

## Best Practice Pension Systems in Developing Nations

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### Abstract

*Pension is an arrangement to provide people with an income when they are no longer earning a regular income. The experiences of other countries in social security suggest that Ghana is not the only country with its problems in the running of social insurance schemes. However, when these problems are identified, it is important to devise an effective set of mechanisms for reviewing the general operations of the social insurance scheme and especially for assessing the financial integrity of budgetary operations. The article therefore presents and analyzes models for revising the public pension schemes that take account of aspects of 'best practice' and address the weaknesses of the existing schemes. To this end, the administrative cost to total contributions ratio of Social security pension fund is decreased successively from the current level to 20% to 15% to 10% to 5% under two scenarios, yield of 10% and of 17%. As the ratio decreases, the funds last longer, with the biggest increase occurring between 10% and 5%; the funds last longer under the scenario with the higher yield. In other words, decreasing the cost of operation and improving its investment income will naturally extend the life of the reserves of the social security pension trust. This increase in the pool of funds can contribute significantly to increasing funds for long-term savings and investment. As expected, the funds of the system run out earlier when the Cap 30 (Government unfunded pension scheme) benefits are paid, but this takes a year longer with the higher yield.*

**Keywords:** Pension, CAP 30, SSNIT, Defined Benefits, Defined Contributions

### Introduction

We begin this section with a summary of an evaluation of SSNIT's operations in relation to what obtains in the countries cited as operating 'best practice' schemes so as to highlight the respects in which SSNIT's operations could be improved. These are then incorporated into the models of this section.

Pension ensures you have adequate income in your retirement. The Chilean system has some unique characteristics. It is government mandated and regulated, but completely privately managed by a number of authorized private sector pension management companies, known as Administradoras de fondos de Pensiones or Pension Fund Administration Companies Superintendency or AFPs for short. The AFPs are permitted only to administer pension funds. As at December 2001, there were eight such AFPS. Furthermore, the number of affiliates including pensioners and individuals who have contributed to the system at least once stood at 6.4 million: active contributors stood at 3.4 million or 14.8% of Chile's total population of 23 million. To ensure simplicity and transparency, regulations impose a strict limit of "one account per worker" and "one pension fund per AFP" Affiliates receive regular statements with information about the credited contributions and the investment income of their fund.

The pension system of Singapore is organized on national provident fund principles. The scheme is designated as the Central Provident fund (CPF). All workers, except self-employed people, are required to participate in this Central Provident fund (CPF). The CPF is a public board that administers the system, collects contributions, keeps records, pays out benefits, and invests the accumulated funds. The investment aspect of the fund is a simple straightforward function for the CPF since, practically, all the funds are invested in government instruments. The investment decisions that matter are taken by two other very important government institutions, the monetary authority of Singapore and the Government of Singapore Investment Corporation

The problems created by the PAYG system in Sweden, Sunden (2000:5) reveals a decrease in real pensionable wage as the flat pension guaranteed by the state was not indexed to inflation; an unsystematic and inequitable distribution of contributions through taxes and benefits since contributors contribute for longer periods than they earn the benefits; and labour distortions which increases pension expenditure.

Pecchenino and Polland (2005:458) reported that the PAYG system had significant public expenditure in the G7 countries and with the increase in the number of retirees however, the system will wane in the long-term leaving behind frustrated retirees and huge budget deficits (Pocchenino and Polland 2005). In Uganda, the PAYG system caused increased budget constraints, the local government and the army could not afford the pension benefits and wages could not be increased without raising pensions disproportionately (Herbertsson 2001:5).

To address the global pension crisis, OECD (2009a:98) advocates for reforms in the pension systems to make them fully funded and hence make the PAYG funds extinct. The OECD argues that by funding the pension systems, workers will be saving for their own retirement incomes and will therefore eliminate intergenerational inequity, reduce old-age dependency ratios and remove excessive pension expenditure on the part of the World governments. OECD therefore suggests contributory pension systems that increase the replacement rate (ratio of retirement income to pre-retirement income). To achieve this objective, pension funds must be operationally and financially efficient.

Governance is defined in Carmichael and Palacios (2003:7) and IOPS (2007a:4) as the “systems and processes by which a company or government manages its affairs with the objective of maximising the welfare of and resolving the conflict of interest amongst stakeholders.” The authors thus suggest that pension governance is about transparency, conflict resolution and prudent management of the organizational resources that contribute to value adding for the pension fund.

Qureshi and McKay (2007:5) identify three broad approaches of viewing pension governance in the context of multi-national companies: (1) decentralized governance, which refers to where the pension fund governance is exercised in different pension funds in the same country; (2) compliant governance, which refers to following the law; and (3) efficient governance, which refers to making financial and operational efficiency gains. Qureshi and McKay (2007) recommend the efficient governance option. Therefore, efficient governance should enable the pension fund to achieve compliance with the pension law and control of the decentralized units that eventually contribute to increased efficiency in operations.

Effective pension fund governance involves the processes and decision-making structures that ensure appropriateness of goals, information management procedures that support the goals, compliance with pension regulations and the pension fund’s stakeholders’ collectivism (Stewart 2009:2; Ambatchsheer, Useem and Mitchell 2000:499). In order to achieve efficient pension fund governance, trustees should be allowed the opportunity to initiate action in response to their needs and preferences, adapt swiftly to changing situations with minimal interference from policy makers, and therefore reconcile economic efficiency with equity to the stakeholders (Clark 2003b:13). In other words, the design, administration and management of pension funds should be closely attuned to the often-competing interests of those directly involved. According to Teisseire (2009:2) and Clark (2006:14), pension fund governance defines accountabilities, establishes authority levels, specifies mechanisms of enhancing compliance with the law and enables provision of accurate, timely and reliable financial information to the stakeholders.

### ***Methods***

A stochastic model was used to determine the relationship between Dependent and Independent Variables. Test of goodness of fit to determine the reliability of the model and student T-test to determine the significant level of the extent of variation of the co-efficient. For random variables which the model could not explain will be determined by probability distribution characterized by Standard Normal Distribution.

The model for fund management relation to the contribution from employees will be Time Value of Money methods which will be used to determine the pension benefit.

To be able to make recommendations for overhauling SSNIT and CAP 30 and also of improving the pensions system in general the article looks at what has become known as the Swiss Chilandore, what is touted as representing ‘best practices’ in the pensions reform literature.

This is done against the background of problems associated with SSNIT management in general. For emphasis, the article recapitulates the core problems that face SSNIT as follows:

- Poor investments with negative rates of returns on overall investment portfolio
- Excessively high administrative costs
- Low coverage with marginalization of informal sector
- Inadequate level and amounts of benefits actually paid
- Excessive government control and interference in the activities of SSNIT.

The article looks at the pension reform which will take care of three tier pension and effective regulation of the new pension reform. Coupled with this, the prudent investment of pension fund which will not have adverse effect on the economy.

### **Results**

Different pension scheme models will be presented and analysed in this chapter. The first two will be the Cap 30 and the SSNIT schemes. This will be followed by a model in which it is assumed that the Cap 30 benefits are paid under the SSNIT scheme as it currently operates. Then in line with elements of best practice, scenarios of decreasing administrative cost on the current yield and on increased yield are run on this model with the SSNIT scheme paying Cap 30 benefits or something close to them, which we will term enhanced benefits.

It is expected that the analysis of the models and scenarios with the enhanced benefits being paid by the SSNIT scheme will facilitate selection of what should be the revised scheme. The cost and benefits of the schemes and models and whether these are sustainable will be analyzed.

In the tables of this and the next chapter years 2007 to 2011 are actuals, whereas projections are made from 2012 to 2054.

#### **Model 01: Cap 30**

The formulae used to calculate benefits, gratuity and pension, under the Cap 30 scheme are:

$$(a) \text{ Gratuity} = (5 * \text{FPE} * \text{LSM}) / \text{PC}$$

Where FPE = Final Pensionable Emolument

LSM = Length of Service in Months

PC = Pension Constant (stands at 480 as of now)

$$(b) \text{ Pension} = 0.75 * \text{FPE} * \text{LSM} / \text{PC} \\ = \text{FPE} * \text{LSM} / 640^1$$

We were unable to obtain from the CAGD an estimate of the cost of administering the scheme, which is the responsibility of the Department's Pension Computation Unit.

Since the cost of administering the scheme is subsumed under the CAGD, we might conclude that this cost is sustainable as long as the department remains in operation.

Last year, 2011, the CAGD made benefit payments to beneficiaries that totalled GH¢790.4 Million<sup>2</sup>

Being an un-funded (non-contributory) scheme as far as the state is concerned; the issue of the sustainability of contributions does not arise. Therefore, it's the benefits that the state pays that are a burden on the state. This burden may be sustainable as long as the bill does not become too big.

#### **Model 02: SSNIT**

The SSNIT benefits formulae, with all its aspects, are stated in Appendix II.

The state's 13% contribution to employees on the SSNIT scheme totalled GH¢170.61 Million in 2010 and this increased to GH¢467.89 Million in 2011.<sup>3</sup>

As long as there are civil and public servants, and there is a public social security system, the state has to make contributions to social security on their behalf.

<sup>1</sup> There is supposed to be a new formula that uses = .5\*retirement rate, but this is not being used. If it were used the resultant benefits would be smaller than with .75 as the factor.

<sup>2</sup> CAGD

<sup>3</sup> Estimate from SSNIT Statistical Digest

Therefore, the issue of sustainability is really one of the sizes of this statutory payment in relation to total government expenditure as well as to total government revenue. If government is running a disciplined fiscal regime then these ratios will not be big, i.e., the burden will be small.

In 2010 and 2011 SSNIT's administrative expenses, which include benefits, totalled GH¢334.54 Million and GH¢357.58 Million, respectively, these being 24.96% and 24.94% of total contributions, respectively. Although this ratio has decreased yearly since it peaked at 32.4% in 2002 it is still high (Table 6.1).

The agitation for bigger benefits, specifically the Cap 30 benefits, derives largely from knowledge that SSNIT can afford to pay bigger benefits on the total contributions that it receives. Except for 2008 to 2009 when it decreased slightly, the benefits to total contributions ratio has increased yearly since 2007; in the last two years it was 28.26% and 37.37%, respectively (**Error! Reference source not found.**).

Indeed these ratios indicate that SSNIT can afford to pay bigger benefits from total contributions, especially if it reduces the proportion of total contributions it spends on administrative cost, i.e., the administrative cost to contributions ratio.

### **Model 1: Cap 30 unto SSNIT (Administrative Cost Unchanged)**

In this and the following section two scenarios of each model will be done: the first, with nominal yield of 7% (the historical level); and the second, with nominal yield of 14%. With the current rate of inflation about 9%, the real yield is about -2% and about +4%, respectively.

The Cap 30 and SSNIT formulae are used for the various models and scenarios which are stated in **Error! Reference source not found.** and **Error! Reference source not found.**. For each model in both tables, the first column states the funds ratio results using the SSNIT formulae while the second column states the results using the Cap 30 formulae, i.e., when it is assumed that Cap 30 benefits are paid under the SSNIT scheme.<sup>4</sup>

Since the set aside of 2.5% for the national health fund that has reduced the total contribution rate to 16% from 18.5% is supposed to be for a short duration in order to enable seed capital to be generated for the national health fund, we have concluded that the total contribution rate of the SSNIT scheme will revert to 18.5% in the near term. Therefore, we use the total contribution rate of 18.5% throughout.

#### **Model 1, 10% Yield**

With the historical yield of 10%, the scheme will run out of funds in 2027, while with Cap 30 benefits it will run out in 2014 (second and third columns of **Error! Reference source not found.**).

(These represent increases of 6 years from 2021 for the SSNIT scheme as it currently operates with a 15% rate, and 2 years from 2012 if the scheme pays Cap 30 benefits.)

The cost implications to the state of moving all workers (except those in the security services: see 0) onto the SSNIT scheme with CAP 30 benefits is that government will pay only the 13% contribution rather than pay the CAP 30 benefits of those who would have been moved. We will be able to do a quantitative analysis of the net effect on government budget when we have the data on the number of persons on CAP 30, their wage levels, and their age profile. But even in the absence of this data, we can state that the 13% contribution will be smaller than the Cap 30 benefits for the same workers.

#### **Model 1, 17% Yield**

When the yield is increased to 17%, the funds last longer by 2 years under the SSNIT scheme and 1 year under the scheme with Cap 30 benefits, to 2029 and 2015, respectively (second and third columns of **Error! Reference source not found.**).

The cost and its implications to the state are the same as with 10% yield.

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<sup>4</sup>The assumptions of the tables are:

- (1) Salary growth rate = 10%.
- (2) Contributor population growth rate = 4%.
- (3) Indexation factor = 10%.

All subsequent statements about when funds "run out" is a reference to the funds ratio, which measures the number of years that reserves in a previous year can be used to finance the scheme at that year's level of expenditure if contributions seized flowing into the fund.

## Models 2 to 5: Elements of ‘Best Practice’ on Model 1 (Administrative Cost and Yield Changed)

### Introduction

We begin this section with a summary of an evaluation of SSNIT’s operations in relation to what obtains in the countries cited as operating ‘best practice’ schemes so as to highlight the respects in which SSNIT’s operations could be improved. These are then incorporated into the models of this section.

In the ‘best practice’ countries cited above administrative cost is quite low. It is less than 1% in Singapore, and in the US, where the IRS collects contributions for the Social Security Administration.

- (a) Therefore, we assume that SSNIT’s administrative cost could be reduced to as low as 5% of the total contribution of 18.5%, this to cover fixed costs and make a small provision for marginal cost.
- (b) SSNIT’s contributions can be paid directly into SSNIT’s accounts at banks by the “check-off” system.
- (c) The board of directors of SSNIT which resulted from representation of interest group and institutions that are represented on the board, such as TUC should be represented on the National pension regulatory Authority(NPRA), It also necessary for the interest groups and institutions be made to appoint experts instead of staff. The oath of secrecy may have to be abolished. SSNIT’s accounts should be reviewed by parliament periodically.
- (d) The yield on investment can be assumed to be 17% since this will give positive real returns (as stated in the previous section), as obtains in those countries. The objective is to change SSNIT’s investment portfolio so as to improve the return on investment, i.e., investment income.
- (e) SSNIT can directly contribute to the development of the long-term capital market by encouraging the state, the Bank of Ghana, banks and big corporations to issue bonds and other long-term instruments that it can invest a big proportion of its funds in.
- (f) The combined effect of lower administrative cost and higher yield will be an increase in the pool of funds for long-term savings that banks and financial institutions can lend long-term, consequently increasing long-term investment (also as obtains in those countries).
- (g) Private provident funds are currently not tax-deductible. Making them tax-deductible like the Keogh and IRA in the US will encourage long-term savings and investment. As in the US, these funds/accounts should be on deposit at banks.
- (h) A decrease in administrative cost will make the management of the fund more cost-effective and efficient and result in more funds being freed up for increasing gratuity and benefits close to the Cap 30 levels.
- (i) SSNIT funds should not to be used for social purposes without analysis of how any such expenditure will affect the sustainability of the scheme.

### Models with Yield at 10%

We run scenarios with SSNIT’s administrative cost reduced successively from the current level (Model 1) to 20% (Model 2) to 15% (Model 3) to 10% (Model 4) to 5% (Model 5) of total contribution of 13%, all with the yield on its investment fixed at the 10% nominal (historical) level (**Error! Reference source not found.**).

When these scenarios are run, the years in which the funds ran out under the SSNIT scheme increases from 2027 to 2029 to 2034 to 2038 to 2054 (very small amount of funds still available), respectively for current to 5% administrative cost to total contribution ratio. Clearly, the biggest jump is from 10% to 5%, an increase of 16 years.

Recall that if SSNIT’s administrative cost is not reduced but it pays Cap 30 benefits, the funds will run out 13 years earlier, in 2014 instead of 2027 (6.3.1 above).With the Cap 30 benefits being paid, the years increase successively from 2014 to 2016 to 2017 to 2018 to 2019. Clearly, after increasing by 2 years from the current level to the 20% ratio, the increase falls to 1 year only with each successive decrease in the ratio.

The cost to the state will be the additional 13% contribution that will have to be paid to the workers who will be moved from the Cap 30 to the SSNIT scheme.

### **Models with Yield at 17%**

As in the previous section, scenarios are run with the administrative cost of SSNIT being set at the same successively lower ratios to total contribution. But for these scenarios the yield is assumed to be higher, at 17% (Table 6.3).

The higher yield results in the funds lasting longer under the SSNIT scheme, as would be expected: an increase of 2 years to 2029 with current administrative cost, then increasing to 2032 to 2038 to 2044 to 2054 (small amount of funds still available), respectively.

Recall that with no change in administrative cost there is a 14 year drop in the year the funds for paying benefits run out if SSNIT pays at the Cap 30 benefit level instead, 2015 instead of 2029 (6.3.2 above).

When Cap 30 benefits are paid at this higher yield rate, also as would be expected, the funds last longer, although the difference is not much: a 1 year increase to 2015; the same years, 2016 and 2017, for the next two decreases in the ratio, although with higher volume of funds; and then 1 year longer for the next two levels of reduced administrative cost ratio.

Under this scenario too, the cost to the state will be the additional 13% contribution for the workers to be brought unto the SSNIT scheme from the Cap 30 scheme.

### **Comparison**

What is clear from these results and their analysis is that whereas under the SSNIT benefit scheme there is a big increase in the number of years as the administrative cost ratio is decreased successively, the increase when it is assumed that SSNIT pays the Cap 30 benefits is a difference of at most 2 years from one level to the next. The reason for this difference most definitely is that the size of benefits to be paid at the Cap 30 level is big.

Under both levels of yield the biggest jump in years with the SSNIT scheme is achieved when the administrative cost ratio is decreased from 10% to 5%, thus indicating that the optimal level of administrative cost ratio is between the two levels.

### ***Recommended Model***

#### **Recommendation**

Of the models analyzed in the previous chapter, Model 4, with the following features, is what we recommend the SSNIT scheme should be revised to:

1. Contribution: current total of 18.5%, 5.5% by employees and 13% by employers.
2. Administrative cost: to be reduced to 10% of total contribution.
3. Minimum yield: target of 17% nominal, so that real yield will be about +4%.
4. Benefits: enhanced, i.e., the Cap 30 benefits or close to them.

With respect to administrative cost, we recommend as above-stated because we have chosen the higher of the two ratios in the 5% to 10% range concluded to represent the optimal level of operation for SSNIT in the previous section (6.4.3). Operation at this 10% ratio will cover SSNIT's core business of collection, record-keeping (storage), investment, and payments.

SSNIT's benefit formula will have to be changed to the Cap 30 formula or one close to it.

In other words, we are recommending that Cap 30 should be merged with the SSNIT scheme for a revised scheme.

#### **Cost (Fiscal Impact)**

The cost to the state of implementing the revised scheme will be the 13% that it will pay for those currently on Cap 30 who will be brought under this revised SSNIT scheme. This undoubtedly will be a fraction of the amounts being paid currently under the SSNIT scheme, such as the €467.89 billion in 2004 (6.2). But without more data on the number of employees, their age profile, and their salary levels it will be difficult to estimate the cost and budgetary impact. We assume that payment of this contribution will be sustainable.

## **Benefits**

Those currently on the SSNIT scheme will get higher gratuity and benefits similar to what those currently on Cap 30 receive. This will certainly make these workers happier, consequently bringing to an end the agitation for higher gratuity and benefits.

It would be revealing to estimate the additional total value of benefits. The difference would have been ₵51,438.39 billion in 2004; it will increase to ₵387.47 billion this year, 2005; and then increase yearly to ₵1.045 trillion in 2054 (Table 7.1).

The bigger benefits would result from the higher pension rights and the use of final salary in calculating gratuity, i.e., the use of the Cap 30 benefits formula or a revised version. It appears that payment of these enhanced benefits will be sustainable.

## **Long-term Savings and Investment**

If the state makes its 13% contribution for those not currently under the SSNIT scheme into the revised SSNIT scheme we are recommending, then this will generate a new pool of funds that will contribute to a deepening of the capital market, especially if, as recommended above (6.5.1), the funds are invested largely in bonds and other long-term instruments. Therefore, the investment criteria of the re-structured, smaller SSNIT will have to be revised to ensure that the funds are so invested.

Moreover, we recommend that the social function in the investment criteria should be eliminated. In consequence, the Student Loan Scheme will have to be spun-off. Perhaps it could be placed under the GET Fund. Clearly, this requires further study.

Another major revision of SSNIT's investment criteria would be a move away from direct investment, including the management of companies.

It is not possible to estimate the volume of additional funds that will be accumulated from the payment by the state of the 13% contribution for the workers that will be brought under the revised SSNIT scheme without the additional information stated earlier (6.3.1 and 6.3.2).

To facilitate long-term savings and investment, there should be streamlining of the licensing of institutions in the financial market so as to stop the current practice where some institutions offering the same services are licensed by different bodies – the Bank of Ghana, the Securities and Exchange Commission, and the National Insurance Commission.

## **Economic Impact**

1. The increase in gratuity and benefits to all beneficiaries will increase their income which will naturally lead to increase in personal consumption. In other words, there will be product market growth. Also, there will be increase in personal investment, particularly an increase in housing construction.
2. The restructuring of SSNIT to reduce administrative cost drastically should not result in the retrenchment of workers. Consequently, there will be changes and growth in the labour market.
3. The increase in the pool of long-term savings will lead to the introduction and growth of long-term investment instruments which in turn will result in an increase in long-term investment. In other words, there will be financial deepening in the economy.

## **Exemption**

The security services, Ghana Armed Forces, Police Service, Prison Service, Fire Service, could be put on a special version of the revised SSNIT scheme that is non-contributory. But they will all be paid the enhanced benefits.

## **Recommendations**

### **Major Recommendation**

1. The SSNIT pension scheme must be revised as per Model 4 so that benefits similar to those paid under Cap 30 can be paid. This is what we term the **enhanced SSNIT scheme**.
2. Therefore, the law that established the scheme, PNDC Law 247, must be amended.

### Minor Recommendations

1. SSNIT should be restructured so that its administrative expenditure can be reduced drastically to levels closer to what obtains in the countries with 'best practice' pension schemes. We have suggested a target administrative cost to total contributions ratio of 10%.

To this end, the following changes must be effected:

- a) Reduction in the size of the board of directors; abolition of the oath of secrecy; and representation of constituent organizations by persons with relevant expertise and not staff.
  - b) Reduction in the number senior staff.
  - c) Drastic reduction in the number of junior staff to a level adequate for efficient conduct of the core business of collection of contributions, record-keeping, paying of benefits, and investment with modern technology and methods.
2. SSNIT's investment portfolio and instruments should be revised to enable it undertake investment that will earn higher, positive real yield, which at the current inflation rate could be targeted at a 17% nominal rate.
  3. SSNIT should contribute to the development of a long-term capital market in Ghana with its pool of funds by investing in bonds and other long-term instruments. In particular, SSNIT should contribute to vigorous implementation of the long-term savings bill.

### Recommendation

The following are some recommendations suggested by officials of the SEC interviewed to ameliorate problems associated with the national pension scheme:

- Higher contributions are to be made
- Returns are to be optimized
- Unnecessary bureaucratic procedures are to be shortened
- Regular reporting to policy holders
- Release or free up funds for management by licenced investment firms
- Ensure funds are invested in higher yielding instruments and ventures

It was realized that other countries exhibit characteristics similar to those of the three countries; namely Switzerland, Singapore and Chile. For instance, Britain and the US have large funded pension schemes, though unlike Switzerland, employers in these countries are not compelled to offer pension schemes to all their employees. In Britain and the US less than half of private sector employees are covered, by company pension schemes, against 100 % in Switzerland. Korea, India, China, Italy, Greece. Other countries have high rates of household saving, but they do not have compulsory funded pension schemes. Finally, France and, perhaps to a lesser degree, Germany, impose compulsory participation in pension schemes on their residents, but these schemes are not based on funded pension plans.

On the other hand, the three countries also exhibit some important differences as follows:

- The Swiss system, like those of most OECD countries, is extremely complex and opaque. The complexity of the system makes it difficult to measure its cost or to assess the investment performance of the funded components of the system
- The Singaporean system is quite simple and operationally very efficient. However, it suffers from lack of transparency and produces relatively low returns and benefits to its affiliates
- The Chilean system is very simple and highly transparent and is also supported by very effective regulation and supervision. It has produced very high real returns, but suffers from very high operating costs. These afflict not only the pension system itself but also the private annuity market on which it is partly based.

Unlike Switzerland, neither Chile nor Singapore incorporates in their pension systems intentional redistribution in favour of low-income workers. On the contrary, both may inadvertently cause unintentional redistribution that may be perverse by penalizing low-income workers. Nevertheless, both countries offer some forms of minimum pensions.

## **Discussion**

### **The Swiss system**

The essential feature of the Swiss system is that it is a three-pillar system. The first pillar is a social insurance scheme that pays defined basic benefits or pay as you go which is financed with a total contribution rate of 8.4% equally divided between employers and employees.

Government makes an additional contribution to the first pillar from general revenue to cover 20% of pension payments so as to facilitate a redistributive scheme in favour of low-income workers. While the first pillar has useful lessons for developing countries, it must be emphasized that the Swiss economy is a first world economy that has the capacity to generate the required revenue to support the pension system. We must be mindful of the fact that in Ghana, at least for the moment, well over 40% of the national budget is funded from donor sources. Indeed, total government revenue is just enough to finance recurrent expenditures. Consequently, it is not pragmatic to recommend unfunded schemes for implementation in Ghana at the moment.

The Swiss second pillar consists of compulsory based plans that pay complementary pensions aimed at achieving a satisfactory replacement rate. The third pillar is a voluntary savings system that includes fiscally supported pension plans for self-employed people and other workers not covered by company schemes. These two pillars are replicated by the Chilean and Singaporean examples vividly. Consequently, we shall discuss these as the bases for finding useful lessons for Ghana.

### **The Chilean System**

The new Chilean system was introduced in 1981. It is a mandatory fully funded retirement savings scheme that was created to replace an insolvent social pension system that operated on a “pay-as-you-go” basis. The scheme requires all employees to contribute 10 % of the first \$22,000 of earned income until their normal retirement age, which is 65 for men and 60 for women. No contribution is imposed on employers, although they are required to withhold employee contributions and transfer them to the account holding companies. On retirement, workers must either purchase a life annuity from an insurance company or arrange a schedule of programmed withdrawals from their account. Lump sum payments are allowed only if account balances exceed the sum required to purchase an annuity equal to 70 % of final pay.

Like the Singaporean CPF, the Chilean system is a defined contribution system based on individual capitalization accounts, where pension benefits depend on the contributions made over a person’s working career and the investment income earned on accumulated balances. Workers are required to purchase term life and disability insurance and pay an additional commission to cover the premiums for these insurance policies as well as the operating costs of the system. It is managed by the private sector. More important, Chile created a retirement system that, by giving workers clearly defined property rights in their pension contributions,

- a) Offers proper work and investment incentives;
- b) Acts as an engine of, not an impediment to, economic growth; and
- c) Enhances personal freedom and dignity

To ensure the solvency of the system, the pension fund is legally separated from the management companies. This means that in the extreme case, an administrator could go bankrupt but the individual funds of each affiliate would remain unaffected, since they belong to the worker and not the AFPs. The affiliate would only have to transfer his or her funds to another fund manager or administrator. Strict rules are imposed on AFPs, regarding their capital reserves, the investment of pension fund assets, and their performance relative to the average for the AFP industry as a whole. Investment emphasizes safety and profitability. A certain amount of diversification is required and for this purpose maximum limits are imposed on portfolio shares in different classes of instruments as well as in instruments of different issuers. No attempt is made to direct the investment of funds in high priority economic or social projects. The system is subject to strict, even draconian, regulation and to very close and effective supervision.

A very important feature of the system is the individual choice granted to affiliates to transfer their accounts between AFPs. Individual choice is expected to maintain pressure on AFPs to compete and operate efficiently, though experience has shown that unlimited choice to transfer accounts may result in very high operating costs, mostly because of publicity and marketing expenses and the actual account switching costs. Individual choice in the purchase of annuities has also given rise to high publicity and selling costs.

Workers have the freedom to switch between AFPs, taking with them the entire amount of their accumulated funds. This portability freedom was abused in the mid-1990s when increased competition led to unbridled campaigns by AFPs to woo entrants. Some AFPs offered bicycles as rewards for affiliates moving their funds to them. Some others offered cash to those who switched from one company to another. Consequently, the system displayed a significant affiliate “rotation rate”, which had the effect of increasing administrative costs of the system, and by default, the commissions of the AFPs.

At its height, during 1997, the AFPs registered a total of 1.6 million affiliate transfers and employed 18,000 sales people. In response to this situation, in the late 1990s, the authorities created a series of administrative procedures that must be fulfilled when an affiliate wishes to switch between AFPs. Furthermore, the AFPs rationalized their sales forces, greatly reducing the number of sales personnel. These measures led to sharp decline in the rotation of affiliates and a sizeable drop in commission rates. During 2001, only 200,000 affiliate transfers occurred among the AFPs and the system employed about 2000 sales personnel.

As a defined contribution system, the Chilean system is ostensibly a mono-pillar system with no intentional redistribution. Some redistribution may take place, however, through the government guarantee that workers with at least 20 years of contributions will always receive the minimum pension. It is not clear how many workers will benefit from this guarantee. Clearly, this depends on the future relationship between wage growth and real returns.

In addition to the guarantee regarding minimum pensions, the authorities impose on AFPs, and guarantee in case of AFP failure, a minimum investment return relative to the average for all pension funds. The government also guarantees, subject to specified limits, the value of life annuities with insurance companies. In any case, so far, the funds managed by AFPs have displayed attractive rates of return, with average annual real rates of return of 10.7%. The profitability of the funds has, however, been reduced, principally, due to the relatively poor showing of the local stock exchange. The total amount of funds managed has increased significantly since the inception of the new system from \$236 million in 1981 to \$35.4 billion by December 2001.

Some features of the Chilean scheme give rise to regressive redistribution in favour of high-income workers. This arises from two main sources. First, because the structure of commission charges includes both a flat fee and a per valorem fee, low-income workers are effectively credited with a much lower rate of return than high-income workers. Data for the first ten years of the AFP system show that low income workers obtained a real rate of return of 7.5 % against 10.5 % for high income workers and 13 % for the totality of the pension fund (Vittas and Iglesias, 1992). The difference is caused by the imposition of the flat fee, which in the initial years of the scheme was quite high, but which has declined significantly in real terms. In fact several AFPs have now abolished their flat fees altogether. Unintentional redistribution may also arise from variations in returns among AFPs, though these are limited by the required minimum relative investment returns on pension funds.

The second perverse redistribution arises from the forced use of annuities. In theory, life annuities should take account of the shorter life expectancy of poorer people or people from particularly arduous occupations. In practice, however, it seems that low-income workers, not only do not benefit from lower annuity prices, but may also pay much higher commission charges for their life annuities than high-income workers. The extent of perverse redistribution through the use of life annuities is not known, but appears to give rise to concern among Chilean- policy makers and analysts.

However, commentators have noted that, through their pension accounts, Chilean workers have become owners of the means of production in Chile and, consequently, have grown much more attached to the free market and to a free society. This has had the effect of reducing class conflicts, which in turn has promoted political stability and helped to depoliticize the Chilean economy. The only real drawback is excessive government regulation (Testimony of Mr. L. Jacobo Rodriguez of the Cato Institute to the Ways and Means Committee of the US House of Representatives, July 31, 2001).

### **The Singaporean System**

The Singaporean system was a pure mandatory retirement savings scheme, forcing workers to save for their old age and allowing lump sum withdrawals on reaching age 55. Contributions, which were 10% and divided equally between employers and employees during the inception of the scheme in 1955, were raised to 13% in 1968, when a decision was also made to allow interim, but controlled, withdrawals for the purchase of houses. Since then, there have been several increases in contribution rates, which reached a staggering total 50% in 1984.

Subsequently, however, because of the negative impact on employment creation during the recession of 1985/6, the total contribution rate was lowered to 35% by setting the employer's rate to 10%. More recently the contribution rate has stabilized at the still very high level of 40 %, with a long term aim of dividing this equally between employers and employees. An innovation of recent years is the institution of lower contribution rates for people aged over 55, while, from the very beginning, workers earning less than a specified minimum were exempt from making contributions.

Over the years, additional investment opportunities for investment in approved securities and for spending for education were allowed, while health insurance was also included among the benefits of the system. Also since 1987, workers are required to keep a minimum sum in their account after reaching 55. This is fixed by CPF and is adequate to purchase on retirement at age 60 a minimum life annuity equal to about 25 % of average earnings.

The CPF is a defined contribution system with no intentional redistribution. Its primary objective is a forced saving for old age. These days it is not a purely retirement savings scheme since it allows use of funds for several other purposes. Thus, its secondary objective is to encourage spending on merit goods (health, housing, education). Although redistribution is not among its objectives, it is often argued that the CPF creates perverse redistribution because of the low rate of interest credited on account balances. This is particularly so because only high-income workers can avail themselves of the opportunities to invest in other approved but high yielding assets.

Although the CPF is a mono-pillar system, the Government of Singapore operates a public assistance pension scheme that offers to destitute old people a small pension that is half the size of the minimum pension imposed under the CPF and amounts to about 12 % of average earnings.

One of the strengths of the CPF is its high efficiency and very low operating costs. In 1990, total operating costs, including depreciation provisions, amounted to 0.53 % of annual contributions, 0.21 % of wages and 0.10 % of accumulated assets (CPF1990). These ratios are very low by international standards and compare very favourably with those achieved by large employer-based company scheme in Britain and the US. For instance, Postel, the company managing the pension funds for the employees of British Telecom and British Post Office, has total operating and investment management costs of 0.1 % or 10 basis points of total assets. This is divided between 6 basis points for operating costs and 4 basis points for investment management cost.

Apart from the lack of redistributive objectives, two fundamental weaknesses of the CPF are its very high total contribution rate and the low rate of interest credited on account balances.

### ***Pension Fund Regulations***

According to IOPS (2007a:2) and the OECD (2002:3), pension fund regulation involves "the oversight of pension funds and the enforcement of and promotion of adherence to compliance with regulations relating to the structure and operation of pension funds with the goal of promoting a well functioning pensions sector." IOPS (2007a) thus suggests that pension-regulating institutions be set up to oversee pension funds and enforce the regulations.

According to Demaestri (2003:7), pension fund legislation should however not be integrated with the supervision of other financial institutions in the financial system such as banks and insurance companies since their operations and mandates differ significantly from those of pension funds. IOPS (2007a:3) mentions the unique features of the financial products generated by pension funds as: the long-term nature of the contract involved, complexity of the products (tax, actuarial valuations and life expectancy forecasts), limited competition and choice since members belong to their employer's pension funds by default and their social role in reducing old-age poverty.

Hu, Stewart and Yermo (2007:6) identify two approaches to pension fund regulation as Quantitative Asset Restrictions (QAR) and the Prudent Person Rule (PPR). QAR involves legally limiting the percentage of assets that can be invested in a specific asset class by a pension fund. The PPR rule involves the legal expectations of the governing body in respect of obligations relating to the investment management function with the requisite level of skill and knowledge and to obtain external assistance where it lacks such expertise (Hu *et al.* 2007).

Pension laws are embodied in the legal framework whose scope covers all the dimensions of pension fund management that include registration, investing, custody of assets, general management, payment of benefits and winding up (IOPS 2007a:2).

Moreover, Asher and Nandy (2006b:9) suggest that pension fund regulations focus on improving legal compliance, financial controls, actuarial examination and performance of pension fund managers. Typical components of pension regulation include licensing (restricting and controlling pension funds entry in the industry), governance, investing and disclosure of information to the stakeholders (Eijffinger and Shi 2007:1).

Other modules suggested for regulation in (IOPS 2008b:8) include: monitoring (tracking performance and actions of the trustees and service providers), communication (providing regular reports to the industry and announcing their priorities and compliance strategies), analysis (evaluating financial status of pension funds against benchmarks of the entire industry), intervention (imposing sanctions where there is non-compliance with the pension law) and correction that may be punitive, remedial or compensatory.

According to Eijffinger and Shi (2007:2), stringent pension fund regulation causes inflexibility, discourages risk taking and interferes with the running of private pension systems. Eijffinger and Shi (2007) suggest that appropriate pension regulation should leave sufficient scope for innovation and creativity in the design of pension products that would ultimately lead to improved performance of the pension funds.

Based on the Swiss Chilanpore system, it is therefore recommended that the combination of these practices in Ghana will help optimize the employees' pension in Ghana.

### ***Importance of Pension Fund Legislation***

Successful regulation of the pension fund industry ensures prudent investment of pension fund assets and provides assurances for the payment of pension benefits when they fall due (Clapman 2007; Galer 2009; Stewart 2009; Blome, Fachinger, Franzen, Scheuenstuhl and Yermo 2007; Kyiv 2003; OECD 2008a). The regulations further contribute to the achievement of systemic stability in both the monetary and fiscal systems of a country (Demaestri 2003:6) and enhances financial sector efficiency since pension funds are major institutional investors in their countries (Robinson 2007:8).

According to Steele (2006:45), pension fund laws contribute to prudent and consistent management of pension funds. Steele (2006) thus suggests that in the absence of legislation that specifically addresses the pension fund industry, pension fund administrators may be confused as to what is required of them and the members would not clearly understand their rights and obligations, thus contributing to inefficiency.

Pension regulation influences administrative efficiency when the regulations limit the frequency of transfers between pension plans, impose limits on administrative and investment charges made by the service providers and where penalties are imposed on persons who commits fraud or act inconsistently with pension fund objectives (OECD 2009b:5). The OECD (2009b) therefore views pension fund efficiency as anchored on the prevailing pension laws.

The National Treasury in South Africa (2004:4) summarizes the need for pension fund regulation as follows: to encourage individuals to save for their own retirement and the needs of their dependants, encourage economic growth, ensure that pension funds are cost-efficient, prudently managed, transparent and fair, improve standards of fund governance and accountability and to enhance long term sustainability to the pension funds. Effective pension fund regulations in Kenya have since 2001 resulted in improved investment practices, professionalism, member confidence, participation and involvement, record keeping, transparency and disclosure of pension information (Odundo 2008:13). Pension funds should therefore adhere to the regulations set to remain within the framework of the law and avoid compliance costs that erode pension fund benefits.

### ***Elements of Pension Fund Regulations***

Key issues of pension fund regulations that will be discussed in this analysis include the regulation of compliance costs, size of the pension fund board, service providers, taxation of pension funds, compulsory levies, annual meetings, risk based supervision and quantitative restrictions on pension fund investments.

#### ***Regulation of compliance costs***

As pension funds increasingly become visible economic and social players, governments increase their scrutiny of them (O'Neill, 2007:3), which leads them to incur substantive compliance costs. O'Neill (2007:12) cites the example that pension funds in Canada are required to comply with specific environmental, social and governance considerations that require them to source expertise from different specialists, which increases their operating costs.

According to Queisser (1998:50), compliance costs comprise expenses incurred in an attempt to abide by the pension laws and include segregating the custodian, management and investment functions of pension funds in addition to monetary penalties for non-compliance.

Kyiv (2003:51) notes that compliance costs are difficult to measure since they are incurred in fulfillment of legal requirements that change from time to time. Quiesser (1998) suggests that mandatory compliance costs result in cost inefficiencies of the pension funds. Most countries regulate the structure and, partially, the level of compliance charges for pension funds and lists cost that are subject to regulation such as admission fees, asset management fees and other operating costs. Costs caused by legislative requirements should be maintained since all costs are eventually borne by members and so for the regulator, it is necessary to balance the costs and benefits of guarantees to improve the performance of the pension funds (Chlon-Dominczak 2003).

### ***Summary and Conclusion***

The basic lesson derived from the pension systems of the three countries discussed is the hardheaded softness of the Swiss scheme, the expensive yields of the Chilean scheme and the ruthless efficiency of Singapore. These three have a number of features in common, but they also exhibit some important differences. Notable ones are:

1. The first similarity is that they all have compulsory systems that cover nearly every worker, except self-employed people.
2. The second similarity is that they rely to a substantial degree on funded schemes. The financial resources accumulated in pension funds are large in relation to national income in all three countries.
3. The third similarity is that they represent relatively successful economies with high levels of national and household saving. This is particularly so in the case of Singapore and Switzerland. Chile has suffered from the high inflation that has long characterized the economies of most Latin American countries. But allowing for the negative effect of high and volatile inflation on national saving, especially on financial savings, the financial performance of the Chilean pension funds has been quite remarkable.

As a supplementary benefit system, legislation should be passed for the establishment of tax-exempt provident funds as well as individual retirement accounts (IRAs) similar to the Keogh and 401(k) account, and the simplified employee pension (SEP) plans, in the US.

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