure investment funds or *títulos securitizados*”(Vives,1999). According to Vives, the investments in infrastructure provide higher returns for the pension funds than what is obtained by portfolios. As these higher returns are achieved in the long term, pension funds can wait till maturity since their liabilities are in the long term.

In Ghana, The Social Security and National Insurance Trust has for a number of years been involved in the real estate’s sector. From their 2009 annual report, SSNIT also invests in the manufacturing sector, hospitality industry, services, the banking industry, other financial houses, private equity funds, economically targeted investments and listed equities. “Unlike the PAYG financing scheme which does not generate appreciable surplus funds for investment, a partially funded scheme (SSNIT) accumulates substantial funds that must be invested prudently to ensure, that the contribution rate of the scheme is maintained at a stable level, over a long period of time. This entailed diversified investment of the scheme's resources into promising areas of the Ghanaian economy, in particular, the financial, manufacturing, service, residential and commercial properties” (SSNIT Annual report,2009).

Since the inception of the Ghana Stock Exchange in 1990, SSNIT has actively participated on it. “The GSE is a financial market in which financial securities that have been previously issued can be resold. The GSE makes it easier to sell financial instruments such as treasury bills, stocks of companies, mortgages and bonds to raise cash and provide more liquidity. The investment of SSNIT on this financial market was analysed, since a well-developed secondary market (GSE) makes the financial market an ideal place for SSNIT to 'warehouse' surplus funds until they are needed” (SSNIT, 2015). Currently, the Trust is among the largest institutional investor on the Ghana Stock Exchange; helping to develop and sustain the Capital Market in Ghana. SSNIT has adopted a partial funding design and the key result is that, it is able to accumulate huge reserves which are invested to generate income to augment the contributions of members. The investment policy guidelines seek to achieve safety, high yield, diversification and liquidity. The major investment objectives of the Trust are; to maintain a long-term optimum fund ratio through realization of real returns on investment, maintain a portfolio mix which ensures low risk on investments, and to ensure adequate liquidity to enable the Trust meet its obligation when due. However, Act 766 makes provision for the Investment Policy to be reviewed when necessary in line with guidelines issued by the National Pensions Regulatory Authority in consultation with the Board of Trustees.

One result of policies that seek to fulfil social objectives beyond the maximization of the fund value is poor asset allocation, which in turn may lead to low investment returns. “Studies show that asset allocation can explain up to 90 percent of the variability in return on assets over time”(Brison,*et al.*, 1991). This view is supported by Iglesias & Palacios (2000) who contends that “where asset allocation decisions are based on politics rather than on sound portfolio theory, investment performance is sure to suffer - to the extent that some countries' public

pension fund returns are consistently lower than interest rates paid by banks to individual savings accounts in those same countries”.

## **2.7 Performance of Pension Funds**

Equities serve as a major form of investments for most pension funds all over the world. It is not surprising to see that when the stock markets are doing well, pension funds tend to post strong results. In developed countries, pension funds are ranked among the largest institutional investors considering the assets under management. In recent years, new pension funds have been created in many countries while existing ones have been modernised in others. Special emphasis is placed on upgrading their investment policy framework and to strengthen their governance structure.

Over 10 years to December 2009, pension funds in most industrialized countries posted varied results. Pension funds in the United Kingdom made good returns in some years and not so good returns in others. “Majority of the United Kingdom’s pension funds posted double-digit investment returns for the year 2009 but the results were not that positive between the years 2005 and 2008. In 2008, the average UK pension fund achieved a weighted average return of -13.6%” (Clark *et al.*, 2007). In 2008, the Irish pension funds are said to have lost about 30% of their value. The world’s largest pension scheme (Japanese Government retirement pension plan) is said to be worth \$379bn and has more assets than the total GDP of Switzerland. However during the period when the Japanese economy witnessed a small economic growth, the government pension fund suffered serious setbacks as resources continued to diminish in direct relation to the weakness in the Japanese stock markets. In 2008, most pension funds in the United States lost some value with a number of them posting poor results. The retirement savings account is said to have lost about US\$2trillion in 2008.

The global financial crises affected many economies across the world with pension funds in different countries coming out as major casualties. However Germany seemed to have escaped these losses. They did so by investing a higher proportion of their pension funds in bonds. In Africa, Nigeria's pension fund also lost a significant portion of its value. In an article on the [allafrica.com](http://allafrica.com) website entitled „Nigeria Pension Asset and Global Meltdown“ dated 6th April, 2009 Abubakar Buba states that “In Nigeria, 7% of the total contribution to the Retiree Savings Account (RSA) which stood at N471.77 billion was lost due to crash in the equities market. Pension Fund Asset which had accumulated to an estimated value of N1.1 trillion as at December 2008 was ordinarily supposed to call for celebration for all stakeholders in the pension industry including the apex regulatory body but, the meltdown ensured they never did. In addition, RSA investment in equities which was 15.93% in 2007 crash landed to 9.52% as at the end of December, 2008. Unlike Germany, Nigeria had only about 32% of its total pension funds invested in Federal Government securities/bonds and 11% in real estate”.

In Ghana, SSNIT has invested in majority of the companies listed on the stock exchange. However in recent times, there have been several reports of inadequate returns generated from the investments of Ghana's pension funds, SSNIT. It was revealed in August, 2013 by the Public Accounts Committee of Parliament that some companies owned by the Trust were no longer profitable, after investment of huge sums of pension contributions into them.

Again in February 2010, was reported that SSNIT was making low returns on monies invested as only six out of forty companies the Trust had invested in were able to declare and pay dividends as of 2004. An article written by Frank Dewotor of the data bank group titled “Towards a Sustainable National Pension System” also goes to buttress the fact that the returns on investments were not satisfactory. There may be underlying reasons for the low returns.

According to Dewotor, “Other problems include SSNIT’s record of investing in many projects that have yielded negative real returns over the years due to political interference, lack of competition and probably inadequate investment expertise at SSNIT.” The nine-member Presidential Commission on Pensions also discovered that the SSNIT Pension Scheme had been mismanaged through, “reckless investments which have undermined the profitability and utility of the Fund and the Scheme. SSNIT in its present form will have to change. The governance has to change” (Ghanaweb.com).

## **2.8 Risks in Pension Scheme**

The component of risk in pension scheme is crucial and inevitable. According to Bikker *et al.*, (2009), risk in pension fund is a major issue of concern especially during times of bearish financial markets and numerous uncertainties. In most studies on pension funds, risk has been captured along the dimensions of default (from employers and employees), stock market, operational and liquidity risks.

A characteristic of Defined contribution schemes is the flexible mechanism it offers to save for retirement by enabling the members to share in investment returns. These schemes are designed in such a way to allow people who change jobs and those with intermittent employment to have regular and uninterrupted retirement income. Defined contribution schemes are normally employed by personal pension schemes. As a result it entails considerable amount of risk for individual members though every investment has risk. Barr (2002) contends that “both private and public pension systems are subject to risk and uncertainty”. The Business dictionary defines risk as the probability that an actual return on an investment will be lower than expected. Risk may be defined as the possibility of obtaining an undesired outcome. Daykin (2005) defines risk as "the possibility of something going wrong which will have unfortunate consequences, it will undermine the institution's plan or, will make it less likely that the institution's objectives will be achieved”.

These risks according to Daykin (2002) include market, economic, default, hedging or mismatching, management, interest rate, longevity, expense, political, insolvency, fiscal and operational risks. Market risk is whereby in adverse market conditions value of the investment in the individual account fluctuates and suffers significant falls in value. Economic risk occurs when the real rates of return on investments prove unsatisfactory as a result of factors such as mismanagement of the economy, high inflation, difficult economic conditions and low economic growth rates. Longevity risk has to do with improving the average life expectancy among the population. Actual and prospective annuitants are factored into the price of annuities and directly affect the amount of annuity which can be purchased. “To the extent that members are expected to draw down on their accounts and not be required to purchase annuities, the risk of long life of the individual member falls directly on the member and he or she runs the risk of exhausting his or her savings too early or leaving an excessive balance on his or her death”. This view is supported by Osei (2005) who also puts forward that “future improvements in mortality will result in pensioners receiving pensions for longer periods and consequently increase the cost of benefit payments”.

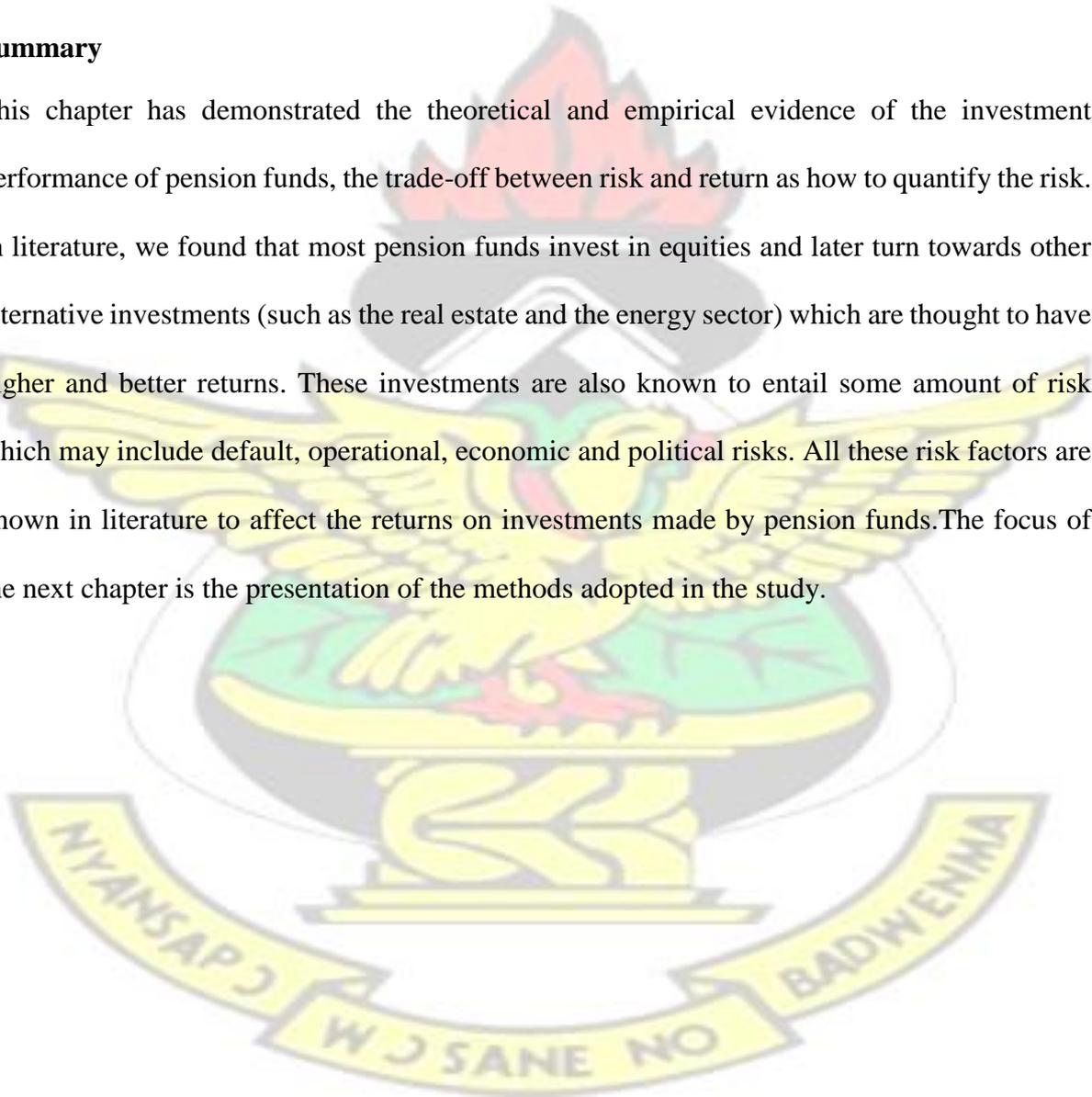
Operational risk occurs when managers of the scheme fail to exercise adequate operational controls that may bring about loss of information about the individual's accumulated contributions. This may also arise as a result of unexpected computer failure and force majeure (fire, flooding or other natural hazards). Operational risk may affect the performance of the pension manager in many other ways. For instance, the level of administrative expenses or deductions to generate profits may be too high, leading to an inadequate savings on the individual members. Political risk as put forward by Daykin (2002) occurs “when the government interferes in the operations of the pension system; reduce contribution requirements or direct investments towards social or political objectives, without regard to whether the returns are economic”. “The main risks that Defined Benefit pension funds are

exposed to are investment, inflation, and longevity risk” (Blome *et al*, 2007). These risks, according to Barr (2002), threaten the viability of all pension systems as they undermine output, or generate price inflation or both.

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## **Summary**

This chapter has demonstrated the theoretical and empirical evidence of the investment performance of pension funds, the trade-off between risk and return as how to quantify the risk. In literature, we found that most pension funds invest in equities and later turn towards other alternative investments (such as the real estate and the energy sector) which are thought to have higher and better returns. These investments are also known to entail some amount of risk which may include default, operational, economic and political risks. All these risk factors are known in literature to affect the returns on investments made by pension funds. The focus of the next chapter is the presentation of the methods adopted in the study.



## CHAPTER THREE

### METHODOLOGY AND ORGANISATIONAL PROFILE

#### 3.1 Introduction

This chapter contains the methodology used in this research. This study aims to examine the return on investments of SSNIT from 2004 to 2013, to assess the risk associated with the returns on investments using the Capital Asset Pricing Model (CAPM), and to examine the challenges associated with the investments of SSNIT. To achieve these objectives, it is important to design a research methodology that will provide relevant and accurate data. This chapter discusses the study organisation, study design, population and the basis on which samples were chosen and the data collection procedures adopted. Finally, it outlines how the data obtained are presented and analysed.

#### 3.2 Research design

As Saunders *et al.* (2012) puts forward, “there is no perfect solution to any research approach, only a series of compromises. Because there are various research choices, the researcher must justify the approach chosen since each technique is associated with distinctive means of collecting and analysing data”. The research design adopted in this study is evaluative. This research method was used because SSNIT was the only organization with the mandate to administer the Social Security Scheme in Ghana until recently. Evaluative study can be both qualitative and quantitative. Robson (2002) puts forward that, “it is an exploratory study which finds out what is happening; seeks new insights; asks questions and assesses phenomenon in a new light It is particularly useful if a researcher wishes to clarify an understanding of a

problem”. Evaluative research seek to assess or judge in some way, providing useful information about something other than what might be collected gradually from various sources in mere observation or investigation for relationship.

According to Weiss (1998), “evaluation is the systematic assessment of the operations and/or the outcomes of a programme or policy, compared to a set of explicit or implicit standards, as a means of contributing to the improvement of the programme or policy”. It seeks ideas that have already been found and put them together in a new way in order to arrive at a conclusion. Evaluation tends to provide reliable and accurate information for practitioners, service providers, and policy-makers to make an informed judgement of an intervention, a programme or service.

### **3.3 Sampling**

A purposive sampling method was used to select the respondent. In this study, the manager in charge of investments was chosen. This was because of the vital role played in the management of the SSNIT pension scheme. Again, this respondent was selected purposively to enable the researcher obtain data and information on the investments of SSNIT and how the funds are managed. Again, the period under consideration is from 2004-2013. Again this period of time was chosen because current relevant data and other financial data were available.

### **3.4 Data Collection**

Both primary and secondary data were used. According to Saunders, Lewis, and Thornhill (2012), “there are three main groups of secondary data; documentary data, survey-based data and those compiled from multiple sources”. Survey-based secondary data refers to data collected usually by questionnaires that have already been analysed for their original purpose.

“Survey-based data are collected through censuses, continuous or regular surveys or ad hoc surveys. Multiple-source secondary data can be based entirely on documentary or on survey secondary data, or can be a blend of the two” (Saunders *et al.*, 2012).

Saunders *et al.* (2012) are of the view that, documentary secondary data are often used in research projects that also make use of primary data collection methods. Documentary secondary data may include written materials such as notices, correspondence, minutes of meetings, reports to shareholders, diaries, transcript of speeches and administrative and public records. Written documents can also include books, journals and magazine articles and newspapers. “In addition documentary secondary data can be used to help to triangulate findings based on other data” Saunders *et al.* (2012).

This research utilizes the exploratory research method through the use of literature searches which yielded information on the current challenges SSNIT faces in the management of its investment. The search results help to better explain the extent of the problems the organization have with return on its investments.

Based on the preceding arguments, it seems reasonable that the approach adopted in this study should include both qualitative and quantitative methods as supported by Robson (2002).

Secondary data was gathered from SSNIT reports, and website. The returns received by SSNIT as per their financial statements are also analyzed. These returns are compared to the general rates that were prevailing in the stated period to draw conclusions on their adequacy. Validated interview guide was also used to obtain primary data which would yield information on the current challenges SSNIT faces in the management of its investments.

### 3.5 Data Analysis and Presentation

The returns received by SSNIT as per their financial statements are also analyzed. These returns are compared to the general rates that were prevailing in the stated period to draw conclusions on their adequacy. Primary data collected were screened and edited. Responses are carefully cross checked to determine the extent of accuracies, consistencies and appropriateness. Data would be analysed using Microsoft Excel and Statistical Package for

Social Scientists. Data would be presented in tables and graphs.

#### Portfolio returns

This is the yield on total amounts invested in the operations of SSNIT. The portfolio returns examined the nominal returns and real returns and compared the rates with T-bill rates and GSE All-Share Index. Real rates on investment were calculated as follows:

$$RR_{inv} = \frac{1 + \text{Nominal rate}}{1 + \text{Inflation rate}} - 1$$

### 3.6 Organisational Profile

The study was done using the Social Security and National Insurance Trust (SSNIT). It is a statutory public Trust with the mandate to administer Ghana's National Pension Scheme. Currently, the Trust is the biggest non-bank financial institution in Ghana. Its primary responsibility is to replace part of lost income of workers in Ghana and/or their dependants due to old age, invalidity and payment of benefits of deceased to their surviving dependants. The Social Security and National Insurance Trust was established to administer the National Social Security Scheme in 1972. The institution administered as a provident fund until 1991 when this was converted into a pension scheme.

The Trust has a board of Trustees who are responsible for its policy direction. The Trustees have representations from government, employers and workers.

The Director General is the head of the day-to-day administration of the Trust. There are nine (9) General Managers in charge of Investment and Development, General Counsel, Finance, Operations, Management Information Systems (MIS), Administration and Human Resources, Benefits, Medical and Special Projects. The Trust also has Area and Branch Managers who are responsible for the core business of SSNIT and Heads of Department who provide advisory and support services.

Its mission statement is “to provide cutting-edge income replacement schemes through improved business oriented methods and state-of-the-art-technology for the benefit of stakeholders and Ghanaians by professional dedicated and quality driven leadership and staff”. The intention is to make SSNIT's products the preferred retirement scheme. The primary objective of SSNIT vision statement is “to develop SSNIT into a world-class pension administration institution dedicated to the promotion of economic security of the Ghanaian worker through prudent investment mechanism” (SSNIT, 2015).

Currently, the pension scheme administered by SSNIT has about 1.2 million active registered members and over 140, 000 pensioners who collect their monthly pension from SSNIT.

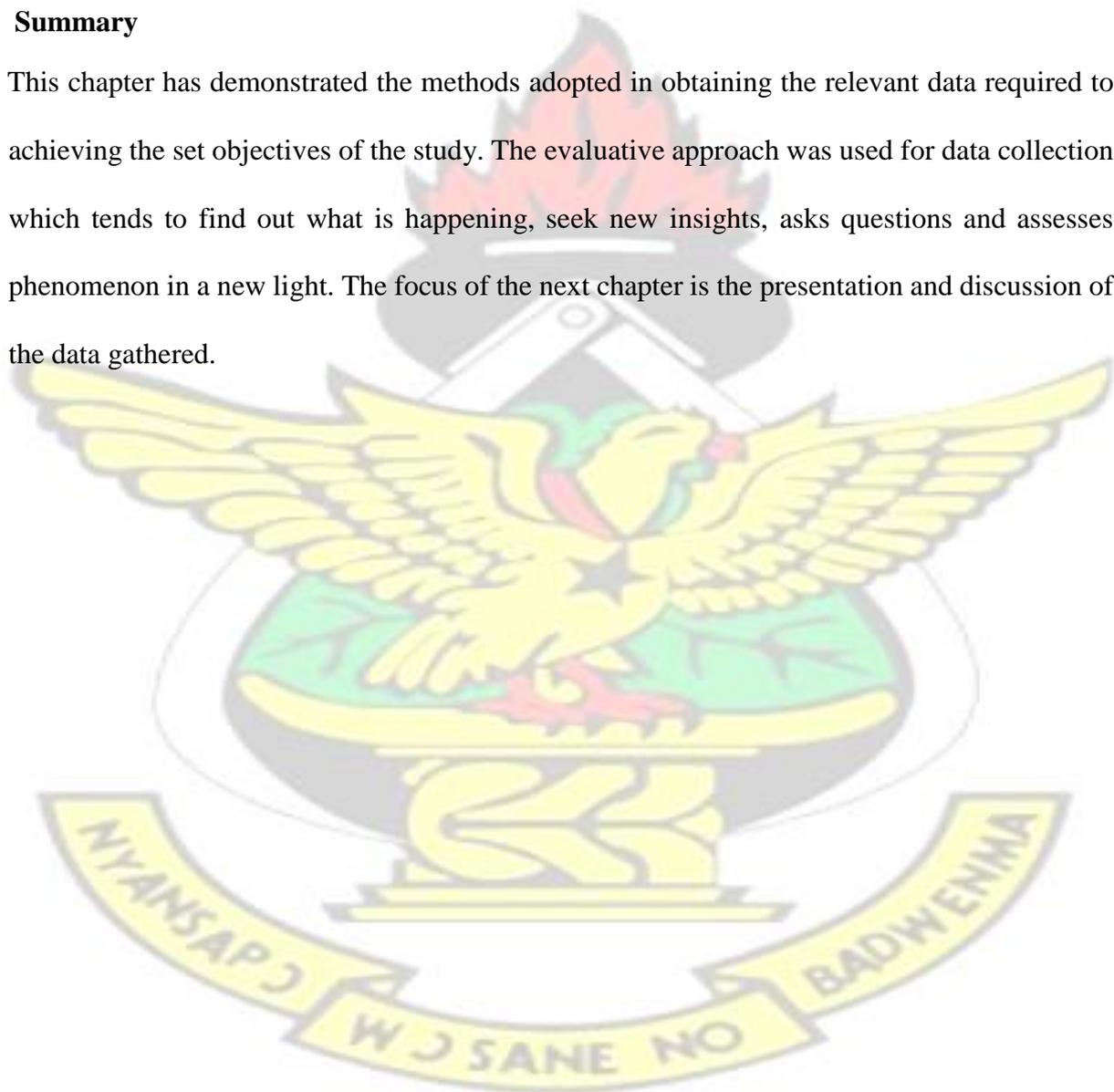
SSNIT is governed by the National Pensions Act 2008; (Act 766) which has a contributory 3tier Pension Scheme with SSNIT operates the first-tier scheme which is mandatory.

The contribution rates are; employers pay 13% of workers basic salary as workers pay 5.5% of their basic salary. Out of the 18.5% total, 13.5% is remitted to Mandatory first tier managed by SSNIT and 5% to the mandatory second tier, privately managed. The core business activities of the Trust are decentralised with most of the functions carried out in fifty

(50) branches. Their activities are monitored by eight (8) Area Offices and supervised by the Operations Co-ordinator. The management of the fund is done at the Head Office. The Trust has been in business of Social Security since 1965 and won the "Good Corporate Citizen Award" in 1998. It is a member of the International Social Security Association (ISSA) which is affiliated to the International Labour Organisation (ILO). In the south of the Sahara of Africa, SSNIT is the first Social Security Organisation to go Pension.

### **Summary**

This chapter has demonstrated the methods adopted in obtaining the relevant data required to achieving the set objectives of the study. The evaluative approach was used for data collection which tends to find out what is happening, seek new insights, asks questions and assesses phenomenon in a new light. The focus of the next chapter is the presentation and discussion of the data gathered.



## CHAPTER FOUR

### ANALYSIS AND DISCUSSION OF FINDINGS

#### 4.1 Introduction

In the previous chapter, the approaches used for data collection and methodologies used for data assessment have been provided. This chapter is devoted to the empirical evidence and assessment of the performance of SSNIT investments in the context of the general economic performance of Ghana. The 91-day treasury bill rates of Bank of Ghana was used as the riskfree rate whilst the GSE All-share Index is used as a benchmark that we expect SSNIT investments to outperform. Again, inflation used to adjust the nominal return to arrive at the real return of the Trust; since it reduces purchasing power. This chapter discusses the analysis of data that was gathered from the study. One objective of this analysis was to examine the performance of the investments made by SSNIT. The data used for this analysis is of both primary and secondary sources.

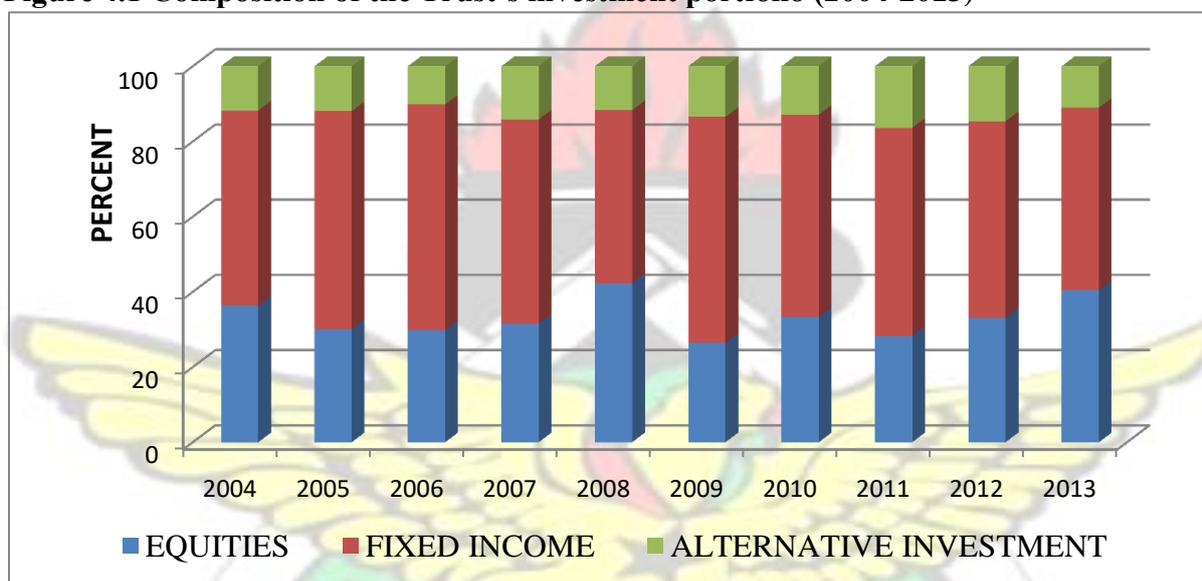
#### 4.2 Composition of SSNIT's Investment portfolio

Figure 4.1 presents the composition of the Trust's investment portfolio from 2004 – 2013. Per the Trust's Asset Allocation Policy, the portfolio structure translates into three main Asset Classes; Equities, Fixed Income and Alternative Investments as presented in figure 4.1.

Equities are made up of both listed and unlisted. Fixed income component comprise of Corporate bonds, Government bonds, Municipal bonds, Corporate lending, Government lending, Municipal lending, Treasury bills and Students loan. The Alternative investments component comprises of the Real estate, Private equity and Economic Targeted investments (ETI). The Alternative investment class has not seen much of SSNIT funds with its highest percentage of about 16.4% recorded in 2011 as revealed in figure 4.1. This may be due to small

local market and insufficient growth of the economy over the period. Fixed income constitutes the largest component of SSNIT's investment portfolio. The percentage of funds invested increased from 51.91% in 2004 to 59.95% in 2006. However, there was a sharp decline of about 14% from 2006 to 45.96% in 2008. However, 2009 saw the highest percentage of 60% and further decline to 48.56% in 2013. Equities are the second highest component of SSNIT's investment with an average percentage of 33% for the period under consideration.

**Figure 4.1 Composition of the Trust's investment portfolio (2004-2013)**



**Source:** Author's field data, 2015.

#### 4.2 Trend in Portfolio Returns

Figure 4.1 presents the line graph of the trend in portfolio returns of SSNIT from 2004 to 2013. This line graph shows a fall in the nominal returns from 2004 to 2005. It rose sharply in 2005 through 2007. The trust then recorded a decline in its nominal returns in 2007 up to 2009. The nominal return rose again in 2010 but not up to the levels experienced in 2005 to 2007. The values then fell in 2011. Nominal returns from 2011 to 2013 however, rose sharply beyond the levels experienced in the period of 2005 – 2007. For the ten year period, the trust recorded its highest nominal return of 34.4% in 2004 and the least (5.4%) in 2005.

The average inflation for the period rose from 2004 to 2005 but declined from 2005 to 2007. It then continued to rise from 2007 until 2009 where it declined till 2012. In 2013, average inflation began to rise. From the graph, it is observed that average inflation and nominal returns move in opposite directions.

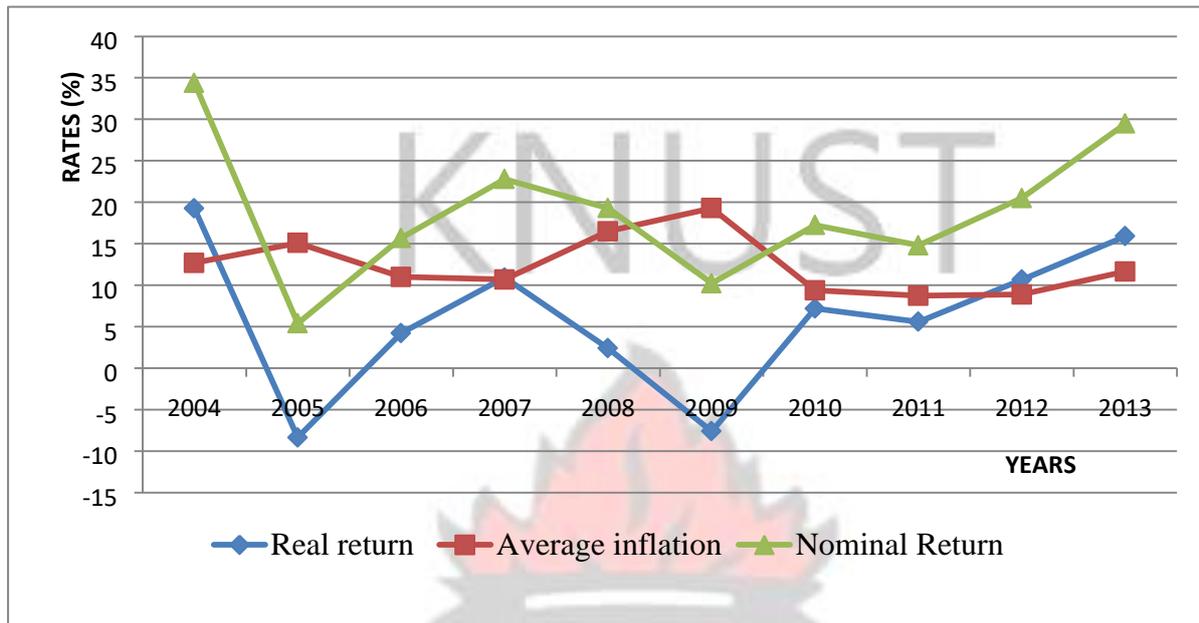
The values of the real return on the investment of SSNIT also kept fluctuating in the period under consideration. From its peak in 2004, there was a steep decline with the trust recording a negative real return of 8.36% in 2005. The value of the real return rose for the next two years; fell in 2008 before recording another negative value in 2009. It then rose from -7.60% in 2009 to 7.20% in 2010 but saw a marginal decline in 2011 to 5.59%. Real returns then began to rise from 2011 to 15.90% in 2013. The fluctuation in real return was caused in part by the fluctuations in the inflation rates. The effect of inflation on the returns was significant and this resulted in the lower real returns for the trust.

**Table 4.1: Trend in Portfolio Returns (2004-2013).**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Nominal Return</b>	34.40	5.40	15.70	22.80	19.30	10.23	17.25	14.81	20.50	29.48
<b>Average Inflation</b>	12.70	15.10	11.00	10.70	16.50	19.30	9.38	8.73	8.89	11.65
<b>Real Return</b>	19.25	-8.36	4.23	10.93	2.40	-7.60	7.20	5.59	10.67	15.90

**Source:** SSNIT Annual Report (2013)

**Figure 4.2 Trend In Portfolio Returns (2004-2013).**

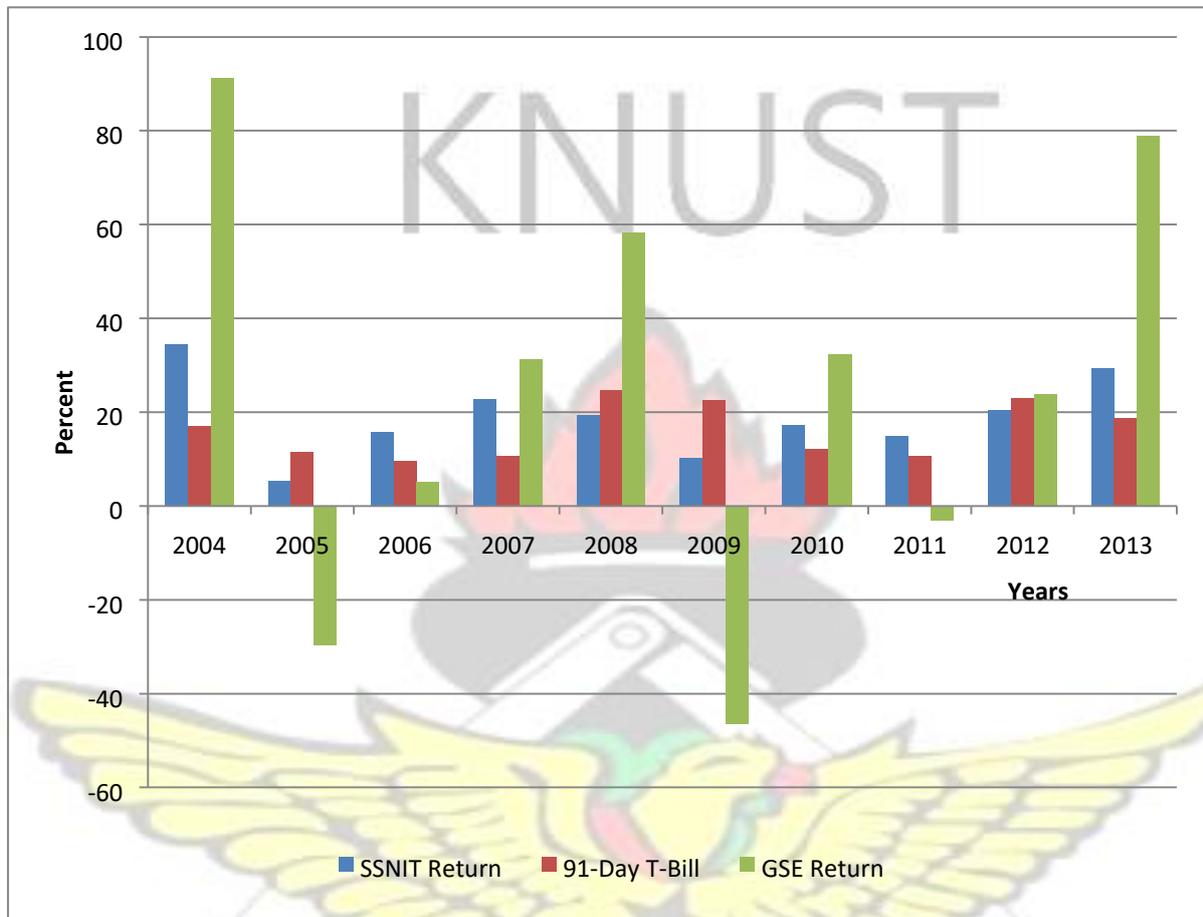


**Source:** SSNIT Annual Report (2013)

### 4.3 Comparison of SSNIT Returns, T-Bill and the GSE Index

A comparison of SSNIT investment returns from 2004 to 2013 and those of the GSE and 91-Day T-Bill of Bank of Ghana is presented in figure 4.2. From the graph, SSNIT's investment returns continued to underperform the market (the GSE) for the ten year period except in 2006 and 2011. This observation shows that SSNIT fund managers underperformed the general market on absolute basis. This could be attributed to the fact that managers might have invested in areas which had average returns less than that of the general market. However, these returns are not on risk-adjusted basis. With respect to the 91-Day T-Bill, the Trust's returns tend to alternate with that of the T-Bill in terms of performance. Additionally, comparing absolute returns, one is implicitly assuming that SSNIT Investments, The 91-Day T-Bill and the GSE index are equally risky.

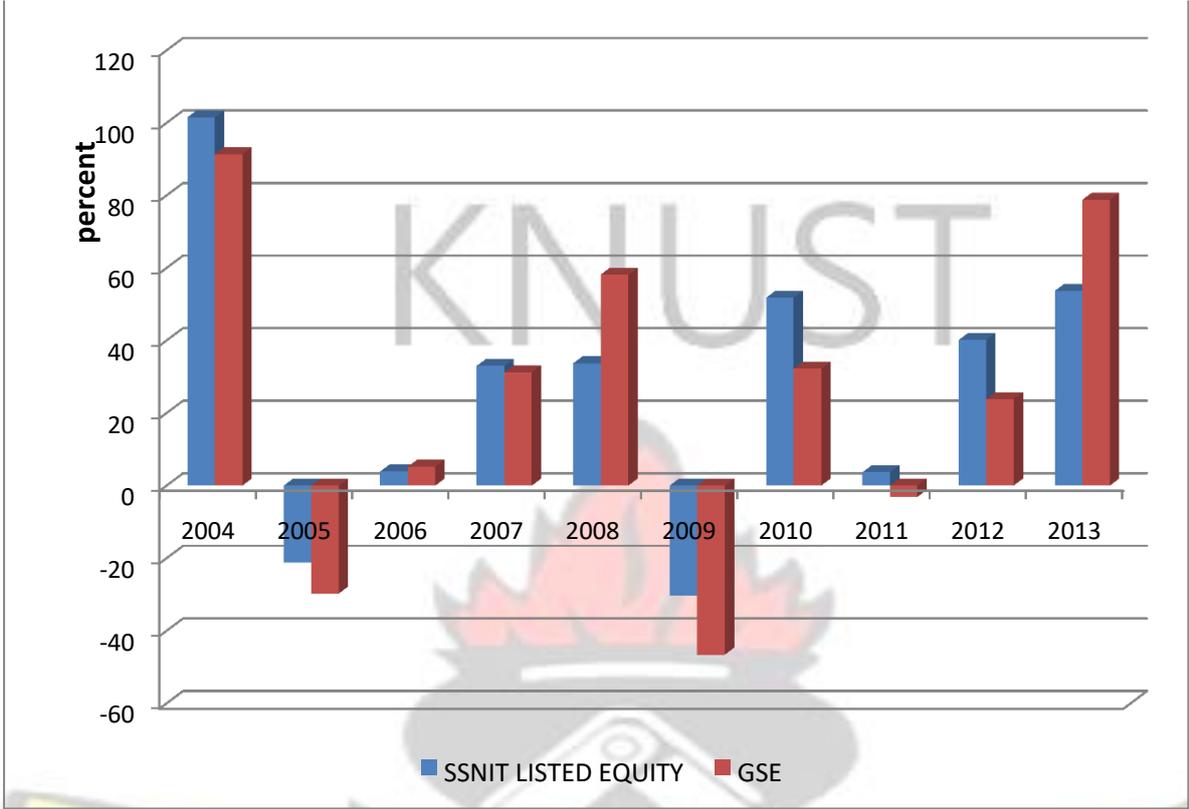
**Figure 4.3 SSNIT Investment Returns Vs GSE and 91-Day T-Bill**



**Source: Author's construct**

Figure 4.4 presents the performance of SSNIT's listed portfolio returns in comparison with that of the GSE index. From figure 4.4, it is evident that, SSNIT's listed portfolio did fairly well as against the general market index. SSNIT investments outperformed the general market in 2005 by about 10%. However in 2005, both investments recorded negative returns with the market recording the highest. In 2006, there was a marginal return in the market generally.

**Figure 4.4 SSNIT Listed Portfolio Vs GSE**



Source: Author’s construct

**Table 4.2 Investment Portfolio Performance – Mean Portfolio Returns**

	10-Year mean (2004-2013)	5-Year Mean (2009-2013)	3-Year Mean (2011-2013)
Nominal Return	18.81	18.47	21.77
Average Inflation	12.34	11.52	9.75
Real Return	5.76	6.23	10.96

Source: SSNIT Annual Report (2013).

Table 4.2 presents the ten, five and three-year geometric mean returns of the Trust’s Investments. This represents the long, medium and short-term performances of the Investment Portfolio. On average, the Portfolio’s Real Return on Investment (RROI) has exceeded the minimum Policy Benchmark of positive 3.25% as indicated by the long, medium and short-term performances. According to the 2011 external actuarial valuation of the Scheme,

at 3.25% RROI, the Fund could be sustained till the year 2032 and at 1.25% till the year 2030 (SSNIT Annual Report, 2013).

**Table 4.3 Return in excess of the T-Bill for SSNIT Investment and GSE All-Share Index.**

Year	Rm-Rf	Rp-Rf
2004	0.7423	0.1730
2005	-0.4112	-0.0600
2006	-0.4390	0.6100
2007	0.2061	0.1220
2008	0.3346	-0.0540
2009	-0.6908	-0.1227
2010	0.2000	0.0500
2011	-0.1377	0.0414
2012	0.0091	-0.0240
2013	0.6001	0.1070
<b>Total Excess Return</b>	<b>0.8086</b>	<b>0.2937</b>
<b>Average Excess Return</b>	<b>0.0809</b>	<b>0.0294</b>

Rp-Rf = Excess Return on SSNIT Investment (return on a risky investment in excess of the return on a risk-free investment)

Rm-Rf = Excess Return on GSE All-Share index (return on a risky investment in excess of the return on a risk-free investment).

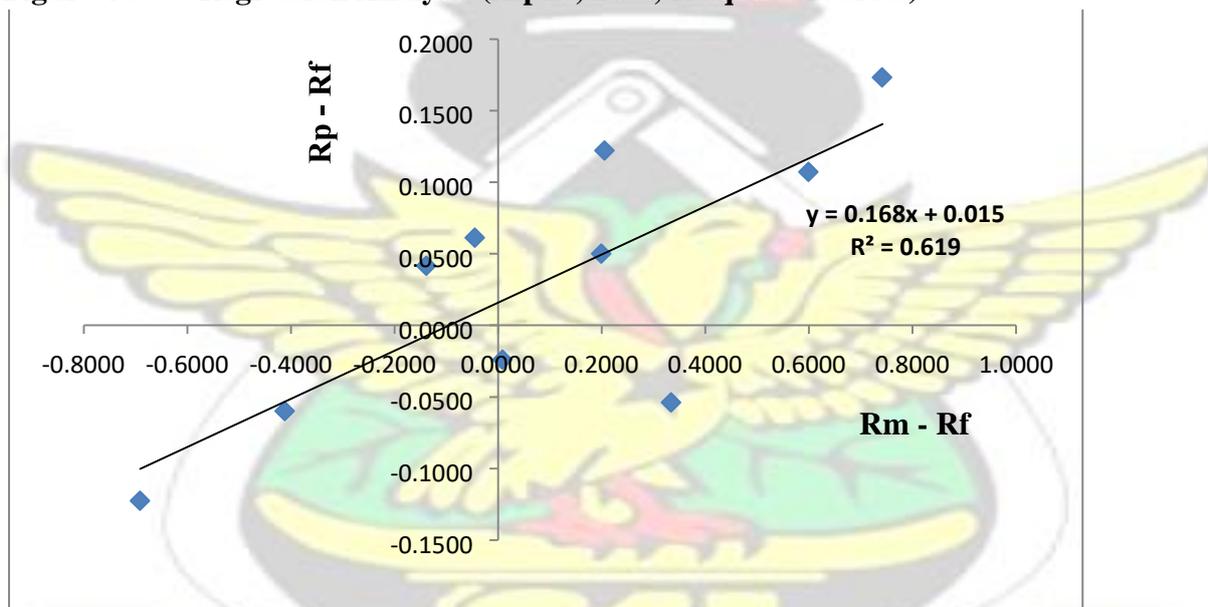
Return in excess of the T-Bill for SSNIT Investment and GSE All-Share Index are presented in table 4.3. From table 4.3 the average excess returns on SSNIT investment far below that of GSE index (benchmark) for the ten years period. Excess return on SSNIT declined from 17.30% in 2004 to -12.27% in 2009 and again declined from 5.0% in 2010 to -2.40% in 2012. However in 2013 there was an appreciation to 10.70%. On the other hand, the GSE excess return declined from 74.23% in 2004 to -69.08% in 2009 and further declined from 20% in

2010 to -13.77% in 2011. However, excess return on GSE increased sharply from 0.91% in 2012 to 60.1% in 2013.

This observation shows that SSNIT fund managers underperformed the general market (The GSE Index) on absolute basis. This could be attributed to the fact that managers might have invested in areas which had average returns less than that of the general market. However, these returns are not on risk-adjusted basis. Again, comparing absolute returns, one is implicitly assuming that both SSNIT Investments and GSE index are equally risky.

#### 4.5 CAPM Risk Measurement

**Figure 4.6 Regression Analysis (Alpha, Beta, R-squared values)**



The result of the linear regression analysis of the annual returns on SSNIT Investment and that of the market data in table 4.3 is displayed in figure 4.3. By comparing the historical risk-adjusted returns of the fund against those of the GSE index, and then using least-squares regression to fit a straight line through the data points as presented in figure 4.3, Beta is the slope of this line. From the graph the risk associated (Beta) with SSNIT investments is 0.168.

With a beta of 0.168, it indicates that the Trust's portfolio is less risky than the market.

#### 4.5 Performance of SSNIT Investment on a Risk-Adjusted Basis.

To compare returns, one needs to standardize for differences in risk. The Sharpe index, Treynor index and the Jensen alpha were used. This is supported by Nitish *et al.*, (2009) who put forward that “the commonly well-accepted methods or indexes in literature for evaluating performance of mutual funds and other portfolio are the Sharpe index, Treynor index and the Jensen Alpha. They all measure performance on risk-adjusted basis”.

**Table 4.4 Summary of Performance Measurement of SSNIT Investment and the GSE Index (market benchmark)**

	<b>SSNIT</b>	<b>GSE Index</b>
Total excess return	0.2937	0.8086
Standard deviation	0.0929	0.4356
Alpha	0.015	
Beta	0.168	1
Treynor Index	1.75	0.81
Sharp Index	3.62	1.92

Table 4.4 contains the Sharpe ratio and the Treynor Index. The co-efficient beta ( $\beta$ ) (the risk of the fund has been measured on the basis of annual returns for the –year period compared to that of the GSE index) and the Jensen’s Alpha ( $\sigma$ ). A portfolio with higher returns only is said to be good if the additional returns are due to smart investment with no additional risk taken. In general, both funds have earned excess return over the risk-free rate.

By comparing the Sharpe ratios of the two funds, SSNIT and the general market (GSE) have a Sharpe ratio of 3.62 and 1.92 respectively. From the point of view of Sharpe, SSNIT outperformed the market (benchmark) for the 10-year period. This indicates that SSNIT had a high risk-adjusted return per unit of total risk than the aggregate market portfolio (GSE index) for the period.

Another ratio for comparison is the Treynor which measures excess returns generated by a portfolio for each unit of market risk taken. According to Nitish *et al.*, (2009) this ratio is considered to be a better measure of performance since it takes into consideration the market

volatility; the higher the value of the ratio, the better the performance of the portfolio. From table 4.4, the Treynor index for SSNIT and GSE are 1.75 and 0.81 respectively. This indicates that SSNIT outperformed the general market (GSE index) on a risk-adjusted basis for the period.

From table 4.4 SSNIT has a beta of 0.168 and that of the market is taken to be 1. A beta of 0 implies that the asset is independent; prices are not correlated with the market. A positive beta implies that the asset generally correlated with whilst a negative means the asset does not follow the market. However, if a beta of a fund is 0.168, it indicates that the fund is less risky than the market. That is, when there is a rapid rise or fall in the market, the fund has a certain resilience which prevents wide volatility. Moreover, if the beta of fund is greater than 1, it indicates that the fund is more volatile than the benchmark index. Again if the market returns goes up by 10%, a fund with a beta of 3.0 should go up 30% and the reverse is true. From table 4.4, SSNIT beta of 0.168 indicates that the fund is less risky than the market for the period. This implies SSNIT investment was less volatile than the benchmark of the period under consideration.

Moreover, a positive Jensen's alpha for the period indicates that the manager of SSNIT portfolio is superior in stock selection compared to the market.

#### **4.6 Challenges associated with the investments of SSNIT**

The investment of SSNIT funds is characterized with a lot of challenges. These challenges can be put into three broad perspectives; internal challenges, Industry and regulatory challenges, and other challenges.

##### **1. Internal challenges**

***Investment Monitoring Capacity*** – To some extent, the Investment Division lacks the requisite capacity to effectively manage/monitor the assets of the Scheme due largely to the volume of transactions.

**Asset allocation policy (Target vs. Actual)** – Another significant challenge is the transition from the actual asset allocation structure prior to the adoption of the new guidelines, to the target allocation outlined in the guidelines.

## **2. Industry and regulatory challenges**

**Small country markets** – The local markets are small and fragile, except for regulated industries such as power, water, telecom, and mining. The insufficient growth of the economy until recently has also impacted negatively the prospects for many industries leading to a lack of attractive big-ticket investment opportunities.

**Corporate governance and building trust** –The incidence of breakdown in corporate governance and transparency tends to have substantial costs and adverse effects on investment returns. This is a major issue that is prevalent not only in Ghana but also in many countries in Africa.

**Legal and regulatory environment** – The securities regulatory environment is still evolving but the existing legal system in Ghana is reasonably adequate. However, law enforcement has been problematic due to lack of capacity. Also regulation is sometimes unclear and change without adequate notice, completely shifting the goal post for SSNIT's investee companies.

**Silence of the pension law on foreign investments** – The silence of the pension law on foreign investments and the general attitude towards foreign investments have made the rate of investing outside Ghana in order to diversify risks and enhance returns very slow.

**Limited exit opportunities** – This is a key challenge especially for both the Trust's private and public equity investments. The volume of equity transactions and the absence of liquidity through a regulated exchange make this risk real and prevalent. The Ghana Stock Exchange is thin and shallow and this makes getting in and out of positions

difficult.

**Currency risks** –The Ghanaian cedi has been unstable against the leading international currencies and this tends to have adverse effects on the Trust’s investment returns in certain instances.

**Inadequate infrastructural base** – The infrastructural base in Ghana is generally inadequate and this tends to hamper investment in certain industries and markets such as the real estate.

### 3. Other challenges

**Public Perception** – Occasionally an investment may go bad and it will become public knowledge. This tends to result in emotional public debates leading to erroneous conclusions about the status of the Scheme.

**Political Factor** – Usually the Board of Trustees is reconstituted whenever there is a change in Government. The public is therefore concerned that the Scheme is subject to political manipulation and abuse by both Government and SSNIT.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter is devoted to the findings, conclusions and recommendations this research; Evaluating SSNIT’s investment performance in relation to the GSE index and the Bank Ghana’s 91-Day Treasury bill.

## 5.2 Findings

### SSNIT return on investment

From the case study it was noticed that SSNIT's investment returns continued to underperform the market (the GSE) for the ten year period except in 2006 and 2011. This observation shows that SSNIT fund managers underperformed the general market on absolute basis. This could be attributed to the fact that managers might have invested in areas which had average returns less than that of the general market. However, these returns are not on risk-adjusted basis. With respect to the 91-Day T-Bill, the Trust's returns tend to alternate with that of the T-Bill in terms of performance. However, comparing absolute returns, one is implicitly assuming that SSNIT Investments, The 91-Day T-Bill and the GSE index are equally risky.

Though average inflation had a high effect on nominal returns, on average, the Portfolio's Real Return on Investment (RROI) has exceeded the minimum Policy Benchmark of positive 3.25% as indicated by the long, medium and short-term performances.

On a risk-adjusted basis for the period, SSNIT has a Sharpe ratio of 3.62 as compared to the market's 1.92. This indicates that SSNIT portfolio manager outperformed the market (benchmark) using Sharpe ratios. That is the Trust had a high risk-adjusted return per unit of total risk than the aggregate market.

Treynor index for SSNIT portfolio is 1.75 as compared to the market's 0.81 for the period under consideration. This indicates that SSNIT portfolio manager outperformed the market on risk-adjusted basis.

SSNIT has a positive Jensen's alpha for the period which indicates that the portfolio manager has a superior ability in the stock market selection.

Using the Capital asset Pricing model (CAPM), SSNIT has a beta of 0.168 and that of the market is taken to be 1. SSNIT's beta of 0.168 indicates that the fund is less risky than the market.

### **Challenges associated with the investments of SSNIT**

The investment of SSNIT funds is characterized with a lot of challenges. These challenges can be put into three broad perspectives; internal challenges, Industry and regulatory challenges, and other challenges.

#### ***Internal***

The Investment Division lacks the requisite capacity to effectively manage/monitor the assets of the Scheme due largely to the volume of transactions.

#### ***Industry and regulatory challenges***

The local markets are small and fragile, except for regulated industries such as power, water, telecom, and mining. The insufficient growth of the economy until recently has also impacted negatively the prospects for many industries leading to a lack of attractive big-ticket investment opportunities. The incidence of breakdown in corporate governance and transparency tends to have substantial costs and adverse effects on investment returns.

The securities regulatory environment is still evolving but the existing legal system in Ghana is reasonably adequate. However, law enforcement has been problematic due to lack of capacity. Also, regulation is sometimes unclear and may change without adequate notice, completely shifting the goal post for SSNIT's investee companies.

Moreover, the silence of the pension law on foreign investments and the general attitude towards foreign investments have made the rate of investing outside Ghana in order to diversify risks and enhance returns very slow.

Limited exit opportunities are a key challenge especially for both the Trust's private and public equity investments. The volume of equity transactions and the absence of liquidity through a regulated exchange make this risk real and prevalent. The Ghana Stock Exchange is thin and shallow and this makes getting in and out of positions difficult.

The Ghanaian cedi also has been unstable against the leading international currencies and this tends to have adverse effects on the Trust's investment returns in certain instances.

Inflation on the other hand has been high in the country and tends to negatively affect the returns of the Trust.

The infrastructural base in Ghana is generally inadequate and this tends to hamper investment in certain industries and markets such as the real estate.

#### ***Other challenges***

Occasionally an investment may go bad and it will become public knowledge. This tends to result in emotional public debates leading to erroneous conclusions about the status of the Scheme. Usually the Board of Trustees is reconstituted whenever there is a change in Government. The public is therefore concerned that the Scheme is subject to political manipulation and abuse by both Government and SSNIT.

#### **5.3 Conclusions**

From the comparisons of the findings and the objectives of the research, a number of conclusions could be drawn:

Despite several concerns raised by the public concerning SSNIT's investment, it can be said that SSNIT holds a more diversified portfolio which helps mitigate against risk. Basically, the work indicates that rates of returns are a very limited indicator of pension fund performance and that the reliance on this indicator can be counterproductive. Comparing absolute returns against a benchmark does not give accurate measure of performance. Risk-adjusted performance measure must be considered. Here, on a risk-adjusted basis, SSNIT outperformed

the general market (GSE index) for the period. Using the Capital Asset Pricing Model SSNIT portfolio is less risky than the market. Moreover, competition may not bring pension portfolios toward the optimal long-term allocation. Therefore, Social Security and National Insurance Trust (SSNIT) need to design and measure performance against optimal long-term benchmarks, the design of which would help optimize the value of the benefits received at retirement.

#### **5.4 Recommendations**

Based on the above conclusions the following recommendations have been proposed:

Despite insufficient growth of the Ghanaian economy, Management of SSNIT must identify and invest in areas and in companies where it can achieve appreciable returns. For instance, opportunities in the Energy and Real Estate sectors must be explored to add value and portfolio diversification.

There should be comprehensive training programs for investment staff to build their capacities. A continuous training program for investment staff would help equip their expertise and knowledge in portfolio management. This step may go a long way to help them compete favourably with other competitors in the industry.

The legal and regulatory framework of the scheme must be reviewed to allow for improved management control.

Finally, though it is evident that governments can play an important role in setting up these optimal benchmarks, they should not interfere in asset allocation. Managers should be given the independent role in allocating investment assets. This would enable portfolio managers exhibit their professional competence.

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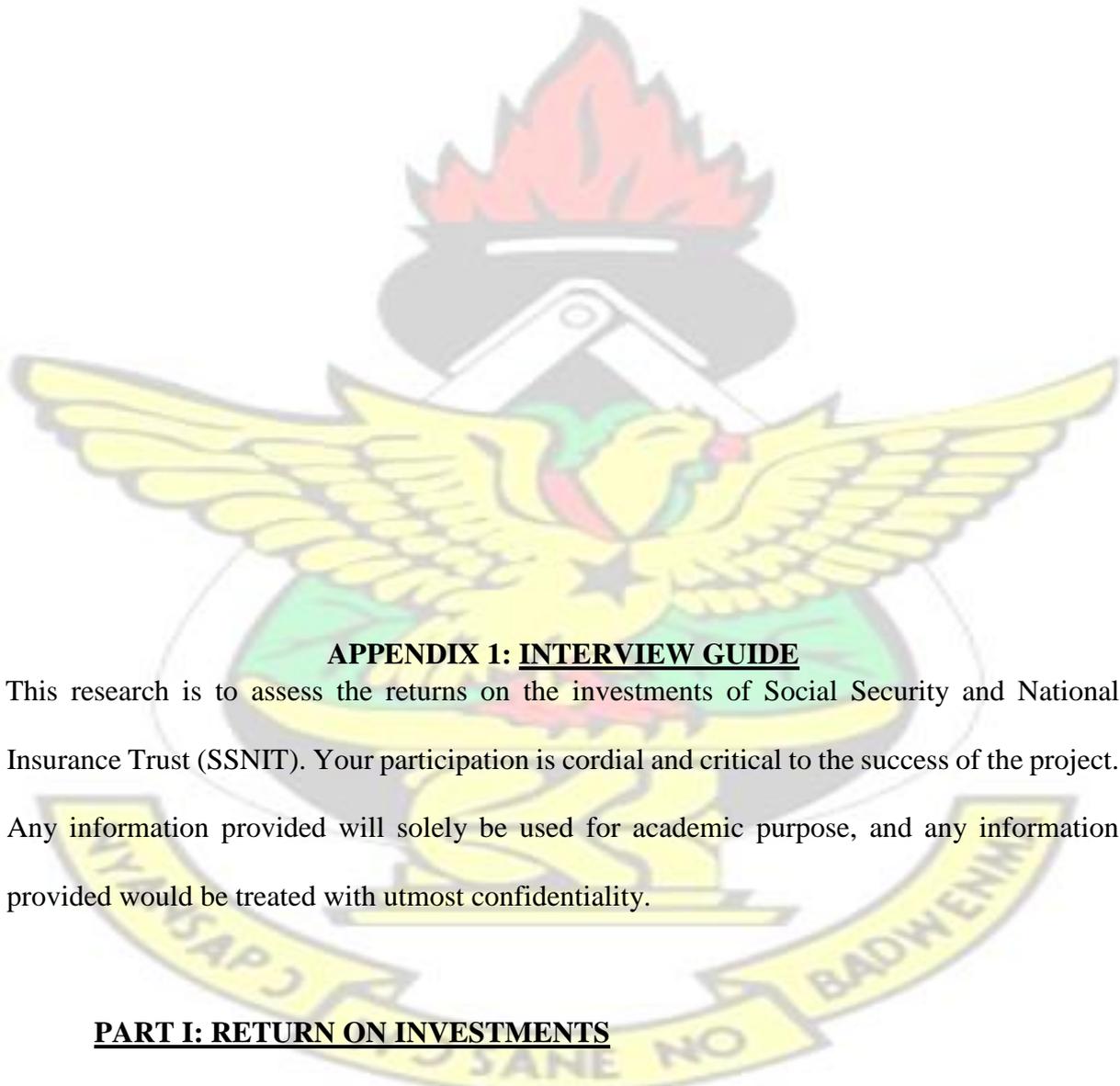
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# KNUST



## **APPENDIX 1: INTERVIEW GUIDE**

This research is to assess the returns on the investments of Social Security and National Insurance Trust (SSNIT). Your participation is cordial and critical to the success of the project. Any information provided will solely be used for academic purpose, and any information provided would be treated with utmost confidentiality.

### **PART I: RETURN ON INVESTMENTS**

1. What was the gross returns on all investment assets of SSNIT from 2004-2013?
2. Is performance monitored against explicit benchmarks for each type of assets? What are these benchmarks if any?

3. What is the scheme's asset allocation structure from 2004-2013?
4. What proportions of the investment portfolio are managed in local and foreign currencies?

## **PART II: CHALLENGES ASSOCIATED WITH INVESTMENTS**

5. Does SSNIT have an investment policy? (tick the appropriate box)

Yes [  ]      No [  ]

6. What are some of the factors that influence the investments of SSNIT?
7. What are some of the strategies used in the management of the funds?
8. What are some of the challenges encountered in the investment of SSNIT funds?

