

Assessment of Pension Fund Management Practice in Ethiopia: The Case of Public Servant Social Security Administration (PSSSA) and Private Organisations Employees' Social Security Administration (POESSA)

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Abstract

Pension funds provide income in retirement years. To accomplish this, they collect monthly contribution throughout the working life of beneficiaries and engage in investment activities. Rising inflation rates, higher life expectancy, increment to payments make it difficult for contributions alone to suffice the payment of benefits sustainably. Thus, for pension funds to fulfill their organisational objective of providing income for beneficiaries in their retirement years, investment has to be managed well. In addition to achieving the purpose of social insurance, the investment of pension funds boosts economic growth, resource mobilisation and operation of stock markets. Understanding the importance of pension fund management, this research attempts to assess the pension fund management practice of Public Servant Social Security Administration (PSSSA) and Private Organisation Employees Social Security Administration (POESSA). It attempts to assess the investment identification procedure, measure of performance, opportunities and challenges faced. It is descriptive research, where interview of respondents was analysed qualitatively to assess the aforementioned objectives. The researcher found that both PSSSA and POESSA used to engage in investment activities per directives of MOFED (previously MoF), but since 2022, they are in the process of drafting their own investment guideline and policy. The measurement and accounting standard used to measure performance were found to be

inappropriate. The primary opportunity for the pension funds was participating in the capital market soon to emerge. Threats to the pension funds were lack of skilled manpower, rising contribution payments, inflation and behaviour of certain beneficiaries. The researchers recommends the critical evaluation of guidelines, proper measurement and disclosure of performance, account for the pension fund using IPSAS, train and outsources to contest the lack of skilled manpower.

Keywords: Pension Fund, Capital Market, Management, Social Security, Reporting Framework

Introduction

A person's ability to work and earn income may be hindered by factors like old age, injury or illness. This inability to earn a living caused the establishment of social security. Social security plays the role of Social security providing income to pensioners who are no longer able to do so themselves. The International Labour Organisation (ILO) defines social security as "protection that a society provides to individuals and households to ensure access to health care and to guarantee income security, particularly in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a breadwinner." The ILO broadly defines social security as a system of contribution-based health, pension and unemployment protection, along with tax-financed social benefits.

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A pension plan, which is one part of Social Security, is a program set up by an employer, union, or government that provides regular income payments to retirees meeting the conditions set forth in the plan (Hiwot, 2012). According to Davis, pension funds are institutional investors that collect pool and invest funds to be able to deliver future obligations to pensioners. Pension funds need to manage their funds sustainably so as to ensure payments to beneficiaries that reach the retirement age are made. Through periodic collections, they create the means for individuals to accumulate saving in the years they work. This enables the pension funds to provide payments to retirees by means of lump sum or annuity. The assets of pension funds are made up of the collections accumulated and the return of their investment activities. Besides their role in providing retirement income, pension funds have a significant role in building of the economy. According to Ben Kajwang, contributory pensions have the potential to increase Gross Domestic Product with competent risk and portfolio management by pension fund administrators and custodians. Pension funds can also contribute towards domestic resource mobilisation. "Domestic resource mobilisation refers to the generation of savings from domestic resources and their allocation to socially productive investments" (Culpeper, 2008). Pension funds also enhance and strengthen stock market (secondary market) (Babalos & Stavroyiannis, 2020).

In Ethiopia, the former social security agency, established in 1963 managed a social insurance scheme. Initially, the coverage was limited to civil servants, police and military. The agency provided social security to old age, survival benefits and non-occupational invalidity. In 2011, POESSA was established to perform the same duty of collecting, managing and paying funds to old age, survival benefit and non-occupational invalidity of beneficiaries employed in the private sector. The pension system in both cases is mandatory and contributory. The pension funds collect contributions throughout the beneficiary's work to provide benefits in their retirement years. Additionally, investment is another source of the fund according to proclamations No. 714/2011 and 715/2011. The social security system of Ethiopia consists of pension plan that collects monthly contributions and payment of benefits for old age pension, survival benefits and non-occupational invalidity or injury. To do so requires managing and growing a sustainable fund. Collection from beneficiaries are primary source for the fund. Additionally, the agency participates in investing

activities as expressed in proclamation No. 714/2011 and 715/2011.

Proper administration of the funds allocated for social security is essential for ensuring the sustainability of the pension plan. The performance of investment of pension funds is crucial to meet its social welfare objective of providing adequate retirement income for the aged. Payment of benefits to beneficiaries cannot sustainably be funded only through collection accumulated. The increasing life expectancy, high inflation rate and mandatory increment to payment necessitate the proper management of pension funds. Inflation necessitates the well performance of investments of the pension fund. According to a report by France 24, the war in the northern region has caused rising inflation by putting pressure on government finances and hitting key sectors such as agriculture and industry. It has also scared away investors and foreign partners contributing to a shortage of foreign currency in an importing nation. The high inflation rate depletes the purchasing power of the low income pensioners as wages do not increase proportionally to inflation. This is another constraint for pension fund that requires efficient management.

Besides its role in alleviating poverty from the old, pension funds play an important role in the economy. According to an article (Bagliano, Fugazza & Nicodano, 2009), positive performance of pension fund investments and the increase in the rate of return on these investments have contributed positively to the economic growth of countries. Pension fund contributes to the resource mobilisation. For a country that is yet to have an active secondary market, pension fund is a possible source of resource for long term investment (Aryeetey, 2021). Pension fund also enhances and strengthens the secondary market. Pension funds are one of the main institutional investors and they invest large amounts of financial assets in the stock markets and private companies with the highest ratings in the global financial market (Bagliano, Fugazza & Nicodano, 2009). This implies pension funds can be one of the main investors in the soon to emerge secondary stock market in Ethiopia.

The need to meet its objective of welfare despite constraints and attain the various advantages provided by efficient management of pension funds creates the need to evaluate the investment practice of PSSSA and POESSA. To this end, various studies were conducted and found that the agency (PSSSA) had limited investment

activity, low market return and limited experts. The main factor found was government intervention restricting investing activities to treasury bills, government bond and time deposits. Recently, a new proclamation that repealed Proclamation No. 715/2011 and its amendment Proclamation No. 908/2015 was issued. This proclamation allows the use of pension fund towards any profitable and reliable investment sanctioned by the management board, removing the previous requirement to invest in government securities. In light of this development, this research tried to assess the pension fund management practice of PSSSA and POESSA thereby answered the following research questions:

- What is the investment identification practice of PSSSA and POESSA?
- How is the performance of investment in PSSSA and POESSA measured?
- What reporting standard is used?
- What are challenges faced by PSSSA and POESSA in regards with investment?
- What are the prospects of the pension fund?

Literature Review

Social security is the protection that a society provides to individuals and households to ensure access to healthcare and to guarantee income security, particularly in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a breadwinner (ILO, 1997). Initially, introduced in Europe in the late 19th century, they were implemented in various nations in the 20th century. Social security was created with the objective of enhancing the welfare of the poor, minimising social disparities and reconciling varied social needs. This was done to prevent social and political tensions. Notable cases were the social security act of the United States and the social security program in the United Kingdom. Such programs provided a basis for later forms of social security. The ILO defines social security as “a human right which responds to the universal need for protection against certain life risks and social needs.”

Pension Funds

The dictionary definition of pension is “money that is paid regularly by a government or company to somebody who has stopped working because of old age or who cannot

work because they are ill”. And Fund can be defined as “sum of money that is collected for a particular purpose.” Thus, pension fund can be defined as money collected to serve the purpose of repayment to those who are unable to work or earn a living. Pension funds can be collected and administered by government in the case of publically managed pension funds or by private organisations in the case of privately managed funds. Hybrid pensions are those that have the characteristics of both. The funds are accumulated throughout the working age of pensioners and are repaid when the beneficiaries reach the retirement age. This gap between the time asset is accumulated and liability is due creates the opportunity for the funds to be invested. According to a report by ILO (1997), effectively managed pension funds can have a considerable influence on the national economy and national capital market. Pension funds invest in capital markets to make profit. In order to ensure sustained recoverability and to match assets with liabilities, most pension funds invest in long term investments. Showcasing this, substantial amount of various countries’ long term capital comes from pension funds. Initially, pension funds are invested in safe investment areas which consist of shares and bonds of listed companies and government securities. Pension funds also invest in alternatives as the funds near maturity. Alternatives have higher risk and higher return as compared to safe investments. According to International Social Security Association (ISSA) (2005), social security funds have to be managed in such a way that the social security maintains its ability to make payment to pensioners when they are due, provide adequate means of covering its expenses and also account for pressures that might arise from change in demography. In 2005, the ISSA established guidelines that should be implemented. The guideline mainly outlines the investment of social security pension funds.

Pension funds are prominent institutional investors that play a vast role in a countries economy. Their staggering amount of capital or reserve enables them to have a vast role in an economy. Through investment of this reserve, pension funds can affect unemployment, enhance Gross Domestic Product, and provide welfare for beneficiaries or those who can’t otherwise earn an income. Besides these effects on the economy, pension funds ultimately belong to beneficiaries. This requires due care in management of the fund and has to follow well defined principles and guidelines in its investment. The ISSA guidelines on investment of social security funds require

that, the investment activities of the board, management, investment unit and other representatives of the social security institution respect ISSA's five principles of good governance; namely, Accountability, Transparency, Predictability, Participation and Dynamism According to the guideline, "accountability is the ability to hold legally responsible the officials who are in charge of the institution." The process necessitates the creation of norms and standards that serve as benchmarks in assessing the achievements of the social securities' objectives. There also needs to be an effective mechanism for addressing grievances to ensure stakeholders (i.e., sponsors and beneficiaries) interest is not compromised. Since administrators of social security fund play a fiduciary role, they are accountable for the proper management of funds.

The guideline defines transparency as "the availability and accessibility of accurate, essential and timely information to ensure that stakeholders are well informed of the true state of the social security program and how it is being managed." Transparency deters mismanagement of funds, as administrators are held accountable for the information they put forth. The simplicity of rules would further enhance transparency by minimising areas that would need discretion.

Per the guideline, predictability "refers to the consistent application of the law and its supporting policies, rules and regulations." In the case of social security, the right and responsibility of members (which party has what specific obligations and what particular rights are members entitled to and the conditions) has to be explicitly and clearly defined and implemented. Spontaneous changes in rates or conditions challenge the credibility of the social security. "Participation refers to the active education, engagement and effective involvement of stakeholders to ensure the protection of their interests." The extent to which stakeholders participate is a factor of the accessibility of information and their ability to understand and make effective decisions on available information.

Dynamism is simply defined as "the element of positive change in governance." The four principles; Accountability, Transparency, Predictability and Participation are concerned with governance in existing or stable environment. On the other hand, dynamism is concerned with changing and refining the existing situation itself. This is done by a more efficient, equitable governance and value creation. There is also another view

about the basic principles of investment (Kidus, 2018). Four principles are applied in the governance of social security fund; Safety, yield, liquidity and social and economic utility.

OECD guideline on pension fund asset management states that the governing body of the pension fund has to have a written investment policy. The investment policy has to provide the investment objectives of the pension fund, given that it aligns with the objective of providing benefits to recipients. The policy must also take into account the attributes of liabilities and level of risk members are willing to take. Prudent person standard has to be considered in attaining the objectives of the investment policy. This includes proper attention to risk management, diversification, and maturity matching and liquidity considerations. Any legal restrictions concerning the portfolio allocation of the social security is also taken into account.

Asset allocation is apportioning or allocating assets among different asset categories. It plays a huge role in the performance of investments. It is required for the investment policy of pension funds to identify strategic asset allocation strategy, the goal desired for the performance of investments and the method of monitoring and modifying these in dynamic conditions.

The investment policy must also encompass any general determinations regarding the allocation of assets choice of securities and implementation of trade. It is essential to establish a robust risk management process that evaluates and effectively manages portfolio risk. The process should aim to manage assets and liabilities in a cohesive manner. In the case of pension funds that allow members to make decisions in investments, the investment policy should provide a suitable selection of investment options which includes an option to default. The options are classified according to the risk bore by members. The policy should also ensure that appropriate information for decision making is made accessible to members.

The parties that are accountable for executing the investment policy as a whole should be identified along with other pertinent parties involved in the management. If internal management is not sufficient for managing pension funds, the management might be outsourced. The investment policy should detail about the use of internal or external management, the range of activities and authority and the selection and performance evaluation

process. If management is outsourced, there needs to be an investment management agreement.

The governing body of pension funds must establish standards for regularly evaluating the effectiveness of the investment policy. The body should assess to whether changes are needed to the policy, its implementation and the responsibility of these actions.

According to social protection reform project, financial performance of social security indicators are total investment, total investment as a percentage of Gross Domestic Product, total investment as percentage of domestic capital market, portfolio of investment, average return rate, average return rate as a percentage of the market rate. World Bank measures performance of pension funds by gross real rates of return and three-year standard deviation of those returns (volatility of gross real rate). However, determining performance solely on return on asset was admittedly insufficient and was undertaken for the sake of simplicity. According to OECD, the performance of pension fund depends on the method of valuation of assets and the methodology of calculation of investment return. The common method of valuation identified was market price. Other valuation methods were book value, liquidity index on valuation date, average price of executed transaction.

The method of reporting investment returns differ across various countries. There are specific regulations in Latin America and Central and Eastern Europe that provide a comprehensive framework for determining the method of computing returns for pension plans. Typically, these regulations are set by regulatory body and serve as either official calculation method or as a means of verifying asset managers' calculations. When there are regulations on the portfolio's performance through guarantees of a minimum or relative rate of return, the method used to compute return becomes more critical. How management fee is accounted for brings forth another discrepancy of return calculation among nations. The OECD reports returns after deducting management fees, whereas certain South American countries report returns before accounting for management fees. Average return of five years was compared against standard deviation for the period to evaluate performance and volatility.

The measure of performance recommended by ILO is using internal rate of return:

$$i = \frac{2I}{A+B-I}$$

Where: i is desired annual rate of return; I is net investment revenues per annum; A is funds invested at the beginning of the year; B is funds invested at end of the year

Sharpe ratios measure the excess return (or risk premium) per unit of risk in an investment strategy (OECD, 2008). In a scenario where an investor combines a solitary risk free asset with a portfolio concerned and where the measure of risk is the same for all investors, Sharpe Ratio is the performance measure used to compare different investment options. An investment option with the highest ratio is the most preferred choice. Measurement of Sharpe-ratio lies with the condition that some assumptions are true. For every investor to view risk in the same way and for the Sharpe ratio to provide a significant ranking, the following assumptions need to hold:

- There are no short-sale restrictions for the risk free asset.
- All investors have the same planning horizon.
- There are no other sources of wealth; and
- Consumption goods prices are uncorrelated with asset returns (OECD, 2008).

Under these assumptions investors should choose the portfolio with the highest Sharpe Ratio. This is because expected return and volatility are optimised. The Sharpe Ratio measures the slope coefficient. In calculating the ratio, there needs to be a riskless asset alternative. The basic concept of the measure ranking portfolios that can be combined with a riskless asset brings forth constraints. To take these into account, another performance measure that uses Sharpe's empirical attribution analysis for average and rolling weights was suggested. This measure detects the value added by a portfolio manager via selectivity and/or market timing and it avoids some of the biases discussed previously (OECD, 2008). For its implementation, the analysis considers as asset classes local T-Bills or deposits, local T-Bonds, both in local currency, local equity, US T-Bills, US-T-Bonds and Global equity. The methodology searches for non-negative portfolio (index) weights that minimize the variance of $r_{pt} - r_{bt}$, where r_{pt} represents the pension funds return and is the return of the weighted average of index returns. This methodology is similar to a least squares regression,

subject to non-negativity constraints on the coefficients. The weights are represented by the β 's in equation. An interesting application, as suggested by Sharpe, is to estimate the portfolio weights with information until t and then use them out of sample to weigh the index returns in $t+1$ and then repeat the estimation until $t+1$ to apply it to index returns in $t+2$. These are rolling estimates in both cases (for the in- and out-of sample or rolling estimates), the value added is estimated as the return difference, called Selection return, represented by the Alpha in the equation (OECD, 2008).

$$\bar{r}_{pt} = \alpha_p + \sum \beta_{pk(t-q)} \bar{r}_{kt} \equiv \alpha_p + r_{bt} \equiv \text{Selection Style}$$

The benefit of this approach is that it includes endogenous benchmarks that are comparable in style to the portfolio under scrutiny; the rolling approach enables portfolio weights to shift over time, and as these changes are observable, it is possible to replicate the benchmark; lastly, utilising multiple benchmarks is more likely to produce combined benchmarks that are efficient in terms of mean-variance. Another method of assessing the investment performance of privately managed pension funds is assessing its performance against artificially constructed country-specific benchmarks. This is an initial benchmarking exercise that uses a Markowitz mean-variance portfolio maximisation approach with historical data. That is, it compares the investment performance of a pension fund with that of an artificially constructed benchmark portfolio whose asset mix would have produced the highest (mean) return for a given level of risk (variance). As a result, it calculates, with hindsight, how much better pension funds could have done, given past market returns, for a specific level of risk (OECD, 2008). The benchmark portfolio comprises of equities, government bonds, money market securities and corporate bonds.

The performance of an investment is assessed by calculating the rate of return on the portfolio since the inception of privately-funded pensions. Accumulated rate of return is preferred since, what is crucial to a beneficiary is the aggregated return at the time of retirement. Risk is measured by standard deviation of returns (volatility).

Although Sharpe ratio and Markowitz mean-variance portfolio maximisation approach are better than simply considering return on investment, they were designed for privately managed pension funds.

Even though occupational mandatory pensions; pension where it is mandatory for employees and employers contribute towards pension was included in the study, since it was primarily designed for privately managed pension funds; it puts its application towards Ethiopian pension fund into question. Furthermore, the two methods were intended to create uniform measurements across countries so that cross country comparison of performance would be possible. Thus, the focus was on attaining some form of uniformity than entirely objective measures. For instance, Sharpe ratio tells us how much more our return is from the risk free asset and Markowitz mean-variance portfolio maximisation approach compares our performance to hypothetical portfolio.

Methods and Materials

Descriptive research is used to obtain information concerning the current situations of the phenomenon to describe what exists, with respect to variables or conditions in a situation Mugenda and Mugenda (2003). The type of research design used for this study will be descriptive. There are various departments in PSSSA and POESSA. From those departments, the researcher chose a department that is directly related with the area of the study. The investment department was selected because it has a direct relationship with the study. In PSSSA there are 12 employees that are directly related to investment. In POESSA, there are 13 employees working in related area. Due to the nature of information required, the researcher found it sufficient to conduct a semi-structured interview with knowledgeable employee of both administrations. The data collected was analysed using qualitative tools.

Results and Discussion

Social security plays an immense role to provide income in retirement years of its contributors and as such it plays a fiduciary role. This makes its management an area of concern. There are four general principles that govern the investment of pension fund; safety, yield, liquidity and social and economic utility or harmony with social interest. For the proper management of social security funds, there needs to be a guideline that provides standards for its governance. Although not binding, ISSA provides investment guidelines for pension funds. As Ethiopia is a member country of ISSA, the researcher believes it is appropriate for pension funds administered by PSSSA

and POESSA follow the principles. In addition, OECD requires pension funds to have a written investment policy that at least states the objective for the pension fund, and the strategic asset allocations (asset classes and their weight).

Investment Identification Procedure in PSSSA

To identify what guideline PSSSA and POESSA follow in identifying investment opportunities, knowledgeable employee was interviewed. They were asked what guideline the administrations followed to identify investment opportunities, if the guideline was exhaustive and practicable and if there was a procedure to review its effectiveness. They were also asked what criteria are considered when selecting areas of investment, what the portfolio consisted of and the driver of asset allocation decision. PSSSA used to be administered under Ministry of Finance and Economic Development. It did not have a set of guidelines it followed for investment procedures; it made investments as per the directives of MOFED. The tool it used to make investment decisions were proclamations. Regulation No. 203/2011 under power and duty states “invest public servants pension funds in treasury bonds and other secured investments specified by directives issued ‘by the Ministry of Finance and Economic’ Development”.

Since this regulation limited the choice of investment opportunities to primarily government securities, there wasn't any other guideline followed. The principal reason for this was because pension fund was used as a source of borrowing for the government. Due to the same reason, there is no investment policy followed to identify investment procedures. Investment opportunities were identified according to the directive of MOFED. However, in 2022, a new proclamation; proclamation no. 1267/2022, was issued that repealed previous proclamation's restrictions. The proclamation changed PSSSA from an agency administered under MOFEC to an administration that has its own budget. The ‘administration’ means public servant social security fund administration to be established by council of minister regulation. The supervisory authority was also changed from civil service to National Bank of Ethiopia. Sub article 14 of the proclamation; Utilisation of pension funds stated that; pension fund shall be utilised only for:

- Effecting payment of pension benefits stipulated under the proclamation.
- Profitable and reliable investment to be decided by the administrations management board.
- Covering the operational expense of the administration.

Under the new administration, the choice of investment decisions went from directives of MOFEC to decision of the board of the administrations management. And the restrictions in investment opportunities were also repealed.

After administration of investment was given to board, interest rate on government securities has increased. Previously, 1% interest was earned on treasury bills/bonds. The rate was determined by government and since it was stipulated in the proclamation that the fund has to follow MOFED's directives, there wasn't much to be done for a better return. With the board's actions however, treasury bill/bonds began to be purchased through competition with banks and insurances, and this allowed interest rate to change from one decided solely by the government to a relatively market determined rate. Rate rose up to 7% and later on 9%. With the new found freedom, the need for a well devised investment guideline and investment policy was understood and the administration outsourced the task of setting up a new guideline and investment policy to a consultant in Kenya. This was in the belief that better guidelines will be developed taking into account better established and performing pension fund's practice in Africa and across the globe. This is set to be ready by July, 2023. The administration is also undergoing restructuring although the investment department will be dealt with relatively latter.

Currently, the pension fund's assets are invested in mainly in Treasury bills, government bond, time deposits and shares (of only around 20 million birr or 0.1% of investment). Without the restriction of investing according to directives of MOFEC, there are numerous asset classes available for investment. The assets chosen in the portfolio of PSSSA will be known after the portfolio study is complete. According to the knowledgeable employee interviewed, areas might include equity, bond, time deposit, real estate and other classes of assets. Diversification, risk management, hedging against inflation and return on investment are driver of asset

allocation decision in PSSSA. A body that limits asset classes or proportion of asset allocated in certain classes of assets is yet to form. When asked whether this would pose a threat on the sustainability of the pension fund, it was replied that since the board are knowledgeable in macroeconomics and factors that affect performance and sustainability, there is minimised risk.

Investment Identification Procedure in POESSA

Like PSSSA, POESSA also followed proclamations to identify investment opportunities. It did not follow ISSA's guidelines or have an internally developed investment policy. Regulation No.202/2011 of POESSA Establishment Proclamation stated under the power and duties of the agency, "Invest the private organisations' employees' pension fund in treasury bonds and other secured investments specified by directives issued by the Ministry of finance and Economic Development." Since the agency's investment opportunities were restricted, there wasn't a guideline or investment policy that would have been of use. The agency invested in treasury bills and government bonds. For the longest time (up to 2012 E.C), the fund's money was invested in treasury bill with an interest rate of 1.02%. In 2019 (2012 E.C), with the forthcoming progress of plans for the emergence of capital market in the country, pension funds were considered to be major participants. This led to better attention to the agency and the unreasonably low interest rate. Treasury bills and bonds were sold in competitions and in market rates. Although the area of investment was still government securities, interest rate was decided by the agency. Under this condition, the interest rate showed an increase to 8.5% and latter 9%.

The attention given to pension funds seems to also be the driver behind proclamation No. 1268/2022. This proclamation repealed the Private Organisation Employees' Pension Proclamation No. 715/2011 and its amendment Proclamation No. 908/2015. The proclamation changed the agency into an administration where administration means Private Organisation Employees Social Security Fund Administration to be established by the Council of Minister's Regulation. Sub article 14: Utilisation of pension fund states: the Pension Fund shall be utilised only for:

- Effecting benefit payments stipulated in this Proclamation.

- For running cost of profitable and reliable investments specified by the Administration's management board and
- The administrative expenses of the administration.

The proclamation changed the authority of imposing investment areas from MOFEC directives to the administration's board. It also repealed the restriction of investing in Treasury bonds and secured investment. Previously, government securities earned 1.02% interest. After investment administration authority was given to the board there has been an increase in the interest rate earned. The administration has invested 35,795,000,000 ETB in Treasury bonds (with 10 years term), Treasury notes (with 3 years term) and Treasury bills of 360 days. The later Treasury bill earns 8.5–9% and there is 55 billion ETB invested in it as of June 2023 (Ginbot, 2012 E.C). The administration was also able to invest in Development Bank bond with more than 9% interest rate.

Accordingly, POESSA is undergoing organisational restructuring. Previously there were departments for fund and investment. The restrictions imposed limited opportunities and necessary procedures. However, in light of the new proclamation and conditions, the investment department will be made of three groups; Risk assessment, Investment operation and management of fixed assets. The restructuring is ongoing at the time of the research. After restructuring is completed, the administration plans on devising exhaustive investment guideline and investment policy.

Currently, the administration has invested in Treasury bond, treasury bills, treasury notes and Development Bank bond. The classes of assets are still government securities but they earn better rates. As participants in the capital market, POESSA will have equity of listed companies (government development organisations like Ethiotelcom, ELPA) and real estate. Since investment in alternatives (private equity) is considered risky, it is unlikely for the administration's portfolio to encompass. Like that of PSSSA, there no body with the responsibility of restricting asset classes or proportion of assets to be allocated in certain asset classes. When asked about the risk this poses, the following response was given. Since there will be great caution in the launch of the capital market itself, the risk of underperformance of pension fund in the market to the point of unsustainability is low. When the capital market starts operating, companies

that get listed will be limited to few organisations. And initially, government owned development organisations like Ethio telecom and ELPA and very highly performing privately owned organizations like Midrock will be listed. Since POESSA does not plan on investing in private equity, the risk will be mitigated. Since the market will be handled with caution, it reduces the risk the administration will face in it. Additionally, since the board consists of knowledgeable people, it is deduced proper risk management will be taken.

Measurement of Performance of Investment

The performance of pension funds is not accurately measured through usual measure of performance like return on investment. Risk adjusted rates such as Sharpe ratio and Markowitz-variance are used to measure performance of pension funds. Although it is not difficult to deduce that the investment of pension fund's investment in Ethiopia is low, the accurate measurement is needed to draw attention to the level of performance and the implication it has on the fund's ability to cover future obligations. The measure of performance also depends on asset valuation and return calculations. To assess the measurement of performance in PSSSA and POESSA, the following questions were asked: what economic measure was used to measure the performance of investment, if administration and investment management cost taken into account when calculating it, how the performance of investment in past years has been and the reason, if investment performed well enough to provide income after retirement sustainably considering higher life expectancy and inflation.

Since accounting standard used also impacts measurement of performance, the following questions were also asked: what accounting standard was applied, if the use or lack thereof affected performance and investment decision. How assets were valued and who set the return calculations. And if there was skilled man power to value and manage investment in alternatives, PSSSA uses return on investment to measure the performance of investment. Because investment was restricted to government securities and they had a very low return (ranging from 1% to 9%), it was well known that investment had poor performance. Furthermore, since the proclamation limited future investment options too, not much attention was given to accurately measure

the performance. Administration and investment management cost is taken into account when calculating performance.

For reasons stated above, investment has not been performing well. However, in the past 2 years it showed little improvement. This is related to purchase of stock of Banks. Currently 11 billion ETB was earned from investment. When asked if investment performs well enough to provide income after retirement considering higher life expectancy and high inflation, the following answer was received. Investment does not perform well enough to provide income to members that reach the retirement age on an ongoing basis or sustainably. The primary source of payment is collection from pensioners. This gives the characteristics of pay as you go pension system where payments are made from collections and the remaining amount is invested.

The benefit of the pension is determined. When retiring, a pensioner is entitled to 30% of his/her average monthly basic salary in three years before retirement plus 1.25% for civilian and 1.65% for military of average monthly basic salary for each year of contribution exceeding 10 years. In addition, there is increment in payment every three years. The minimum salary in the country is 1,100 ETB. However, the minimum allowed pension payment is 2,258 ETB. The amount of payment also rises due to inflation and longer life expectancy this shows that collection alone cannot suffice as source of payment and investment needs to perform well. Unless investment performs well, the administration is in the risk of not being able to meet its obligations sustainably. In the event that PSSSA fails to do so, the burden ultimately lies on government since pension schemes are public in Ethiopia. This is one of the reasons that made government cede its restriction on investment and for the portfolio study to be approved.

Accounting Standard Used

PSSSA used to have manual accounting. This was attributed due to knowledge gap and lack of man power. However, it is now converting to computerized accounting. It uses Peachtree accounting software. Starting form 2010, investment is accounted for using IFRS. Finance department uses IPSAS; however, IFRS is used for investment. Financial statements were audited as prescribing to IFRS. Since IFRS is implemented, the

administration uses accrual basis. This allows for a more realistic representation of the state it is in. Cash basis is not preferred as it causes a delay in a month and doesn't show the budget year's figure. The performance of pension funds depends on asset valuation and return calculation. Some commonly used asset valuations are market value, book value. PSSSA values its asset at book value.

Since investment was predominantly in government securities, the return was set by MOFEC (the government). After government securities started to be sold through competitions, the return is determined by government and the investment department. That return is used in the measure of performance. When asked if the administration has the skilled manpower to value and manage investment in alternatives, it was answered that even though the administration doesn't currently possess enough skilled manpower for such events, it will address the issue after restructuring.

Measure of Performance in POESSA

POESSA uses real rate to measure performance. It outsourced the measurement of performance and learned it had -5% real rate of return. The report was used to showcase the risk of its ability to pay pensioners due to government intervention.

Performance is not measured using appropriate measure on an ongoing basis due to lack of man power and since it is well established that investment has poor performance.

Opportunities of Pension Fund

Pension funds are one of the prominent participants of capital markets. Pension funds and the market have a dynamic interaction. According to World Bank, capital market offers pension funds the opportunity for better portfolio returns and risk management. It provides better investment opportunities, and minimises risk. It also enhances innovation, corporate governance and privatisation. Pension fund in turn contribute to the capital market through capital formation, job creation and infrastructure development. Pension fund have a long term liability thus, can be the source of long term capital which contributes towards economic growth and development. They also help with job absorption by financing projects that are source of employment. Investing in infrastructure

is also one way pension funds affect the economy. To assess the opportunities of the pension funds administered by PSSSA and POESSA, the following questions were asked: How the administrations planned to participate in the capital market, whether their investment will be on 'safe' assets or if it will venture into alternatives, how it plans to benefit from the opening of the market, how it perceives to affect the market and if there was a possibility of privatisation.

Pension funds are expected to be major participants in the soon to emerge capital market in Ethiopia. This can be observed through the better attention given to them and the trainings being conducted by NBE. PSSSA is training its management and preparing guideline and policy to navigate its preparation in the market. It plans to invest its idle cash allowing it to earn the appropriate rate of return. The administration plans to participate not only locally but also internationally.

Other opportunities identified by PSSSA are amendment to proclamations limiting its performance, the administration being governed by board instead of directives of MOFEC. Better attention given to the pension fund management by government as shown by the portfolio study is also considered to open opportunities for better performance of investment of pension fund. Investment areas in the country such as real estate and shares are also notable opportunities. There are no indications to suggest that the administration will be privatised.

POESSA plans to participate in the secondary market as well. It plans to invest in Initial Public Offerings and equity of listed companies like CBE, Ethioelecom, Ethiopian Airlines, Midrock. POESSA is aware of the role it will play in the market. Its huge capital is likely to affect price. Currently, the administration is allowed to invest an additional of two billion ETB every month. This level of capital it brings to market will make it a prominent player. Pension funds have the advantage of having known expense. Since the pensioners eligible for payment and their average salary including increment is known, the administration knows its expenses. This allows it to invest its rather idle cash for the duration. Investing in the market also allows the administration to diversify and manage its risk.

Opportunities identified by POESSA are building new buildings in big cities. These buildings are mixed; commercial and residential and it is expected to lower its

rent expense and generate income. It also plans to buy share of known real-estates.

Other opportunities identified include growing economic conditions, and absorption of manpower. There is no indication to suggest the administration will be privatised or listed in the stock market.

The findings agree with the one found by the establishment of capital market was identified to be an opportunity to the pension funds through increasing investment opportunities and reducing risks especially in Ethiopia where there are no cast-iron criteria and standards for entities in the financial sector. Capital market also helps with liquidity of already invested assets, increase mobility, increase liquidity of already invested asset, increase mobility of capital and reduce risk. Findings in this research includes higher rate of return earned, freedom of investing decision given to board of management, slightly better investment options, restructuring of the administrations, study of portfolio and guidelines being conducted, training of man power.

Threats to the Pension Fund

According to literature, pension fund in Ethiopia has faced many challenges. The notable ones are government intervention, limited investment opportunities, low market return, absence of financial market, limited expert and low understanding of fund investment. As mentioned before, the circumstance of government intervention and the absence of financial market have changed. In this new situation, the researcher tried to assess the challenges faced by the pension funds at the moment and in the foreseeable future. The following questions were asked: is there government intervention that inhibit the fund to perform optimally, are investment opportunities limited, is there any restriction on the fund's participation in the capital market, is there sufficient skilled manpower to handle participation in the financial market, will problems such as budget deficient faced by government pose a risk of tying back funds, and what challenges are faced by the fund.

PSSSA's pension fund has no limitation to participate in the capital market. The board is given the authority to make decisions on investment, portfolio management and asset allocation. Thus, there is no threat that limits the fund's participation in capital market. However,

lacking the quality and quantity of man power needed to participate in the capital market can set hindrance. To this end, NBE is training the higher management of the fund. Unless employees can keep up with the knowledge requirements of their positions, lack of manpower poses a threat on optimal performance of the pension fund.

Regarding the risk of government intervention recurring due to problems such as budget deficit, PSSSA assumes it is less likely to occur. This is because the ultimate burden of the administration lies on government, thus, it will be forced to not take further actions that undermine the pension funds' performance. Although the likelihood might be presumed to be low, government intervention still poses a threat in the future performance of the fund.

Other challenge identified by PSSSA is the political, economic, social condition of the country. If the macro environment is problematic or not conducive for investment, there won't be likely situations the fund's performance will not be affected.

Challenges identified by POESSA were government intervention. When investment decisions are based on political reasons and not market reasons, it affects the pension fund negatively. Another challenge for the well performance of the pension fund is high or uncontrolled inflation. This rate of inflation causes the real rate of return to be negative. Furthermore, capital market needs stable inflation rate to perform optimally. If high inflation rates continue, not only would the pension fund be at risk but the market would not be able to function optimally. Another threat was the three year increment in payment of pension. Contributions are the main source of inflow for the fund. Contributions are fixed; 11% from employers and 7% from employees. However, payment of pension increases every three years. This puts risk of settling the liability.

Another threat that is unique to POESSA is payment of pension to formerly publicly employed members. Such members spend their years to retirement in governmental organisations earning low salary and thus paying low contributions. However when they reach retirement age, they find jobs in private sector. Due to their years of experience, they are paid at high rate. Since pension is calculated on the average of the last three years basic salary of their payment, the liability to POESSA becomes high. Although such members are small in number at the moment, the high amount of payment they require and their

increasing number poses a threat on the pension fund.

The threat of government intervention, due to conditions such as budget deficit, receding into pension funds management is present. But this threat is common to all entities. Another challenge faced by POESSA is idle cash. Treasury bills are sold every 15 days. And on those fifteen days, the cash is idle. Since the fund is not allowed to have saving accounts, it can't even earn a bank rate on the idle days.

The findings are partly akin to the findings of Eleni et al. (2017) in that skilled manpower, low understanding in fund investment and low market return are challenges faced by the pension funds. There is lack of skilled manpower regarding capital markets in the country as a whole, thus it is not surprising that there is insufficient manpower and low understanding of fund investment. Market rates have reportedly improved from the lower of 1–9%. However, in the economic environment and inflation rates, such rates are not sufficient for optimal management of the funds. In contrast to their finding, the research found that government intervention doesn't pose the same challenge to the performance of pension fund. Since the authority over investment decision was passed on to the board of managements of the administrations, this challenge has receded. Government intervention is a vague future consideration. Furthermore, the absence of capital market will not be a challenge as it is to emerge soon.

Conclusion

The procedures used in both PSSSA and POESSA to identify investment procedures were guided with directives of MOFED. However, since 2022, the boards of the respective administrations were tasked with the authority of making investment decisions. The boards make decisions on which classes of assets to invest in, and their weight. Until the time of the study the main areas of investment still comprised of government securities. But, the interest earned on them has risen from 1% to 9%. Even though small in scope, investment in areas like bonds and shares were also made allowing the administrations to earn relatively better return. With the newfound freedom, there was an understanding about the necessity of a well-studied and devised investment policy. Both administrations have outsourced the task of preparing investment guidelines to consultants. The

guidelines and policies will be reviewed and approved by the respective board and commenced to action.

Performance of investment is measured using ordinary rates such as return on investment. Such measures don't show the accurate performance of pension funds. Risk adjusted ratios such as Sharpe-ratios and Markowitz-variance would have been better measures. The obvious underperformance and lack of options to change it were reasons that accurate measurement of performance weren't conducted frequently and thoroughly. With the new investment guideline and policy, it is expected that performance will be critically measured and evaluated. The funds use IFRS standard of accounting although the appropriate standard is IPSAS. It is not certain if and when there will be conversion to IPSAS as it was decided to implement IFRS after debating the appropriate standard from IPSAS and IFRS. The fact that the decision was made while necessary information was available puts the change to the right standard in question.

Results of operation/performance should be publicly disclosed as pension funds have fiduciary role and manage the money of the public. However, performance reports are not publicly disclosed or easily accessible. The primary opportunity for pension funds is their participation in the financial market. The government has already acknowledged the role pension funds play in the stock market and has decided they will be prominent players. Investment decisions were changed to more reasonable and market based ones, NBE is actively training and certifying concerned employees, the administrations themselves are undergoing restructuring to make them an efficient participant in the market. Pension funds will participate primarily through the secondary market by buying stocks and bonds of listed companies, Initial Public Offering, real-estate. Other than real-estate the funds will not engage in alternative investments for the time being. Besides these investment options, the capital market will provide pension funds with lower risk since listed companies hence, investment opportunities will be held to a high standard. Diversification and minimising liquidity risk are other prospects of the market.

Pension funds also have an impact on the financial market. With their staggering amount of capital, pension funds can be source of long term capital. Their need to match their long term liability with long term assets

makes them conducive for this role. They can improve economic growth through their investments and related employment opportunities they bring. They are also expected to invest in infrastructure. Although they can enjoy all these opportunities, pension funds also face their share of challenges. Capital market is being established in the country and whether there is the necessary quality and quantity of skilled manpower is questionable. Furthermore, even though the boards of management of the administrations are knowledgeable, the lack of a body to oversee its activities and performances might cause a problem of self-review. The strain on investment return is another challenge. Contributions remain constant but payment of benefits increase due to growing life expectancy, inflation and the mandatory three-year increment. The macro environment (the economic, political and social environment), also determines whether or not the capital market itself will operate smoothly or not. Unstable inflation rates, basing decision on political reasons than economic reasons, the state of the country will affect how investments made will perform.

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