RBA
Retirement Benefits Authority

Rahimtulla Towers, 13th Floor
P.O. Box 57733 - 00200 Nairobi
Tel: 2809000 Fax: 2710330

RESEARCH PAPER
SEGMENTATION OF RETIREMENT BENEFITS SCHEMES IN KENYA
(RBA/RFP/RESEARCHPAPER/613/822/2018)

FINAL REPORT

Submitted to:
The Chief Executive Officer
Retirement Benefits Authority (RBA), Nairobi

By

The Institute for Development Studies
University of Nairobi
P.O. Box 30197 -00100
Nairobi
Tel: 020 3318262 Ext 28177
Email: Director-ids@uonbi.ac.ke or pkamau@uonbi.ac.ke

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University of Nairobi

EXECUTIVE SUMMARY

Introduction

In 2019/2020, the Retirement Benefits Authority (RBA) commissioned three related research assignments on pension schemes industry in Kenya. The Institute for Development Studies (IDS), University of Nairobi was assigned the project entitled 'Segmentation of retirement benefits schemes in Kenya'. This is the final report of this assignment.

This report divided into five broad sections as follows. Section 1 provides a broad introduction and scope of the assignment. Section 2 provides a review existing literature and the current status of segmentation of the pension industry in the country, different pension categories, and examined existing literature gaps. In section three, four and five, the report outlines the methodology, findings as well as the conclusions and recommendations, respectively.

Overview of the task

The researchers undertook the study in five counties namely Nairobi, Mombasa, Uasin Gishu, Kisumu and Nyeri between March and June 2019. The main task was to assess the current retirement benefits industry and provide a framework for market segmentation of retirement benefits schemes. The specific objectives included to:

1) Examine the size, scope and composition of the retirement benefits schemes in Kenya

2) Document the current market segmentation of retirement benefits schemes in Kenya. Develop a criteria for market segmentation taking into consideration asset under management.

3) Design and develop a framework for market segmentation of the pensions industry in Kenya.

4) Develop a framework for levy rates review in accordance with market segmentation.

5) Develop a framework that links market segmentation to risk exposures of retirement benefits Schemes.

Methodology

The study utilized both qualitative and quantitative research designs. Data was collected from five sites one in each of the selected counties – Nairobi, Mombasa, Uasin Gishu, Kisumu and Nyeri. Using cluster (based on the fund value) and random (Random Sequencing Software) sampling method, a sample of 125 was selected from a population of 1,031 schemes. In addition, purposive sampling was used to pick two (2) other schemes with a unique attributes from the rest. These were the Civil Service Pension Scheme (CSPS) and the National Social Security Fund (NSSF). Secondary data mainly from the Retirement Benefit Authority (RBA) was used to develop a sample frame from which to select the individual pension schemes and to provide critical information about the industry.

Findings

The study established the following key findings with regards to size, scope, composition and current segmentation of retirement benefits schemes in Kenya.

- The review of size, scope, and composition of the 1,033 schemes in the country established that 79% of the schemes had less than 500 members, 72% had a fund

value of less than Kshs 300 million and operated mostly in the service, education and manufacturing sectors.

- The review of the current status of segmentation revealed that retirement benefit schemes in the country have been segmented in terms of their type. This is by far inadequate since it ignores the size, scope and composition of the retirement benefit schemes.

On the basis of these findings, the research proposed segmentation, levy review and risk and size linking frameworks as follows:-

a) The proposed framework for segmentation deviates from the scheme type to a composite market share index (CMSI). The CMSI overcomes the weaknesses of the current segmentation criteria by considering the salient characteristics of the scheme rather than the type. The CMSI considers the size as proxied by a schemes investment, membership and scope as proxied by the sectors in which the scheme operates in. To get a single score, the CMSI is operationalized as a weighted average of a schemes investments, membership and sectors of operation. Shaped by the importance of each argument the weights are different. The research team assigned a weight of 50% to size, 40% to membership and 10% to sectors of operation. Arising from this weighting, retirement benefit schemes with similar investments, membership and sectors of operation tend to cluster and are put in a segment. Three segments arise, the large, medium and small segment. The large segment comprises of pension schemes with a CMSI score greater than six, the medium components has a CMSI scores greater than three or equal to six while the small pension schemes have a CMSI ranging from one but less than three.

b) The proposed levy rate review framework is segment specific and considers the previous levy rates, the average size of a segment, the average risk scores and average return on investment for a segment. The proposed use of the previous levy rates is meant to ensure productivity of the formula while the segment-based characteristics are meant to capture the prevailing economic conditions. To avoid punitive levies, the research team limited the extra penalty added by the segment-based characteristics to one percent or less. To achieve this, the average risk score for each segment is assigned a negative parameter (-0.01). This avoids further destabilization of risky schemes. The average size score is assigned a positive parameter (0.1) and the average profitability of the schemes as proxied by the average return on investment (ROE) for each segment is assigned a positive weight of 0.08. This ensures that the levy rate review formula has a risk return trade off.

c) The framework that links market segmentation to risk exposures of retirement benefits schemes is anchored on the statistical tool of cross tabulation. However, before the cross-tabulation risk scores for each of the retirement benefit scheme must be obtained. The research propose a risk rating framework derived from the

qualitative RBA risk assessment module. Each retirement benefit scheme is assigned a risk scores for the various domains of the risk matrix. An overall risk score is calculated for each retirement benefit scheme using a weighted average. This further leads to clustering of retirement benefit schemes in terms of risk profiles. The most risky retirement benefit schemes have risk scores greater than or equal to 5.05, the moderately risky retirement benefit schemes have risk scores ranging between 2.53 and 5.04 while the least risky ones have risk scores ranging between zero and 2.53. The resulting risk scores are cross tabulated with those from the segmentation framework to match each retirement benefits scheme to its size score, risk score and risk category.

Conclusion & Recommendation

In conclusion, the study has made two major achievements. One, the research team examined the status of retirement benefits schemes and documented key issues in the segmentation of the pension industry in Kenya, which informed the development of a new criterion for market segmentation. Two, the research team designed and developed three frameworks – a guide to market segmentation, levy rates review in light of market segmentation, and a framework linking market segmentation to risk exposures. This led to the following recommendations:

a) Since the pensions industry is highly fragmented with many small players who, have few members and are distributed across a few sectors of the economy. The study recommends that the RBA finds a robust segmentation framework that captures this industry uniqueness.

b) Since the current segmentation framework is one dimensional the study recommends that the RBA adopts the multidimensional segmentation framework proposed in this report. In particular, RBA should either do away with the current segmentation based on the type or adopt the CMSI based segmentation and complement it with the type-based segmentation.

c) The proposed segment specific levy review framework be subjected to a simulation and industry analysis. The simulation analysis should test its fairness, productivity, alignment with other macroeconomic objectives by the government as well as permitting any adjustments to the parameters. The industry analysis will help popularize the framework and gauge its practicality.

d) Since the proposed frameworks are in algorithmic format, RBA should endeavour to create both physical and soft self-reporting modules for the retirement benefit schemes. This would permit segmentation based on the CMSI and calculation of the risk categories of the retirement benefit schemes.

e) Since the frameworks are in algorithmic format, RBA should automate them for ease of operations. The automation will automatically place the retirement benefit schemes in the right category, calculate their risk exposure and place them in the correct risk category and finally cross tabulate the risk scores with the size scores. This will aide in timely preparation of detailed industry annual reports.

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ABBREVIATIONS AND ACRONYMS

ACA	Anti-Counterfeit Authority
AFC	Agricultural Finance Corporation
AFCASS	Alexander Forbes Consulting Actuaries Scheme Survey
CC	County Commissioner
Co	Company
CP, NLBs	Commercial paper, non-listed bonds by private companies
DB	Defined Benefits
DC	Define Contribution
FDs	Fixed Deposits
GDP	Gross Domestic Product
GS	Government Securities
IDS	Institute for Development Studies
IEA	Institute of Economic Affairs
ILO	International Labour Organization
IM	Immovable Property
IPP	Independent Power Produce
IPS	Individual Pension Schemes
IRS	Individual Retirement Schemes
ISWs	Informal Sector Workers
KCC	Kenya Cooperative Creameries
KESREF	Kenya Sugar Research Foundation
KIIs	Key informant interviews
KNEC SRBS	Kenya National Examination Council Staff Retirement Benefit Scheme
Ksh	Kenya Shillings
LCBs	Listed Corporate Bonds
LTD	Limited
MoE	Ministry of Education
MPP	Mbao Pension Plan
MTRH SPS	Moi Teaching and Referral Hospital Staff Pension Scheme
NACICO SRBS	Nairobi City Council Staff Retirement Benefit Scheme
NACOSTI	National Commission for Science, Technology and Innovation
NGO	Non-Governmental Organization

NSSF	National Social Security Fund
OCBL SPS	Oriental Commercial Bank Limited Staff Pension Scheme
OECD	Organization for Economic Co-operation and Development
PAYG	Pay As You Go
PCEA	Presbyterian Church of East Africa
PE	Private Equity
PEFA	Christ church of Kisumu
PLC	Public Limited Companies
PS	Pension Schemes
PSC	Public Service Commission
QE	Quoted Equities
RAs	Research assistants
RBA	Retirement Benefits Authority
RCEA	Reformed Church of East Africa
RDAs	Regional Development Authorities
REITS	Real Estate Investment Trusts
SPS	Social Protection Secretariat
SPSS	Statistical package for social scientists
TARDA	Tana River Development Authority
ToR	Terms of Reference
TSC	Teachers Service Commission
UE	Unquoted Equities
UN DESA	United Nations Department of Economics and Social Affairs
US	United States

Definition of Key Terms

Income security
Is the level of income (absolute and relative to needs), assurance of receipt, expectation of income adequacy now and improvement or deterioration in the future, both during a person's working life and in old age or disability retirement. Income security is about actual, perceived and expected income.

Investment
It is the process of investing resources in a gainful venture.

Old age
The chronological age of 65 years when one is considered as 'elderly' or 'older person' as is the case in most countries of the world.

Pension scheme
Is an arrangement where an employer and in some cases the employees pay into a trust fund that is invested to provide the employee with a pension income upon retirement.

Pension
Financial arrangement between employee and employer to provide persons with an income after cessation of employment.

Poverty
The inability to attain a minimal standard of living measured in terms of basic consumption needs such as food, clothing and shelter or the lack of income to satisfy them.

Re-employment
It is where employers and organizations provide retired employees with the opportunity for re-engagement.

Segmentation
Is the process of dividing a market of potential customers into groups, or segments, based on various characteristics. The segments created are composed of consumers who will respond similarly to marketing strategies and who share traits such as similar interests, needs, or locations or social characteristics.

Self-employment
It is engagement of retired persons in self-initiated income generating activities.

CHAPTER 1: INTRODUCTION

1.1. Background

The Retirement Benefits Authority (RBA) is one of the five main institutions regulating the financial sector activities in Kenya. RBA regulates and supervises the establishment and management of pension schemes, protects the interests of members and sponsors of retirement benefits schemes. It also develops and promotes the retirement benefits sector (RBA Act 2000). The Authority is mandated to regulate and supervise players in the sector, which includes pension schemes, and service providers. The service providers include managers, administrators, and custodians who play key roles in the management and development of retirement benefits schemes in Kenya (RBA, 2019 p. 7).

The pension system in Kenya is structured in a three-pillar system, where the first pillar delivers a universal pension of a very low amount aimed at poverty eradication via Older Persons Cash Transfers. The second is a mandatory contributory pillar based on a defined contribution scheme managed by the National Social Security Fund (NSSF), while the third is a voluntary pillar, formed by occupational and individual pension schemes.

The overall coverage of the system in Kenya is low as it is estimated that only 20% of the working population is covered. The coverage of the pension system is about 20% of the labour force, with 80% of the workforce in the informal sector having no social security pension coverage. The Civil Service Pension Scheme (currently unfunded) covers 450,000 civil servants; the National Social Security Fund covers about 1.7 million formal public and private sector workers on a mandatory basis. In addition, there approximately 1,300 occupational pension schemes which have around 400,000 members. The Retirement Benefits Authority (RBA) has regulated and supervised the pension industry since 2000, with a method of risk-based supervision which was adopted in 2011. Pension funds are established on a trust basis with governing bodies made up of members and sponsor representatives who are licensed by the regulator (RBA).

Generally, the overall coverage of pension schemes in Kenya is low, estimated at 20%. This means that about 80% of the workforce (largely in the informal sector) do not have any form of social security pension. The Civil Service Pension Scheme (currently unfunded) covers 450,000 civil servants, with the National Social Security Fund covering 1.7 million formal, private-sector workers on a mandatory basis.

As already mentioned, currently there are about 1,300 registered pensions schemes of which 87% of them have assets below KShs. 1 Billion with a combined assets base of 16.1% of the industry assets. On the other hand, 13% of all the schemes have assets above KSh 1 Billion and their combined assets under management account for 83.9% of the industry assets. This creates a challenge, especially where all the schemes may be unable to participate in portfolio diversification opportunities in alternative investments. Some schemes even lack economies of scale while others have high operating costs resulting to lower net returns.

According to Alexander Forbes Consulting Actuaries Scheme Survey (AFCASS) (2018), the large schemes with assets above Ksh 1 Billion generally outperformed the small schemes in the fixed income asset class, which represented the single largest exposure for most pension schemes. In view of this, we are in agreement with RBA that the difference in various categories of assets, necessitates the need to have market segmented for purposes of regulating and supervising the industry based on membership and asset portfolio.

1.2. Research Issue

This study was carried out with the recognition that there is a need to segment the retirement benefits industry in Kenya based on the asset under management, membership size and the sector or the industry that retirement benefits schemes belong to. The assumption is that some pension schemes especially the small ones may be too limited in terms of economies of scale (small in terms of membership size and the fund value/scheme assets).

While the need for segmentation is known, it is not clear which framework can be used by RBA to undertake this exercise. This knowledge gap calls for scholarly research. It is on the basis of filling this knowledge gap that the current study was undertaken.

1.3. Research Objectives

The overall objective of this research was to assess the current retirement benefit industry and provide a framework for market segmentation of retirement benefits schemes. The specific objectives of this study included to:

1) Examine the size, scope and composition of the retirement benefits schemes in Kenya
2) Document the current market segmentation of retirement benefits schemes in Kenya. Develop a criteria for market segmentation taking into consideration asset under management.
3) Design and develop a framework for market segmentation of the pensions industry in Kenya.
4) Develop a framework for levy rates review in accordance with market segmentation.
5) Develop a framework that links market segmentation to risk exposures of retirement benefits Schemes.

1.4. Research Questions

The broad question that this study attempted to answer is how the retirement benefit schemes in Kenya can be segmented for purposes of enhancing efficiency and sustainability of the industry. To answer this broad question, the following specific questions were answered.

1) What is the size, scope and composition of the retirement benefits schemes in Kenya?
2) How is the market segmentation of retirement benefits schemes in Kenya structured?

3) What criteria can be used for market segmentation taking into consideration asset under management?
4) Which framework of market segmentation can work better given the current fragmentation of the pensions industry and low levels of coverage?
5) What is the framework for levy rates review in accordance with market segmentation?
6) What framework that links market segmentation to risk exposures of retirement benefits schemes?

1.5. Scope of the Assignment

The the scope of this assignment was to evaluate the current retirement benefits industry and provide a framework for market segmentation. Thus, the scope entailed: a) a market segmentation of retirement benefits schemes in the country; b) criteria for market segmentation of the retirement benefits scheme; c) a framework for market segmentation based on the developed criteria; d) a framework for levy rates review as informed by the market segmentation criteria; and e) develop a framework that will link market segmentation to risk exposures of retirement benefits schemes. The data for this assignment was limited to the following schemes: NSSF, occupational, and individual schemes.

This study was carried out with the cognizant that there is a need to segment the retirement benefits industry in Kenya based on either the asset under management, membership or the sector in which the schemes operate.

CHAPTER 2: LITERATURE REVIEW

2.1. Market Segmentation

According to Lamb, Fair, and McDaniel (2003: 214) "Market segmentation is to divide a market into smaller groups of buyers with distinct needs, characteristics, or behaviors who might require separate products or marketing mixes." Technically, segmentation is the procedure of splitting the market into separate clusters of clienteles or consumers with same qualities or needs, which can assist a business in targeting the customers and marketing to them efficiently (Lovelock & Wirtz, 2011). There are basic stages for businesses to divide their markets, although each enterprise should modify its stages to divide the market in accord with its own market (Lamp et al. (2003). The stages in segmenting markets include selecting a market or product category for study, choosing a basis for dividing the market, selecting segmentation descriptors which identify the specific segmentation variables to use, profiling and analyzing segment's size, expected growth, purchase frequency, current brand usage, brand loyalty, and long-term sales and profit potential among others, selecting target markets which are a natural result of market segmentation and finally designing, implementing and maintaining appropriate marketing mixes.

The process of segmenting an existing customer base or to segment potential customers consists of three phases. The first part of the process starts with defining the scope of the segmentation project by setting up the geographical area which will be covered in the project and by gaining a thorough understanding from the customer's point of view to what purpose the buying institution uses your product. The second step in the project is to create a market map which ideally should be a flow chart which shows how your product moves through possible suppliers to the end-users. When the market mapping is ready you should then determine where at the map such decisions are made of which suppliers to use.

There exist two main ways of how to categorize or segment institutions. One is the priori and the other is posteriori. In priori segmentation, the entity performing the segmentation determines in advance which characteristics define each segment or how to group the prospects or customers in these segments. In posteriori or data-driven segmentation a set of variables is chosen as a segmentation base. The development phase is supposed to take in concern all the markets that the company is capable to operate, not only the tiny part that it is successful in. Therefore, it should contain the current customers or alternatively the current customers and the potential customers (Malcolm & Dunbar, 2010b p. 64).

Sun (2009) notes that each of the two main markets namely consumer and business markets have their own variables used in segmentation. As far as the consumer market is concerned, various studies (see for instance Camilleri, 2016, 2018; Goyat, 2011; Larsen, 2010; Sun, 2009;) have provided qualities of individuals, groups or organizations that are often used to split a whole market into segments. The variables include geographic, demographic, psychographic, and behavioural and product-related/decision-maker variables. Geographic variables would include dividing the market into geographical units, which can be counties,

cities, states or even neighbourhoods depending on the zone (see Larsen, 2010). Demographic variables would focus on age, gender, family size, family life cycle (young, single, married), occupation, education, religion, race, generation, nationality, etc. while psychographic nature would divide the market into segments based on variables such as social class, lifestyle, and personality. Behavioural market segmentation divides the market into segments on the basis of consumer knowledge, attitudes, uses or responses to a specific product while decision-maker takes care of who makes the final decision to purchase the product. Apart from the consumer markets, there is the business to business segmentation criteria that would take into consideration the business characteristics.

Camilleri (2018) observes that market segments should be measurable, sustainable, accessible and actionable for them to be effective. Once the market segmentation has been completed, the firm should ascertain the most beneficial segments and to decide which segments will be focused on.

Businesses should consider the most appropriate market coverage strategy according to their resources, the type of service to be offered and the diversities within the market. According to Camilleri (2018), the marketing coverage alternatives include undifferentiated marketing; differentiated marketing and concentrated marketing.

2.2. Pension Schemes

A plethora of empirical literature exists and the discussion has taken three broad perspectives, including social insurance for all, private savings and life-cycle model of consumption at a macro level (Modigliani & Muralidhar, 2005). The role of pension schemes in the economy includes the provision of retirement income in the light of the ageing population. Pensions serve as a means of saving towards the future after the employees' normal working life. It provides income security to the retired worker or his beneficiaries in the event of death or invalidity.

Governments in many countries normally grant tax exceptions on the contributions made by employees to the fund. This increases the level of savings for the employees or retired workers. Also under a defined benefit scheme, managers see Defined Benefits (DB) fund liabilities as a debt to the company which the employees can claim like creditors. They, therefore, invest some of the company's assets to serve as collateral for the pension obligation when it's due. Pension Schemes (PS) help companies to reward and retain their best staff, attract high-quality labour and reduce labour turnover. This is called the business expediency concept. As a reward, managers use pensions as a negative reward to lay off too-old-to-work employees whose carelessness and mistakes might cause injuries to other employees and losses to the company. Defined benefit plans attract high-quality labour and also retain the existing ones because of the insurance features attached to it. Employees feel that there is a guarantee for their income during retirement. This is because, under a Defined Benefit system, employee's rights to accrued pension benefits increase with the length of

service. Managers can also reduce labour turnover by increasing the length of time the employee must work to acquire the right to the accrued pension benefits.

Pension schemes help governments to develop infrastructure, eradicate poverty, reduce financial services cost and improve the financial system. Such instruments in turn create jobs and spill over to other sectors of the economy. Pension funds have also been seen to influence corporate governance in the economy. Clark and Hebb (2003) identified four factors which facilitate pension funds corporate governance: first the use of indexation technique; second is the increasing demand by owners for more accountability and transparency, third is the pension funds pressure to undertake socially responsible investing and fourthly to harmonize capital with social, moral and political objectives extending pension funds simple concern for the rate of return.

Pension schemes also boost the performance of life insurance companies. Pension funds are used to purchase annuity products for pensioners upon retirement. Pension schemes improve the financial markets; this is evident in many stock exchanges in various countries where pension schemes are among the largest institutional investors in the exchange. Pension funds accumulate large amounts of resources, providing long term capital and stability to the stock market. For example in the United States (US) investors with over US$ 10 trillion in pension fund assets now own up to 76% of the stock market. In Kenya, NSSF is one of the largest institutional investors on the Nairobi Securities Exchange which was ranked among the best performing stock markets in Africa in 2012. Pension funds also protect investors and enhance public confidence in the capital market. Additionally, pension funds role in the financial sector includes the following: the allocation of savings, investment in securities and other financial assets both locally and foreign, payment of annuities and provision of forms of insurance, domestic borrowing by various governments, improving the liquidity of various intermediaries who are custodians of the fund for example commercial banks (Davis, 1995). The governments borrow the amount they need from pension funds with the promise to repay in an agreed time.

2.3. Segmentation of the Current Pensions System in Kenya

The current retirement benefits system in Kenya can be classified into the following scheme types:

Table 2.1: Segmentation of the Current Pensions System in Kenya

Scheme Type	National Social Security Fund	Public Service Pension Scheme	Occupational Schemes	Individual Schemes
Legal Structure	Act of Parliament	Act of Parliament	Established under Trust	Established under Trust
Members	Employees in formal sector establishments with 5+ employees excluding public service employees	All public service employees, including civil servants, teachers and disciplined forces, separate scheme for armed	Formal sector workers in companies that operate retirement schemes	Open to all on voluntary basis
Funding	Funded	Non Funded	Funded	Funded
Regulation	RBA	Act of Parliament	RBA	RBA

Source: RBA Website (2019)

In order to assess the aspects of the current pensions system, the following criteria are used:

- Adequacy – benefits are for the full breadth of the population, sufficient to prevent old age poverty and provide reliable means to smooth lifetime poverty for the vast majority of the population.
- Affordability – both within the financing capacity of individuals and of society, and without undue displacement of other social or economic imperatives, or untenable fiscal consequences.
- Sustainability – which refers to financial soundness over an appropriate time horizon under a broad set of reasonable assumptions.
- Robustness - capacity to withstand major shocks, such as significant shifts in economic prospects or demographic trends.

2.3.1. National Social Security Fund

The National Social Security Fund ('the NSSF') was established under an Act of Parliament in 1965. The NSSF is established as a provident fund operating on a defined contribution basis. An amendment to the NSSF Act in 1997 defined the NSSF as a retirement benefits scheme and thus brought the NSSF into the regulatory ambit of the Retirement Benefits Authority. Similarly, the revision of the act, saw an establishment of a new law the National Social Security Fund (NSSF) Act, No.45 of 2013, albeit not operational yet, it aimed to transform the agency from provident fund to a pension scheme (NSSF, 2018).

The NSSF covers formal sector employees in Kenya other than employees covered under the public service pension scheme. All employers are required to register with the NSSF but only employers with five or more employees are required to contribute to the NSSF. The total cumulated membership of the NSSF as per its records is estimated at 3.4m, but the active contributing membership is currently estimated at just over 1m. The number of registered employers with the NSSF (cumulative) in 2018 was estimated at 74,000.

The analysis of NSSF with respect to segmentation criteria shows the following scenario.
Adequacy: The level of benefits, given the low monetary a ceiling on contributions, is woefully inadequate. Indeed given current contribution levels, what is likely to be available to sustain one in retirement after 30 years of contributions to the NSSF is projected to be less than average earnings for just one year. The high costs of administration, low investment returns and even lower returns credited to members also impacts on members' benefits; Further there is no consistency between the rates of return earned and those credited to members' accounts; The NSSF only provides a lump sum benefits and there is no provision for annuitisation. There is a tendency for lump sum benefits to be poorly applied or squandered resulting in inadequate protection against poverty in old age; The range of benefits is limited, there is no pooling or sharing of risks and no minimum level or 'safety net' of benefits.

The coverage of the NSSF is limited. The NSSF covers about 53% of formal sector employees in Kenya and 11.4% of total recorded employment. The percentage of the formal sector employees excluding public service employees covered by the NSSF though is almost 70%.

Affordability-The level of contributions at effectively only 1.3% of average earnings (higher where earnings less than national average earnings) can be regarded as affordable. From a socio-economic perspective, however, past investments in low yielding property and land assets could be deemed to have displaced other economic imperatives through the inefficient allocation of capital.

2.3.2. The Civil Service Pension Scheme

The provision and management of retirement benefits for public service employees are governed under a Pensions Act and Regulations. Certain provisions of the Constitution of Kenya is also relevant especially in the context of considering reform options for the current arrangements. The Civil Service Pension Schemes (CSPS) operates on a defined benefits basis and is non-contributory other than modest contributions at 2% of salaries by male employees towards widows' and orphans benefits. The analysis of these schemes shows the following outcomes.

Adequacy: Although not all remuneration is pensionable, the pension accrual fraction at 2.5% with the generous commutation terms targets a reasonable initial pension although the lack of full indexation impacts on the purchasing power of pensions with time. There is no portability of benefits or provisions for retaining deferred benefits restricting job mobility amongst public service employees.

Affordability: From the Government's perspective, the benefit expenditures are projected to increase as a percentage of GDP and the increase in the fiscal burden could impact on other priority expenditures; A key premise of the CSPS of salary sacrifice during a working career in return for a 'job for life' and a relatively more generous pension after retirement has been distorted by the pay reviews in the past six years with further reviews for some categories of staff proposed. The Government would need to assess whether the ongoing pension costs based on the improved salaries remain affordable and consistent with its remuneration policies.

Sustainability: The adjustment of pensions payable to public servants includes keeping up with the tradition of increasing the monthly pension by three percent every two years in the race to match the rising cost of living. The review, combined with the number of civil servants who will have retired in the two years to June 2019, will see the pension bill rise from Sh86.2 billion in the current financial year to Sh104.4 billion in the next budget. The government noted through the Public Service Commission Chairman Samuel Kirogo, that pension payments under the current arrangement in the next five years will be untenable.

Robustness: Civil servants from July 1, 2019 were to start contributing to a mandatory pension scheme in a move designed by the government to reduce the expenditure on the pension wage bill. According to the Public Service Commission (PSC), the new fund will be guided by the Public Service Superannuation Scheme Act of 2012 which spells out how much every employee should contribute. At the same time, part of the government's contribution will be a direct charge on the Consolidated Fund. The Civil Service Pension Scheme (CSPS) though currently not a purely defined contribution scheme but transitioning to be one, overall ought to have the capacity to withstand major shocks subject to transitioning to be a pure defied contribution scheme and government matching up its employer contribution. An attempt by the government to pay up employer contribution from October 2018 failed after the Ksh. 15.3 billion allocated in the 2018/19 financial year was diverted to other uses.

2.3.3. Occupational schemes

Occupational schemes are schemes set up by employers for the benefit of their staff. Such schemes are voluntary and are established under a trust. Occupational pension schemes are regulated by the Retirement Benefits Authority under the Retirement Benefits Act. There are no minimum requirements in relation to the levels of contributions by employers and staff. Nor are there any minimum requirements in relation to the types or levels of benefits other than legislative restrictions in relation to minimum retirement ages, vesting, portability, preservation, and accessibility of benefits.

The total number of occupational schemes is currently indicated at 1,379 of which 10.4% are defined benefit schemes and 89.6% are defined contribution schemes. The total contributing membership of occupational schemes is estimated at about 300,000 (or 16% of formal sector employment) all of whom are also required to be members of the NSSF and make statutory contributions to the NSSF.

Based on market surveys, the most common rate of contribution to occupational pension schemes by employees are at 5% of salaries and typically ranges from 5 – 10% for employers inclusive of risk-benefit costs.

Occupational schemes tend to target a higher income replacement with the contributions for many of the occupational schemes targeting income replacement of 60 – 75%. A 1994 Survey by the RBA, however, showed an actual average income replacement the ratio of only 22% for retirees from occupational schemes and this was largely attributed to shorter service durations and non-preservation of benefits on leaving service.

Individual schemes or personal pension plans comprise schemes set up by institutional providers to target individual members not necessarily tied to an employer or any formal setting. Although the number of IPPs in the market has grown from 1 to 17 in a ten year period, the membership at currently less than 10,000 individual lives have failed to track this

growth. The majority (11 out of 13) of the IPPs in the market are offered by insurance companies.

2.3.4. Individual Retirement Schemes (IRS)

Individual Pension Schemes (IPS) or Individual Retirement Schemes (IRS) are run by financial institutions mainly insurance companies which provide an avenue for saving where employers do not have their own schemes, and for workers who wish to make additional voluntary contributions (RBA, 2009).

The analysis with regards to the four criteria is as shown below:

Adequacy: The coverage of the IRS is limited. The IRS covers (7.6%) or 199,246 out of 2,607,402 employees who belong to a pension scheme in Kenya and hold 10.2 % or 9,362,457,550.00 out of 91,655,971,983.00 total industry contribution (RBA Statistical Digest, 2017). The range of benefits are enhanced, there is pooling or sharing of risks and level or 'safety net' of benefits like on premature death, combined benefits of accumulated savings and Life Assurance Benefits becomes payable.

Affordability: The majority of the IRS providers have a flexible option that lets the contributor suspend their installments based on their current financial situation. The IRS providers ensure that those who are unable to make payments for whatever reason can choose to either stop or suspend their deposits at the risk of claiming less money after retirement. These policies are flexible, meaning that plan holders are free to change employers without having to forfeit the scheme. The level of contributions at effectively start at a minimum of Ksh. 6,000 a year or only 1.6 % of average earnings(Annual real average earnings per person in 2018 were Ksh.376,080) (higher where earnings less than national average earnings) can be regarded as affordable.

Sustainability: Since IRS remains a defined contribution scheme, assets should be in balance with liabilities by design. The analysis of administrative expenses for all the scheme types, indicates that the IRS have the lowest percentage of Admin Expense to Contributions; Admin Expense to Investment Income and Admin Expense to Total Assets which makes them sustainable going forward. The analysis of Benefits Paid indicates that the IRS has the highest percentage of Benefits Paid to Contribution, Benefits Paid to Investment Income and Benefits Paid to Total Assets, though this may cast doubt on their sustainability, the IRS having the lowest percentage of expenses, an annual growth of 3% in membership and 9% contributions are key mitigating factors.

Robustness: All the factors discussed above plus the IRS's having a pure defined contribution scheme, overall ought to have the capacity to withstand major shocks subject to adopting a proper and more equitable basis of allocating net returns to members and asset-liability management.

2.4. Segmentation by Asset Distribution

On overall, the retirement benefits assets under management decreased by 0.02 percent from Ksh. 1,166.70 billion in June 2018 to Ksh. 1,166.49 in December 2018. However, compared to the same period last year (December 2017) the assets grew by 8 percent, up from Ksh. 1,080.1 billion. The decrease in the assets during the half-year can be attributed to the volatility in the stock market of which investment in quoted equities decreased by 19.83 percent.

The fund managers and approved issuers held a majority of the assets amounting to KSh 980.06 billion. A total of KSh 83.98 billion of investments was internally administered by the National Social Security Fund (NSSF), while KSh 102.4 billion of property investments was directly managed by the trustees of the various schemes. The assets under fund management include KSh 125.91 billion of NSSF funds which are managed by four (4) external managers. Assets managed internally by NSSF are majorly in immovable property, quoted equities, cash and demand deposits, fixed deposits, as well as unquoted securities.

Majority of the investments in the various asset, categories decreased during the half-year period. Commercial Paper non-listed bonds decreased by 297.4 percent, REITs by 42.76, quoted equities decreased by 19.83 percent, and offshore investments decreased by 14.47 percent. Government securities still accounted for the biggest share of the total assets at 39.41 percent, followed by immovable property, which accounted for 19.71 percent, investments in quoted equities accounted for 17.27 percent, investments in guaranteed funds accounted for 14.36 percent. Investment in alternative assets by schemes has gained traction with the inclusion of Private Equity & Venture Capital as an assets class. Investment in private equity and venture capital increased by 51.04 percent from 422.99 million in June 2018 to 863.94 million in December 2018 to account for 0.07 percent of the total assets.
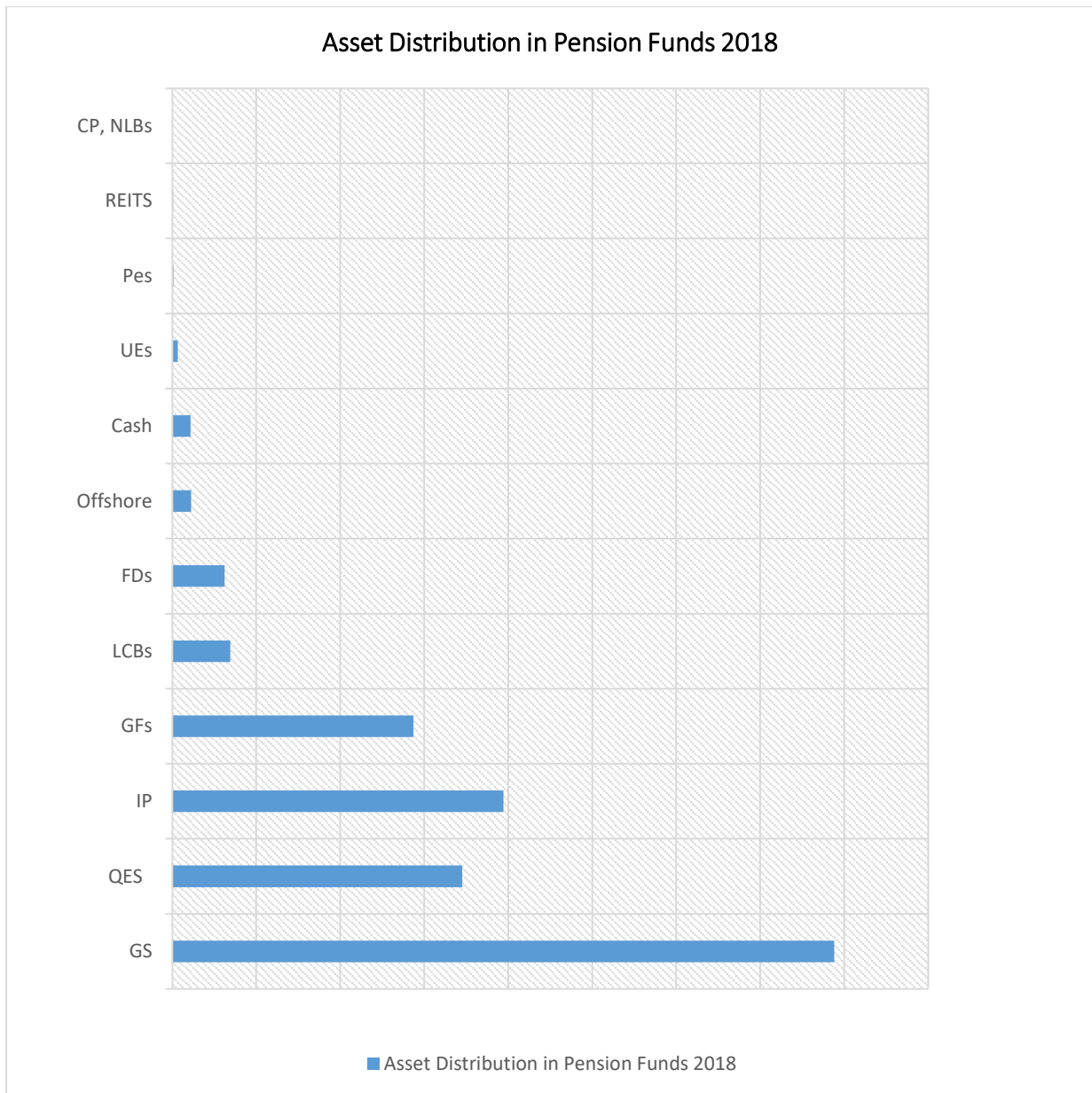
Figure 2.1: Asset Distribution in Pension Fund 2018;

Source: *Retirement Benefits Industry Report for December, 2018*

2.4.1. Segmentation by Asset Distribution vs. Statutory Limits

On average, all categories of investment were within the statutory investment limits provided in the Retirement Benefits Regulations. The Bar Chart below details the Investment allocation by schemes in the various asset classes in Kenya versus the statutory maximum.
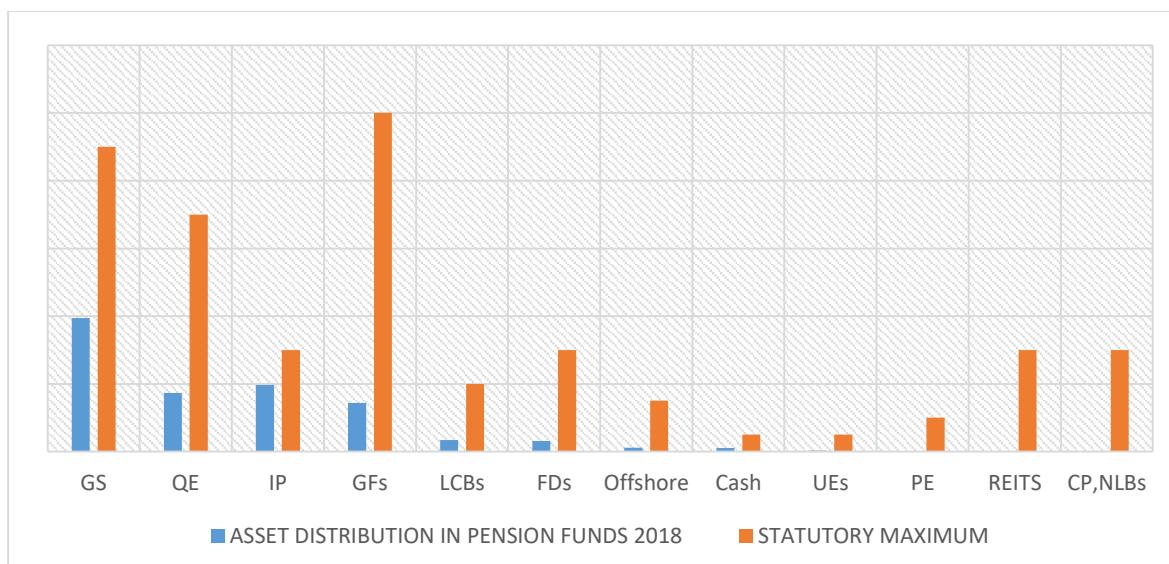
Figure 2.2: Segmentation by Asset Distribution vs. Statutory Limits

Source: Research Team

Returns for pension schemes have been plummeting over the years owing to the fact that traditional fund managers have been shy of the alternative investments, which offer higher returns. This is attributed to a lack of expertise in the area and the unwillingness to get out of their comfort zone. Some of the general factors affecting returns include the size of the scheme, the asset class allocation the strategy adopted by the Trustees as per the investment policy adopted and the prevailing economic environment in addition to the efficiency of the fund manager.

According to Organization for Economic Co-operation and Development (OECD), Retirement Benefits Schemes assets are mainly invested in fixed income securities and equities in over 80% of OECD reporting jurisdictions. On average Equities represented 26.1% of the investments of Retirement Benefits Scheme assets in OECD jurisdictions, and an average of 21.2% in non-OECD jurisdictions. This is in contrast to the Kenyan context where representation in Equities accounts for 19.8% as shown in the chart below. Regulation may also require pension funds to hold a minimum proportion of pension assets in some instruments (e.g. in Poland, pension funds must hold at least 15% in equities in 2017 while investments in treasury bonds are banned). This is a clear indication that non-OECD countries have a bias towards allocating to government bonds.

As capital markets have grown and regulators have advanced, the allocation of pension funds invested into equities has increased. According to IFC, South African Retirement Benefits Schemes with a combined Assets under Management amount to USD 500.0 billion take up roughly 40% of the assets on the Johannesburg Stock Exchange (IFC, n.d.).

In Kenya, local currency bill and bonds prevail, this is despite the regulation allowing for a 10% and 30% allocation to Private Equity and REITs respectively. As at June 2018, the total Retirement Benefits Assets Allocated to Private Equity and REITs stand at 0.04% and 0.09%

respectively. The asset allocation to Government Securities (GS) and Quoted Equities (QEs) on the other hand stands at 36.3% and 20.7% respectively in the same period.

Segregated funds have mostly offered above market average returns, with the average yearly rate standing well above other instruments in the market. Research on the Kenyan market has made it clear that if one invested in a segregated fund, the cumulative rate of return over the 6-year period would be more (i.e. 11.0 per cent) than if invested in a Guaranteed Fund (GF) in the same period (9.7 per cent). This is despite the low performance of segregated funds in 2015 and in 2018.

2.4.2. Segmentation by Asset Distribution by Asset Managers

In terms of investments by specific fund managers and approved issuers, Sanlam Investments East Africa Company limited still remained the fund manager with the largest assets under management with total assets under management at KSh 201.93 billion which constitute 20.60 percent of the total assets under the fund management. The top five fund managers during the period under review are (Sanlam Investments East Africa, GENAFRICA Asset Managers, Old Mutual Investment Group Limited, Stanlib Kenya and British – American Asset Managers Ltd) manages the bulk of the investments with the total assets under management amounting to Ksh. 683.47 billion constituting 69.74 percent of the entire assets under fund management. The analysis considered each entity according to its registration hence, where a parent company has both an approved issuer and fund manager the two were considered as distinct entities (Figure 2.3).
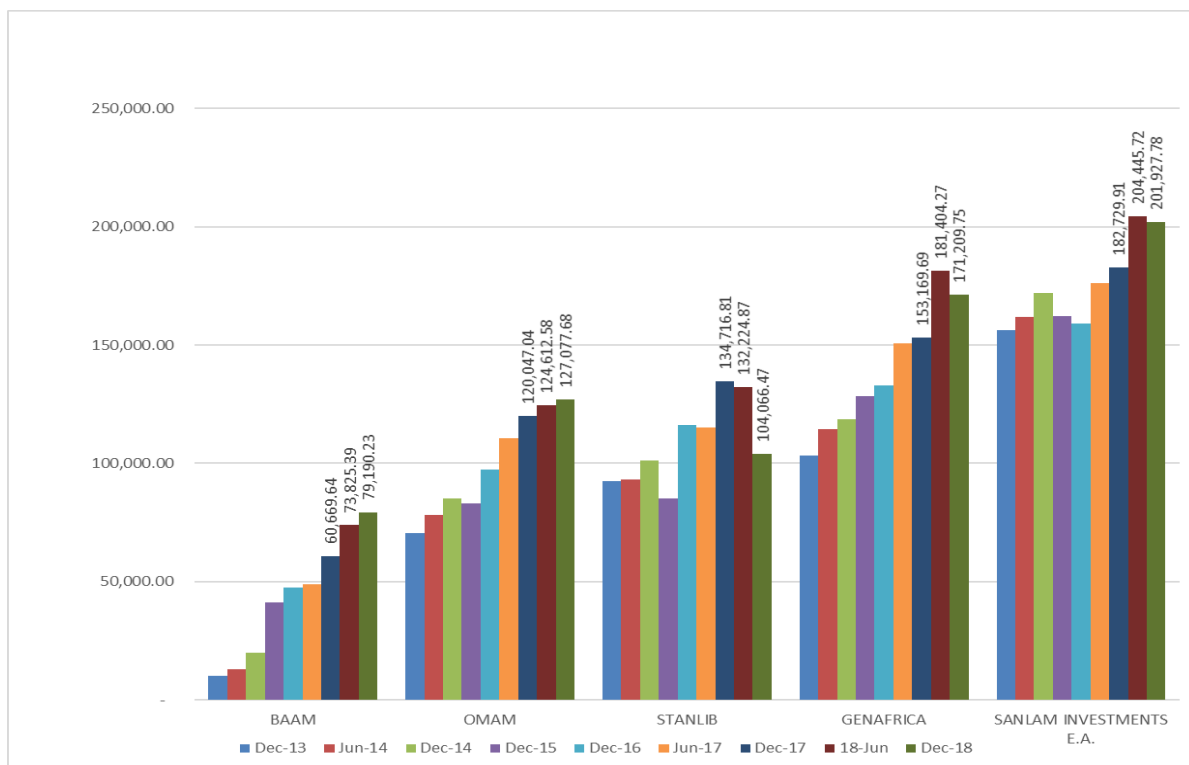

Figure 2.3: Assets under management by top five managers (Dec. 2013 – Dec. 2018)
***Source:** Retirement Benefits Industry Report for December 2018*

One of the most significant oligopolies that exist in the country today involves the Pension Industry. There are several advantages and disadvantages to an industry that has been controlled by a few firms. When the companies involved use their market dominance to achieve competitive outcomes, then the economic result is similar to what is available under other and more competitive market structures. Consumers are likely to benefit from lower prices and better quality goods and services in such context or milieu. The market itself will still lack competition, but the behaviour of the organizations can still be highly competitive. This has been the case for the Kenya Pension Industry as evidenced by falling professional fees as a percentage of total assets.

In addition to the two types of segmentation defined above, it was evident that the DC schemes in Kenya had not been well-designed as a single integrated financial product. In the same vein, there are no legislative guidelines and standards for the design of DC schemes to guarantee adequate benefits to members. These, coupled with a lack of periodic reviews of DC scheme design, compromise the benefits to members. Chirchir (2010) reported that many DC schemes in Kenya were subjected to higher charges, inappropriate investment strategies, employer budgetary constraints, poorly designed annuity and income drawdown programmes. Hence there was a need to (i) evaluate employer-related determinants of scheme design in occupational defined contribution schemes in Kenya; (ii) analyse trustee related determinants of scheme design in occupational defined contribution schemes in Kenya and (iii) to assess regulatory-related determinants of scheme design in occupational defined contribution schemes in Kenya.

2.5. Existing Literature Gaps

The reviewed literature shows that the current pension scheme in Kenya is categorized into the National Social Security Fund, Public Service Pensions Scheme, Occupational schemes and Individual schemes, categories which have not been based on the basic variables that are often used to split a whole market into segments. The most ideal or typical variables for categorization would include geographic, demographic features of members, psychographic, behavioural and product related/decision-makers. Generally, there is no defined criteria for RBA market segmentation that takes into consideration such variables as suggested in available literature. Therefore this study is a pioneer work in pointing out how market-related variables could be used to segment the market.

The literature postulates that for the categorization of markets to be effective, the variables used should be measurable, sustainable, accessible and actionable (see Camilleri, 2018). An evaluation of the RBA schemes, for instance, against the Old Age Income Security in the 21st Century Robert Holzmann and Richard Hinz criteria namely adequacy, affordability, sustainability and robustness reveals that there has not been use of any criteria in the segmentation of the market previously (Holzmann & Hinz, 2005).

Currently, the Authority has come up with a graduated levy that declines with scheme size. In addition, in the case of a lump sum commuted from a registered pension or individual

retirement fund, the first 600,000 shillings; contributions that are less than 20,000 Kenyan shillings per month or 30 percent of the pensionable salary, whichever is less; income earned from investments; and pension payments after attaining the age of 65 are not subject to tax. The authority does not however take into consideration market conditions, competitor actions, trade margins and input costs, amongst other variables under each category while administering the levy rates across different categories.

RBA has regulated and supervised the industry since 2000, with a method of risk-based supervision which was adopted just over a decade later in 2011. Even so, there is no clear framework that links each category with its risk exposures, their causes, and the risk management capacity. Therefore, this work attempts to link market segmentation framework to risk exposure of the industry.

SECTION 3: METHODOLOGY

3.1. Research Design

The study employed exploratory and descriptive research designs and targeted the pension schemes in Kenya. Both qualitative and quantitative research techniques were utilized. The list of schemes (in all categories) was used as a sampling frame to select a representative sample for the study. In the sample selection, care was taken to include schemes that have a variety of operational mechanisms.

3.2. Study sites

This data that informed this study was collected from schemes in selected regions in Kenya. The country was divided into six regions – Nairobi (the capital city), Coastal region, Nyanza and Western region, Rift Valley region, Central and Eastern region and the North Eastern region – in consultation with RBA officials (also see Table 3.1).

Table 3.1: Sample size per fund size per region

Regions	Population Size	Sample size	0 - 300 million	301- 600 million	601 - 1 billion	Above 1 Billion	Total
Nyanza/ Western	32	3.1	2.23	0.28	0.19	0.4	3.1
Nairobi	833	80.64	58.06	7.26	4.84	10.48	80.64
Coastal Region	58	5.61	4.04	0.51	0.34	0.73	5.61
Rift Valley	52	5.03	3.62	0.45	0.3	0.65	5.03
East / Central	55	5.32	3.83	0.48	0.32	0.69	5.32
North Eastern	3	0.29	0.21	0.03	0.02	0.04	0.29
Total	**1033**	**100**	**72**	**9**	**6**	**13**	**100**

The existing data from RBA showed that a majority or approximately 80% of pension schemes are located in Nairobi, Mombasa and Kisumu counties. Such levels of concentration of schemes is a critical factor that had to be reflected in the sample. North Eastern region was not included in the study because of logistical challenges – such as cost implication, distance, and security dilemma[1] – and only three schemes are located in the

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[1] There are numerous cases of terrorists' attacks and insecurity reported over the last three or four years in the three counties – Garissa, Wajir, and Mandera – in the North Eastern region. See, for example, Otsialo, M. (2019, June 19). Terror threat: Public transport suspended in Mandera. *Daily Naition*. Nairobi: NMG. Retrieved from https://www.nation.co.ke/ counties/mandera/Terror-threat--Public-transport-suspended-in-Mandera/1183298-5150552-10g5kmf/index.html; Mutiga, M. (2015, April 2). Kenya attack: 'There were screams and nobody knew if we would survive'. he Guardian. Nairobi. Retrieved from https://www.theguardian.com/world/2015/apr/02/kenya-attack-survivors-garissa-al-shabaab.

area. For purposes of the study, the research team agreed to undertake the study in Nairobi, Mombasa, Kisumu, Nyeri, and Uasin Gishu counties, which are located in the five regions.

3.3. Population and sampling

The data on pension schemes were obtained according to the pension fund from RBA offices. It was used as the population size for the study and listed 1,045 schemes including all occupational schemes, individual schemes, Public Service Pension Scheme and the NSSF. However, 12 schemes in the excel data file provided lacked information or details on fund value which was critical in the sampling process. The schemes were therefore reduced to 1,033 but included NSSF and CSPS schemes.

The sampling process was three-pronged – that is, cluster sampling, random sampling, and purposive sampling. In the first prong, the cluster sampling process was based on fund value of the pension's schemes. Schemes were identified through clusters based on the fund value (KS) in four categories as follows: KSh. 0 to 300 million, KSh. 301 to 600 million, Kshs. 601 to 1000 million, and over Kshs. 1000 million (see the attached list of the schemes based on their fund value).

In the second prong, sample of pension schemes per study sites were randomly selected based on the proportion and using a randomizer (using Random Sequencing Software) to ensure that there were no biases in picking a particular scheme. This same process was repeated during replacement of schemes that were either unresponsive or had dropped out during the study or there were difficulties in locating the schemes. In the third or final prong, NSSF and CSPS were purposively picked because of their unique scheme-type attribute. These two schemes have independent categorization that is different from occupational and individual scheme type.

From the target population of all schemes under this inquiry, the sample size denoted by small n was computed using the formulae as follows:

$$n = \frac{N}{1 + N * e^2}$$

Where N is the known population and e is the error level, with a 90 confidence interval selected the confidence error will be 10% or 0.1. A confidence of 90% was selected because the sample size are institutions and not individuals and therefore the small n is relatively small. The sample size of the study was 93 pension schemes as computed below:

$$n = \frac{1031}{1 + 1031(0.1)^2} = \frac{1031}{11.31} = 91$$

The sample size (n) was rounded off to 100 schemes and adjusted by 25% to take care of the dropouts, decline and non-response evident during the study (Table 3.2).

Table 3.1: Sample size per scheme size per region

Site	Big (n)	Small (n)	0-300 m	301-600 m	601-1000m	Above 1000m	Total
Nairobi	833	93	66	9	6	12	93
Mombasa	58	8	5	1	1	1	8
Uasin Gishu	52	9	5	1	1	2	9
Nyeri	55	5	5	0	0	0	5
Kisumu	32	10	6	2	1	1	10
TOTAL	1,030	125	87	13	9	16	125

3.4. Reviewing of secondary data

Secondary data on pension schemes in Kenya was collected from the annual pension surveys carried out by the RBA as well as studies on investments undertaken. In as far as the market segmentation criteria data is concerned, only relevant data was reviewed but not limited to demographic and decision-makers' variables.

Behavioural market segmentation divides the market into segments on the basis of consumer knowledge, attitudes, uses or responses to a specific product while decision maker takes care of who makes the final decision to purchase the product. Apart from the consumer markets, there was the business to business segmentation criteria that would take into consideration the business characteristics.

Data on the ability to pay, market conditions, competitor actions, trade margins, and input costs, amongst other variables were collected to assist in developing a levy review framework. More so, data on the risks exposures of RBA, their causes, and the risk management capacity were collected from the supervised institutions, the supervisory agency, and the other market participants that could have the ability to affect the choices and proceedings of pension funds.

3.5. Data Collection Tools

The research tools were developed in consultation with the research department of RBA and which acted as quality assurance. The members of the research panel of RBA were also briefed about this exercise and the tools that were to be used. Their input during the presentation of the Inception Report was instrumental in redesigning and executing the fieldwork. Data collection tools were piloted to enhance the reliability and validity of the data collected. The input from the piloting exercise was considered in the refinement of the tool.

3.6. Data Collection Methods

The primary source of data used in this study the 2018 annual RBA schemes survey. This secondary source yielded a population of 1,045 schemes which had filed their returns in 2018, save for the 12 pension schemes whose data was available as shown earlier. The self-reported the survey captures information about scheme Name, Postal Address, Town, registered Office, Membership number and Fund Value. This information was inadequate to enable any meaningful analysis. For instance, a pension firm in Nairobi but whose postal address was in Karen would have a different name of location town. This was also evident in Kisumu and Uasin Gishu. Similarly, the membership number was also inadequate. The research team had to do a lot of data mining through internet and telephone calls to be able to fill in the data matrix as well as a physical search of some of these schemes. Therefore, a rigorous desk review was also undertaken to gather secondary data to supplement the primary data.

In the collection of primary data, the respondents were interviewed using a semi-structured questionnaire as shown in Appendix 1. The sample was drawn from the RBA Annual 2018 survey data. The respondents interviewed included trustees of the various schemes will be selected from the four categories of schemes with an aim of gathering varied views from each of the key officers such as chairmen, treasurers, and internal fund administrators. The research team first selected a sample of 120 pension schemes as per the sampling framework. However, when we contacted them, some were not in existence while others declined to be interviewed. In the end, the team contacted more than 300 pension's schemes. Those that completed the survey questionnaire by the time of data analysis were 60. [A detailed summary is provided in appendix 4].

The research team conducted a thorough desk review guided by the Terms of Reference (ToR). Some of the issues addressed include: the size, scope, and composition of retirement benefits schemes in Kenya. We also identified the current market segmentation of retirement benefits schemes in Kenya; and assessment of segmentation of retirement benefits schemes from a global perspective to isolate key lessons for the Kenyan pensions industry. The research team reviewed the existing national and sector-specific documents and reports on the current market segmentation of retirement benefits schemes in the country as well as major relevant public policy developments and frameworks which included but not limited to:-

i) Guide to Starting a Retirement Benefits Scheme
ii) RBA Strategic Plan 2014-2019
iii) RBA Strategic Plan 2019-2024
iv) Retirements Benefit Act No. 3 of 1997; and
v) Charting the future for Kenya's retirement benefits industry – Institute of Economic Affairs (IEA)

In addition, the team reviewed a considerable amount of local and global literature on market segmentation with reference but not limited to retirement benefit schemes. The review process did not only sought to understand market segmentation but also to develop criteria for market segmentation of retirement benefits schemes in the country.

The research team also conducted key informants interviews with selected pension service providers. These included fund custodians, fund administrators, and fund managers who were knowledgeable on the issues segmentation of the retirement benefits industry, levies, investment as well as the risk exposures. The interview guide for the Key Informant Interviews (KIIs) is as indicated in Appendix 2.

The fieldwork for this study was conducted between 10th April 2019 and 21st June 2019. This was due to the need for close follow-ups with schemes even when they kept postponing interviews. There was also frequent replacement of schemes that either did not exist at the said location or completely declined to participate in the survey. In the former case, some schemes like Uchumi Supermarkets Limited Staff Provident Fund, Mbaraki Port Warehouse (K) Limited Staff Retirement Benefits Scheme and the Advertising Company Limited Staff Retirement Benefits Scheme had closed down and the sponsor company, therefore, advised members to join individual schemes.

3.7. Data Analysis and Presentation

The data obtained from both primary and secondary sources yielded quantitative and qualitative data sets. The analysis of the data, therefore, followed the same track whereby quantitative data and qualitative data were analysed separately. The analysis was guided by the objectives and research questions stated in earlier sections 1.3 and 1.4.

Quantitative analysis of the data entailed giving a summarizing the general characteristics of the pension schemes using appropriate statistical methods. Quantitative data were analysed using the various methods according to scales of measurement of the data collected. In order to compute the measure of central tendencies (e.g. mean or averages) and dispersion (e.g. deviations), as well as other descriptive statistics, statistical models were used where appropriate. Further, statistical tests were carried out to examine relationships between key variables and market indicators. The data was then presented using descriptions, tables, and diagrams.

Qualitative analysis was done through thematic coding of the descriptive data, classification of the information, summarizing the information and presenting it in descriptive form. The analysis of data took into account the design which was mainly explorative and descriptive. This data primarily supplemented the survey data that was obtained through standardised questionnaire as discussed above.

The evaluation used both quantitative and qualitative research methods as well as triangulation of findings where possible. An analysis of the existing Retirement Benefits

Schemes in the country was carried out to be able to identify the current market segmentation. This focused on market coverage, the type of services offered and the diversities within the existing market.

a) Criteria for market segmentation

Criteria for market segmentation was developed by taking into consideration of demographic attributes of the board and scheme-related variables. Demographic variables focused on the age of the scheme, membership, and the composition and diversity of the pension schemes' trustee boards. The scheme-related variables took into consideration the business characteristics such as fund value. This study used Posteriori or data-driven segmentation where the given demographic attributes and the scheme-related variables were chosen as a segmentation base. After that, a mathematical algorithm (cluster analysis) was used to determine which groups in the segmentation analysis having similar characteristics based on the chosen variables (Dolnicar, 2003a p. 3-4). Cluster analysis has the inherent ability to accommodate non linearities and complex interactions among explanatory and explained variables without imposing any structural relationships.

b) Framework for market segmentation

Following the set criteria in (a), the research team designed and developed a framework for market segmentation based on the determined groups having similar characteristics based on the chosen variables. Some of the variables used to segment the pension industry included: membership number and fund value.

c) Levy rates review

With reference to the developed market segmentation, a framework for levy rates review was developed (Qs 16, 17, & 18). For each levy rate category, the team developed a framework that put into consideration accountability, effectiveness, efficiency, and fairness. These categories include: the ability to pay, market conditions, competitor actions, trade margins, and input costs, amongst other variables under each segment were considered. The general model for levy rates charges is a function of many variables such as scheme size, annual growth rate, profits, risks exposure, and input costs, etc. The levy rates are deemed to be related to this framework as shown in equation 3.1 below.

$Levy\ rate\ expenditure =$
$f\ (ability\ to\ pay, market\ conditions, competitor\ actions, trade\ margins\ or\ input\ costs)$

(3.1)

Upon parameterization of the function in 3.1 above we obtain a new equation 3.2:

$Levy\ rates\ expenditure = \beta_0 + \beta_1 ability\ to\ pay + \beta_2 Market\ conditions +$
$\beta_3 Competitor\ actions + \beta_4 Trade\ margins\ or\ input\ costs$ *(3.2)*

Equation 3.2 is expressed as a deterministic function since the data available did not allow estimation of the parameters β. To identify and estimate the $'s$, we use the level of agreement as posed by question 18 in the structured questionnaire. We assign high $\beta's$ to the attributes which most RBAs agree with and vice versa. As a rule of the thumb, we keep $\beta_1 - \beta_4$ between zero and one. As in any other econometrics regressions we let β_0 be a mean

levy rate that is applicable to every other RBA. In addition, the equation 3.2 can be estimated at the firm or segment level. This model is developed so as to ease operations for the regulator at the segment level.

d) *Framework for risk exposures*

In developing a framework for risk exposures, we link risk exposure with the segmentation developed in section 3.6b through simple cross-tabulation. The risk scores obtained from the risk module are cross-tabulated with the size scores from the market segmentation framework as shown in Table 3.3.

Table 3.2: Cross Tabulation of Risk scores with market segmentation

RBA	Size	Risk Score	Risk Category
Large			
A			
B			
C			
Medium			
D			
E			
F			
Small			
G			
H			
I			

3.8. Ethical Considerations

The Institute for Development Studies (IDS) adhered to all protocols related to undertaking the survey. In the preliminary stages, the IDS applied for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI). This was approved and a research permit issued ahead of the commencement of data collection phase (see Appendix 6). Similarly, IDS through the lead researchers requested as is the norm for further authorisation from County Commissioners (CC) and Ministry of Education Offices (MoE) at the county level. In addition, the Director, IDS wrote introductory letters addressed to individual heads or officers in charge of selected pension schemes to notify them about the study, while RBA wrote a complimentary letter on the same subject. The methodology and instruments for data collection were developed in close collaboration with RBA Research Department.

Respect and freedom to participate in the research was ensured for all participants. Other necessary ethical considerations were made as required of a research project of this nature. Respondents' confidentiality and privacy were maintained and safeguarded throughout the study. No personal identifiers were used and sharing of a person's name and contact details was optional. Participation in the research was voluntary. The study participants were

informed about the purpose and objectives of the study, their roles and potential benefits and risks in order to make an informed consent. This research is social science research and the researchers did not anticipate to ask any individual intrusive questions. However, if a respondent wanted to opt or decline or discontinue an interview even after accepting, they were permitted to do so. There were no penalties for the decline or withdrawal. Any incomplete interviews were noted down for our record, as well as the reasons for discontinuation. This also provided a basis for replacement of schemes in the same category and study sites.

The rationale for the study was properly communicated to all schemes through either the contact persons or heads of the particular schemes that were of interest in the exercise. The respondents were informed that the study sought to understand how pension coverage can be enhanced and the industry-aligned to the needs of the 21st century. There was no monetary compensation for participation in the study.

With regards to data storage and management, only the authorised IDS research team members have access to the data. The data was to be used only for the purpose of this study. Access to the data would be granted to the RBA research staff upon request. The final raw data (SPSS), STATA and excel files will be shared with the RBA research.

SECTION 4: RESULTS AND DISCUSSIONS

4.1. Introduction

In this section, we analysed the data in accordance with the study objectives stated in section 1.3. The overall objective of this study was to assess the current retirement benefits industry and provide a framework for market segmentation. The specific objectives were to:

1) Examine the size, scope and composition of the retirement benefits schemes in Kenya
2) Document the current market segmentation of retirement benefits schemes in Kenya. Develop a criteria for market segmentation taking into consideration asset under management.
3) Design and develop a framework for market segmentation of the pensions industry in Kenya.
4) Develop a framework for levy rates review in accordance with market segmentation.
5) Develop a framework that links market segmentation to risk exposures of retirement benefits Schemes.

4.2. Size, Scope and Composition of Retirement Benefits Schemes in Kenya

In order to identify the size, scope, and composition of the retirement benefits schemes in Kenya, secondary data from the annual RBA statistics were used. This data set describes the categorisation of retirement benefits schemes in terms of size, scope, and composition in the country. In terms of size, the retirement benefits schemes were ranked on the basis of their asset value, the number of members and coverage, as per the definition of the Authority (2010). This analysis in this section is based on 1,033 pension schemes which had comparable data as per the RBA 2018 annual returns.

As shown in Table 4.1, the membership number of pension schemes vary significantly. Out of the 1,033 pension schemes, only 782 (76%) reported their membership numbers. It was evident that the pension industry in Kenya is typically small with many schemes having very few members. Almost a quarter (23.35%) of the schemes had less than 50 members, while approximately 79.1% of the schemes had less than 500 members each (Table 4.1). Whereas the membership is a good measure of a scheme's size, we found that detailed information on membership indicator is unavailable.

Table 4.1: Membership number of pension scheme

Membership Categories	Number of Schemes	Percent
1 – 50 members	240	23.35
51 - 100 members	195	18.97
101 - 200 members	175	17.02
201 - 500 members	203	19.75
501 - 1,000 members	86	8.37
1,001 - 5,000 members	101	9.82h
5,001 - 10,000 members	19	1.85
Over 10,000 members	9	0.88
Total	**782**	100.00
*** Schemes without membership information = 251*		

Because there was little information on membership, the research team, therefore, analysed the structure of the industry in terms of the fund value which literature suggests is a more objective measure of the size. Fund value, therefore, remains a salient feature of scheme performance and categorisation based on it cannot be ignored. From Table 4.2, it was evident that most of the schemes are relatively small with 72% of them having less than KSh 300 million. Those schemes with between KSh 300 and 600 million were 114, accounting for 11%. Those with between KSh 600 million and 1 billion were 50 accounting for only 4.84%. Only 11.9% of the schemes had more than KSh 1 billion.

Table 4.2: Fund Value of the Schemes

Fund Value Categories (KSh)	Number of schemes	Percent
0 - 300,000,000	746	72.22
300,000,001 - 600,000,000	114	11.04
600,000,001 - 1,000,000,000	50	4.84
1,000,000,001 - 5,000,000,000	89	8.62
>5,000,000,000	34	3.29
Total	**1033**	**100.00**

The mean fund value for the 1,033 pension schemes, whose data was available, is KSh 724,644,016. The minimum fund value is KSh 356,825 while the maximum fund value is KSh 30,888,488,000. It is therefore evident from these pensions schemes that measure of central tendencies, minimum and maximum fund values that the industry has a combination of very small and very large pension schemes. The viability of smaller schemes in the industry remain unclear, particularly when they begin to pay-out to beneficiaries and, even, in terms of management.

Sector distribution

Of all the pension schemes operating in Kenya, the service industry has the highest number of schemes at 48.3%, followed by schemes in the education sector at 20%, manufacturing sector at 10%, agriculture at 5%, hospitality industry at 3.3%, and trade industry with the smallest number of pension schemes at 1.7% (See figure 4.1).
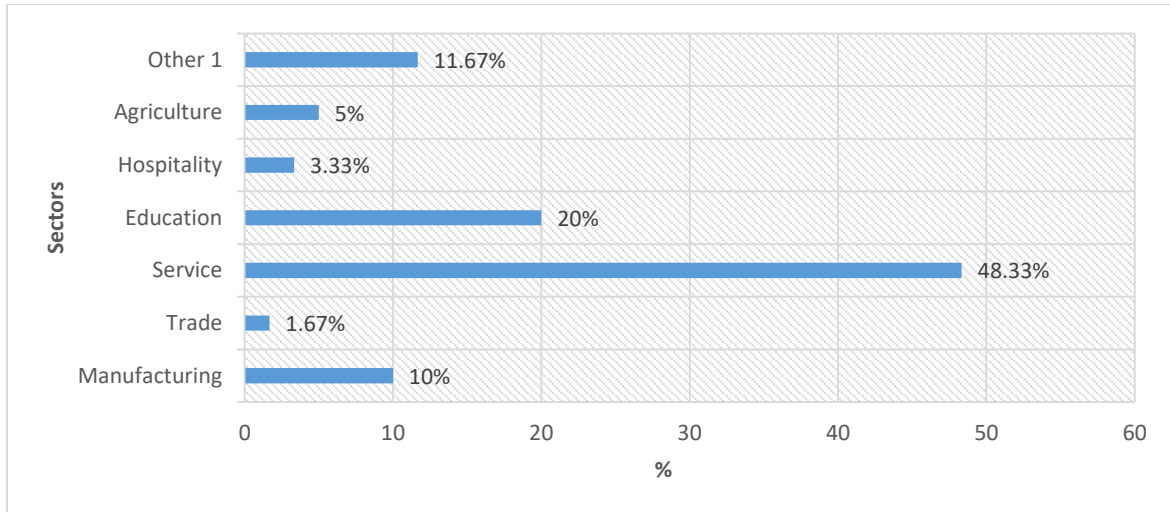
Figure 4.1: Distribution of schemes by sector

Other sectors constitute of the remaining 11.7%, with the media industry constituting of 33.3% of schemes under such category, while the rest including energy, the non-governmental organisations (NGO), Regional Development Authorities (RDAs), and faith-based organisations each constitute of 16.7% of schemes under this category (see figure 4.2).
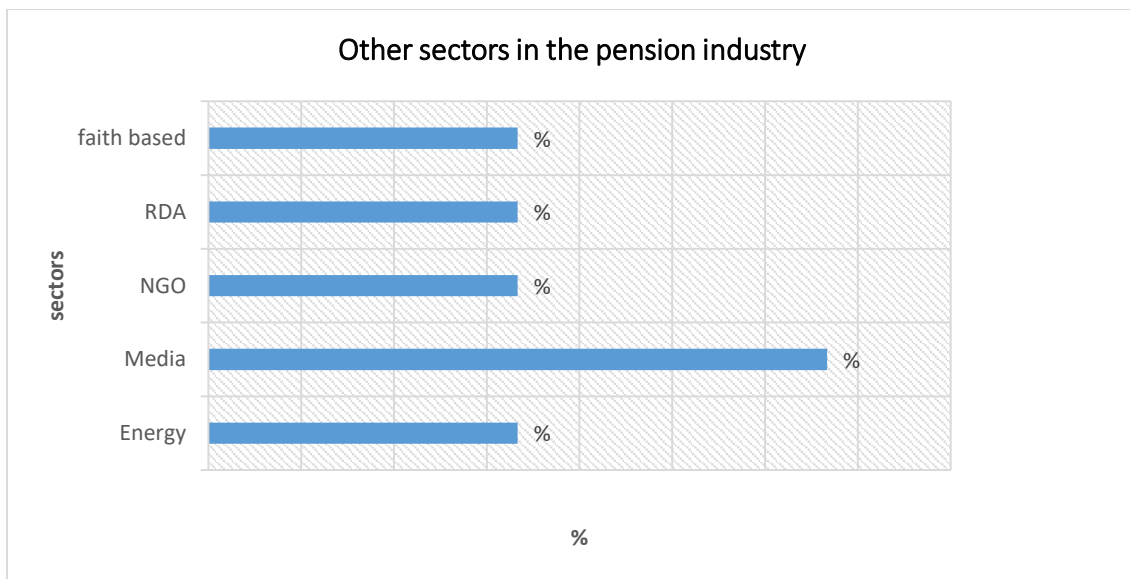
Figure 4.2 : Other sectors in the pension industry

In line with the policy, which is explained further in sub-section 4.4.2, the proportion of defined contribution has increased over time. Table 4.3 depicts how these schemes are spread across the country and their proportion of fund.

Table 4.3: List of Scheme location in the county

Town	Number of Schemes	Percent		Town	Number of Schemes	Percent
Awasi	1	0.08		Maragua	1	0.08
Bomet	2	0.16		Maseno	1	0.08
Bondo	1	0.08		Maua	1	0.08
Bungoma	6	0.47		Menegai	1	0.08
Chogoria	1	0.08		Meru	5	0.39
Chuka	2	0.16		Molo	1	0.08
Diani	1	0.08		Mombasa	65	5.04
Egerton	3	0.23		Muhoroni	1	0.08
Eldama	1	0.08		Mumias	5	0.39
Eldoret	13	1.01		Murang'a	6	0.31
Embu	6	0.47		Nairobi	1027	79.07
Faza	1	0.08		Naivasha	2	0.16
Garrisa	1	0.08		Nakuru	8	0.62
Gilgil	1	0.08		Nambale	1	0.08
Githunguri	1	0.08		Nandi Hillls	2	0.16
Homa Bay	1	0.08		Nanyuki	4	0.31
Isiolo	1	0.08		Narok	4	0.31
Kakamega	5	0.39		Ngambwa	1	0.08
Kalimoni	1	0.08		Nkubu	1	0.08
Karatina	1	0.08		Nyahururu	1	0.08
Karen	1	0.08		Nyangori	1	0.08
Kericho	11	0.85		Nyeri	6	0.47
Kerugoya	2	0.16		Ole Nguruone	1	0.08
Kiambu	2	0.16		Ruiru	6	0.47
Kijabe	3	0.23		Sare Awendo	2	0.16
Kikuyu	3	0.23		Sare-Awendo	1	0.08
Kilifi	3	0.23		Siaya	1	0.08
Kisii	2	0.16		Thika	16	1.24
Kisumu	13	1.01		Tiriki	1	0.08
Kitale	3	0.23		Ukunda	1	0.08
Kitui	2	0.16		Voi	1	0.08
Koru	1	0.08		Watamu	1	0.08
Limuru	6	0.47		Webuye	1	0.08
Litein	2	0.16		Wodanga	1	0.08
Machakos	3	0.23		Wundanyi	1	0.08
Magadi	2	0.16		**TOTAL**	**1,288**	**100**

4.3. Current Status of Segmentation of the Pension Industry in Kenya

In documenting the current market segmentation in Kenya, the study employed a descriptive analysis using a desktop review approach. The review established the current status of segmentation of retirement benefits schemes in Kenya. Descriptive analysis showed that RBA has continued to rely on the scheme type as the main criteria for segmenting pension schemes in Kenya. The four scheme segments are: National Social Security Fund, Public Service Pension Scheme, Occupational Schemes and Individual Schemes. However, these schemes are further differentiated in terms of four main characteristics: legal structure, membership, nature of funding, and the regulator as shown in Table 4.4.

Table 4.4 : Summary of the Retirement Benefits in Kenya

Scheme Type	National Social Security Fund	Public Service Pension Scheme	Occupational Schemes	Individual Schemes
Legal Structure	Act of Parliament	Act of Parliament	Established under Trust	Established under Trust
Membership	Employees in formal sector establishments with 5+ employees excluding public service employees	All public service employees, including civil servants, teachers and disciplined forces. Separate scheme for armed forces	Formal sector workers in companies that operate retirement schemes	Open to all on voluntary basis
Funding	Funded	Non-funded	Funded	Funded
Regulation	RBA	Act of Parliament	RBA	RBA
Source: RBA Website				

The current segmentation follows the scheme type criteria which is insufficient for various reasons: the clustering is wide, overlapping and does not take into account other factors such a double deduction. For instance, the NSSF covers all employers and employees who make monthly contributions and benefits are reserved until age 50.

It is a mandatory scheme for all formal sector employees other than those covered under the public service pension scheme and selected occupational schemes. The public service pension scheme is open to all civil servants as a *Pay As You Go[2]* non-funded and non-contributory scheme. It covers civil servants, teachers, police and prison staff. The individual retirement benefits schemes are open to the general public providing convenient channels of retirement benefits savings for those in employment but whose employers have not established occupational schemes, those in self-employment and those who wish to make additional voluntary contributions. Generally, it targets individual members not necessarily tied to an employer or any formal setting. The occupational

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[2] Pay As You Go (PAYG) basis which meant that workers did not have to contribute to their pensions but would be guaranteed pension benefits on retirement (Financial Times, 2003).

retirement benefits schemes like the individual retirement benefits scheme are voluntarily established and funded through contributions of from employers and employees. Some of the contributors are also required to be members of the NSSF and make statutory contributions to the NSSF, hence overlapping.

The existing criterion of segmentation manifests as a typology and not a segment of the pension schemes in a practical way (Figure 4.3). It thus ignores key features of a scheme, such as membership and fund value, which are so pronounced at scheme level. The study showed that membership could be determined in terms of scheme type, the number of members, nature and membership, worker or membership affiliation, contribution, and geography. Similarly, fund value appeared to be a salient feature of the schemes in a number of ways, but the levy category and investment areas are the most pronounced features. The fund value is the main determinant of the amount of levy that each scheme remit to the regulator based on a computed proportion which has given larger schemes a comparative advantage over smaller ones. The smaller ones pay huge levies compared to big scheme or schemes with large fund values. It is thus clear that, although these two features – membership and fund value – have not been utilized in the past, the significance of the two cannot be gainsaid. In light of the above review, it is evident that a single criterion for segmentation is inadequate for a versatile and dynamic pension industry in the present globalized economy. Thus, the next section proposes new criteria that can be employed to segment pension schemes in the future.
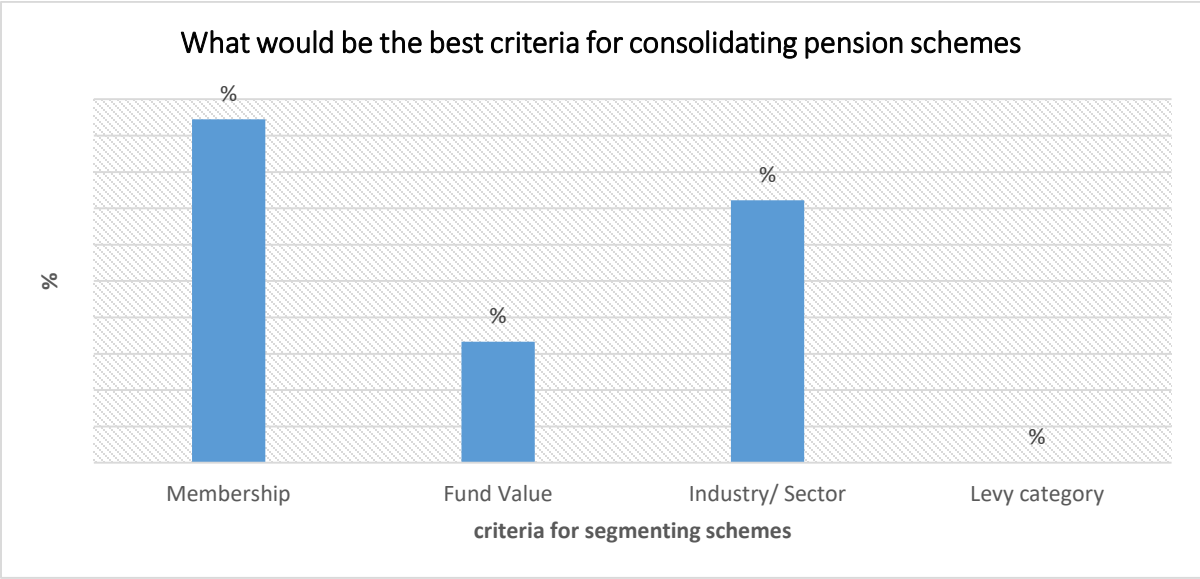
Figure 4.3: What is the best criteria for consolidating pension schemes?

4.4. Market segmentation

Market segmentation is the actual process of identifying segments of the market and dividing a broad customer base into clusters of consumers consisting of existing and prospective consumers of pension products. The process is consumer-oriented and can be applied to almost any type of market or industry.

4.4.1. Criteria for segmentation

From the data collected, the process of segmenting an existing customer base consists of three-point criteria namely: sector/industry, membership and fund value.

Sector/industry

Kenyan economy comprise of several sectors or industries for example manufacturing, agriculture, service, ICT, among others (see figure 4.1). From the analysis, 36.1% of the respondents' favoured industries/sector as a better way for consolidating schemes in Kenya (see figure 4.3) compared to membership (47.2 %), fund value (16.7 %) and levy category (0.0%). This notwithstanding however, sector based segmentation would mean more fragmented scheme since the sectors have different characteristics and would lead to a highly fragmented scheme.

Membership

As earlier indicated, the majority of the pensions are in the small and medium membership categories (also see figure 4.4). Thus, consolidating the schemes based on membership is likely to make the schemes sustainable and viable due to economies of scale and managerial efficiency as well as improved skills set.

Figure 4.4: Percentage of membership per scheme

The new legal regime, via treasury circular No. 18/2010 required State Corporations to convert from Defined Benefit to Defined Contribution by July 1ˢᵗ 2011, provided an opportunity that did not exist hitherto for members of different schemes to monitor the performance of their respective schemes. Moving forward, such reconfiguration of scheme structure signals a new opportunity for pensions schemes to increase and improve their efficiency and thereby reduction of funding deficits.

Increased membership at pension scheme level gives schemes a collective voice and bargaining power, that is not available in small schemes, which brings about affordability, adequacy, robustness, and sustainability.

Fund Value

Fund values oscillates back and forth based on either how pension schemes grow or perform, however, the regulator requires small schemes to invest in government securities that are deemed safe. In the future, the regulator should allow for flexibility for fund managers to venture in profitable investments or opportunity as pension schemes outgrow ceiling due to current segmentation of the pension schemes in the country. According to RBA annual reports, the portfolio structure of the investments by retirement benefit schemes informal sector has 12 classes. These classes include investments in government securities, quoted equities, immovable properties, guaranteed funds, listed corporate bonds, and fixed deposits, offshore, cash, unquoted equities, private equity, REITs and commercial papers.

Following the defined criteria by the respondents, the first part of the process began with defining the scope of the segmentation project by setting up the geographical area which will be covered in the project and by gaining a thorough understanding from the customer's point of view. In the case of RBA, the scope should cover all the retirement benefit authority schemes in Nairobi, Mombasa, Kisumu, Nyeri and Uasin Gishu. Shared characteristics of all the schemes in the different areas were considered. These included in addition to the geographical location, fund value and membership (number). This study used Posteriori or data-driven segmentation where the given set of variables were chosen as a segmentation base.

To determine which groups in the segmentation analysis had similar characteristics based on the chosen variables (Dolnicar, 2003a p. 3-4) a mathematical algorithm (cluster analysis) was employed. Cluster analysis has the inherent ability to accommodate non linearities and complex interactions among explanatory and explained variables without imposing any structural relationships. In our analyses, based on the geographical coverage, number of members and fund values were used for cluster analysis. Observations of pensions schemes with no values for fund value as at 2018 and number of members were dropped from the analysis leaving a total of 51 observations. Using hierarchical cluster analysis, we picked the top most four clusters. The summary is given in Table 4.5:

Table 4.5: Summary Statistics of the Clusters

Summary for the Number of members					
Clus	**Obs**	**Mean**	**Std. Dev**	**Min**	**Max**
1	40.00	524.23	1878.76	5.00	12000.00
2	8.00	1493.88	1403.20	413.00	4583.00
3	2.00	3788	1962.93	2400.00	5176.00
4	1.00	8829	.	8829.00	8829.00
Summary for the Fund value					
Clus	**Obs**	**Mean**	**Std. Dev**	**Min**	**Max**
1	40.00	182000000.00	168000000.00	2000000.00	586000000.00
2	8.00	2010000000.00	1440000000.00	875000000.00	4510000000.00
3	2.00	9250000000.00	1060000000.00	8500000000.00	10000000000.00
4	1.00	30000000000.00	.	30000000000.00	30000000000.00

Source: Authors' Calculations from RBA segmentation data

The summary statistics of the clusters indicated that the mean of the first cluster with 78.43 % of the observations was 524.23 with the second cluster having a mean of 1493.88 number of members. The first cluster had a mean fund value of Ksh 182, 000,000 with the last cluster having a mean value of Kshs 30,000,000,000. Generally, the segments per fund value and number of members per scheme can be divided into four segments. To check whether the population means across the clusters are equal, the ANOVA table was used. The test statistic was statistically significant for both fund value and the number of members indicating that there was a statistically significant difference among the four clusters.

4.4.2 Framework for Market Segmentation in Kenya

To achieve this objective and exploratory design were employed since the size of the schemes, nature of labour contracts and other terms of service were unknown. Data collected was analysed thematically to identify striking characteristics that would be the basis used to segment the retirement benefits market. From the results, the respondents gave the two major reasons why they think the industry is segmented to be because of:

1. Institutional Framework – each fund operates with a different number and experience of the Board of Trustees and the Benefits provided to employees differ.
2. Investment Framework – every scheme is allowed its own investment decisions provided they do not exceed the statutory limits set by the law.
3. Risk Framework – every Scheme faces different risks and they lack a common risk policy.

The framework for segmenting RBSs was based on a composite market share index (CMSI). This is an index that is defined on the key attributes of an RBS market. It is calculated as a weighted average of the individual market shares of the RBSs in a given market attribute. The weights are

determined based on the relative importance of each attribute in determining the size of an RBS. Based on the definition of the size of an RBS by the RBA, three attributes: namely: asset value, number of members and coverage define an RBS market share. The overall investment index was then used to rank the retirement benefits schemes from the highest score to the one with the lowest score. Based on this overall index the retirement benefits schemes were classified (segmented) based on appropriate bands.

Therefore, we construct a CMSI based on these three attributes. The asset value is proxied by the total investment made by an RBS in the various investment classes. Membership is defined by the number of members in the scheme while coverage is defined by the number of sectors in which the RBS operates. For the purposes of simulating how the CMSI index is calculated and used for segmentation, we employ the data collected on the sample of 60 RBSs. Table 4.8 provides an average summary of this simulation (See Table 7.2 in Appendix 4 for a full summary of this simulation).

Table 4.6: Summary of CMSI Score of Retirement Benefit Schemes

	Investments	Percentage of the Total	Members	Percent of the Total	Sectors	percent of the total	size
Weight		50		40	10		
Large RBSs CMSI>6%							
Average for 5 **largest pension schemes**	11307.82	15.722	6597.6	12.262	1	12.5	14.014
Medium RBSs 3<CMSI<6							
Average for 6 **medium pension schemes**	1583.22	2.207	1666	2.581	1	12.5	3.3817
SMALL RBSs 0<CMSI<3							
Average for 49 small pension schemes	122.5176458	0.167	283.70	0.484	1	12.5	1.523
Total	71919.247		53801		8		

Table 4.8 illustrates the CMSI framework of segmenting the RBSs. Based on the weights 50, 40 and 10 percent for asset value, membership and sectors of operation. The sampled 60 RBS produce a CMSI ranging from 1.25 to 31.10. The range of 29.85 points shows that the RBS market is highly fragmented especially across the sectors. An examination of the sectors served by the sampled RBSs reveals that all the RBSs serve a single firm in a given sector. As such, the sectors served by RBA is relatively unimportant in segmenting RBSs in Kenya. The main differences arise in the asset value and the number members served by an RBS. However, the number of members is not entirely a prerogative of the RBSs in question considering that RBSs serve workers in a particular institution. This makes the value of the assets an RBS invests in the single most important attribute

that explains the differences in the size of the RBSs. As such, and in order of relative importance, we assign a weight of 50 percent to asset value, 40 to membership and 10 percent to the number of sectors served by an RBS.

The summarized illustration further demonstrates that 49 (81.7 percent) of the RBSs have CMSI less than 3 and five (8.3 percent) have a CMSI greater than six. Based on this clustering of CMSI scores on the extremes we propose a three-tier segmentation framework as put forth in equation 2.

$$Segment\ of\ an\ RBS = \begin{cases} Large & CMSI \geq 6 \\ Medium & 3 \leq CMSI < 6 \\ Small & 1 \leq CMSI < 3 \end{cases} \quad (4.1)$$

The segmentation framework proposed by equation 2 produces 49 small, six medium and six large RBSs. The clustered RBSs are almost similar in asset value, membership and coverage. For instance, the five large RBSs have asset value in billions with the exception of one, the medium RBSs have the asset values in billions while the small RBSs have asset values in millions. This is important in setting discriminatory, affirmative, policies such as taxation on the RBS.

4.5 Linking Market Segmentation to Risk Exposure in the Industry

In order to develop a framework that links market segmentation to risk exposures of Retirement Benefits Schemes, a risk-based approach was used. Through this approach risks exposures of RBA, their causes and the risk management capacity in the overall assessment of the risk was identified, classified, and categorized per each of the market segment.

In a general sense, all the major risks that a pension industry face included portfolio risk, agency risk, and systematic risks. Addressing such risks would not only depend on the market segmentation but also past development of the organization, the specific legal structure of the pension funds, economic development in general, political and cultural environments. The outcome of the overall risk valuation along with the probability was used to allocate an overall risk rating for each market segment which incorporates pension funds and fund management & administration.

The research team used RBA's qualitative risk assessment module. It assigned various risk categories in the questionnaire weights based on their perceived riskiness. Therefore, if an RBS satisfactorily met the required threshold in a particular domain of measuring risk, then that particular RBS was assigned a weight of zero. The zero weight implies that an RBS does not experience any risk in the reference domain. Based on the weights assigned to various items of the risk module, the riskiest RBS would have an expected score(s) of 4.5, 6 and 15.25 under the inherent risk, management and control risk and capital support risk domains respectively.

The overall risk score, as per the RBS qualitative risk module, for an RBS, is the weighted average of the individual risk scores in the three domains. The module assigns a weight of 50, 25 and 25 percent to inherent risk, management and control risk and capital support risk respectively. Given this weighting, the riskiest RBS would have an overall score of 7.56 while the least risky would have a score of Zero. Dividing this range into three categories of riskiness meant that RBS risk status was as defined in equation 1.

$$Risk\ status = \begin{cases} most\ risky & 5.05 \le risk\ score \le 7.56 \\ moderately\ risky & 2.53 \le risk\ score \le 5.04 \\ least\ risky & 0 \le risk\ score \le 2.52 \end{cases} \quad (4.2)$$

The analysis of the survey data yielded the risk statuses shown in Table 4.9.

Table 4.7: Risk Status of Retirement Benefit Schemes in Kenya

	RETIRENT BENEFIT SCHEME(RBS)	INHERENT RISK	MANAGEMENT AND CONTROL	CAPITAL SUPPORT	RISK SCORE
	POSSIBLE SCORES	4.5	6	15.25	7.56
	WEIGHT	50	25	25	100
LEAST RISKY RETIREMENT BENEFIT SCHEME					
1	Agency France – Press	0.00	0.00	0.00	0.00
2	Paper Converters (K) LTD	0.00	0.00	0.00	0.00
3	Higher Education Loans Board	0.00	0.50	0.00	0.13
4	Parklands Sports Club	0.00	1.25	0.00	0.31
5	TSC Staff retirement benefit Scheme	0.25	0.00	1.50	0.50
6	Pension Scheme - New KCC	0.00	0.00	3.00	0.75
7	Legal Resources Foundation Trust	0.00	0.00	3.00	0.75
8	Kenya Society for the Blind	1.25	0.75	0.00	0.81
9	Competition Authority	1.25	0.50	1.25	1.06
10	Sima Marine Ltd	0.50	1.50	2.00	1.13
11	Kenya Bureau of Standards	0.00	0.00	4.75	1.19
12	AFC Staff Retirement Benefit Scheme	1.00	0.50	3.00	1.38
13	Vintage Africa Limited Staff Provident Fund	1.50	1.00	1.50	1.38
14	Dedan Kimathi University of Technology	0.00	0.00	5.50	1.38
15	Good News Production International Africa	0.50	1.00	4.00	1.50
16	PSI/PS Kenya	0.50	0.00	5.50	1.63
17	Ufundi Sacco Provident Fund	0.50	0.25	6.25	1.88
18	Car and General Kenya PLC	0.00	0.00	7.50	1.88
19	Rural Electrification Authority	0.50	1.00	5.50	1.88
20	MTRH SPS	0.50	0.00	6.50	1.88
21	Rusinga Pension Scheme	1.50	0.25	4.75	2.00

	RETIRENT BENEFIT SCHEME(RBS)	INHERENT RISK	MANAGEMENT AND CONTROL	CAPITAL SUPPORT	RISK SCORE
	POSSIBLE SCORES	4.5	6	15.25	7.56
	WEIGHT	50	25	25	100
22	Teleposta Pension Scheme	0.50	0.50	7.00	2.13
23	UAP (DB) Pension Scheme	1.00	1.75	5.50	2.31
24	Almasi Bottlers (from 2013 to 2015)	0.25	0.00	8.75	2.31
25	Stanbic Bank Staff Retirement Benefit	0.00	0.00	9.50	2.38
26	Commission for Higher Education	0.75	1.25	6.75	2.38
27	Tarda Staff Pension Scheme	0.75	1.00	7.25	2.44
28	Mt Kenya Academy	1.00	0.25	7.50	2.44
29	OCBL SPS	1.00	0.50	7.50	2.50
30	Maseno University	0.25	0.75	8.75	2.50
31	Commission for University Education	1.25	0.75	6.75	2.50
	MODERATELY RISKY RETIREMENT BENEFIT SCHEME				
32	Saham Assurance Co. Ltd	0.75	0.00	8.75	2.56
33	RCEA Staff Pension Scheme	1.50	1.00	6.25	2.56
34	Nyeri Water and Sewerage Services	0.50	0.50	8.75	2.56
35	Anglo Africa Properties LTD	0.50	0.00	9.50	2.63
36	Kura Staff retirement benefit Scheme	1.50	0.00	7.50	2.63
37	Moi University Provident fund	0.00	0.00	11.00	2.75
38	Moi University Pension Scheme	0.00	0.00	11.00	2.75
39	Taifa Sacco Staff Fund Provident Fund	0.75	0.00	9.50	2.75
40	Emirates Airlines	0.75	1.00	8.75	2.81
41	Equator Bottlers Staff Pension scheme	1.00	0.50	8.75	2.81
42	PCEA Staff Retirement Benefit Scheme	0.00	0.00	12.50	3.13
43	Prime Bank Staff Provident Fund	1.50	1.00	8.75	3.19
44	LBDA Staff pension scheme and	2.00	0.00	8.75	3.19
45	KESREF Staff retirement benefit scheme	1.50	1.00	8.75	3.19
46	Kenya school of government pension scheme	1.25	1.50	8.75	3.19
47	Mayfair Holdings Limited Staff	2.50	0.00	8.75	3.44
48	Anti-Counterfeit Authority (ACA)	2.75	0.00	8.75	3.56
49	TFC Staff Retirement Benefit Scheme	1.25	1.00	10.75	3.56
50	Kenya Railways Staff Retirement Benefit	1.50	1.00	10.25	3.56
51	Lighthouse for Christ Provident Fund	2.25	1.25	8.75	3.63
52	PAG Pastors scheme	1.25	1.75	10.75	3.75
53	Nacico Staff SRBS Scheme	2.00	0.50	10.75	3.81
54	Coast Development Authority	2.00	2.50	9.50	4.00
55	Kenyatta University Pension	2.25	0.50	11.00	4.00

	RETIRENT BENEFIT SCHEME(RBS)	INHERENT RISK	MANAGEMENT AND CONTROL	CAPITAL SUPPORT	RISK SCORE
	POSSIBLE SCORES	4.5	6	15.25	7.56
	WEIGHT	50	25	25	100
56	KNEC SRBS 2011	1.50	1.00	12.75	4.19
57	PEFA Christ church of Kisumu	2.50	0.50	11.75	4.31
58	Kenya Ordinance Factory Corporation	2.50	2.25	10.75	4.50
59	Amana pension Scheme	1.50	0.00	15.25	4.56
60	Sovereign Group	3.75	1.25	10.75	4.88

Table 4.9 above shows that, based on the criterion derived from the qualitative RBA risk assessment module, slightly more than half (52 percent) of the RBS surveyed were least risky, 48 per cent were moderately risky while zero percent was the riskiest. Therefore, a majority of the RBSs have tolerable risk levels. A closer examination of the summarized risk scores, however, revealed that the poor-risk rating is largely driven by the capital support domain. This implies that much of the risk experienced by the retirement benefits schemes are from the employers. The employer risk was especially pronounced among schemes operating Defined Benefit Schemes as all of them lacked satisfactory actuarial assumptions for current service cost and a satisfactory recovery plan for unfunded liabilities/solvency deficits.

4.6 Framework for levy rates review in accordance with market segmentation

The fourth objective was to develop a framework for levy rates review in accordance with market segmentation. Our methodology uses equation 3.2 to develop this framework. As outlined in section 3.6c, identification of the parameters in 3.2 required responses from the RBAs on what they agreed should be used to determine the levies that should be charged. Table 4.10 presents the rates of agreement for each of the attribute considered in equation 3.2.

Table 4.8: Agreement with considerations for levy rates determination

Attribute	Response	
	Frequency	Proportion (%)
Market conditions	34	57
Ability to pay	30	50
Trade Margins or input costs	16	27
Competitor actions	3	5

Source: Authors 'computation based on RBA Data set 2018

Table 4.10 summarizes how the RBSs agreed with the considerations for levy rate determination. More than half of the RBSs agreed that market conditions and the ability to pay should be important considerations for determining their levies. However, less than half of the surveyed

RBAs agreed that trade margins and competitor actions should be considered in determining the levies they pay. Further, Table 4.5 shows that the rank from the most agreeable to the least agreeable is from market conditions to competitor actions.

To determine the $\beta^{\wedge}$' s in equation 3.2, therefore, we shall assign the most weight to market conditions, followed by ability to pay, trade margins and competitor actions. Since there are no variables known as the ability to pay, trade margins and competitor actions we suggest using proxies for these attributes. Based on the adopted segmentation framework we shall proxy; ability to pay with the segment where the RBS belongs in terms of size; market conditions with the capital support score of the RBS under the RBA risk assessment module; and trade margins with the average return on investment for the various segments of the RBSs. We drop competitor actions for lack of an appropriate proxy and the insignificant level of agreeability. In addition, we refine our proxy for market conditions to the overall risk score of the RBS since we expect the overall risk score and capital support score to be highly correlated. To obtain risk scores for a particular segment we use a simple average for all the RBS in that segment. On the premise of these findings the proposed formula of calculating and reviewing the levy rates for RBS in Kenya is given by equation 4.3.

$Levy\ rates\ expenditure\ for\ segment\ i_t = \beta_0 - \beta_1 Risk\ Score\ for\ segment\ i_{t-1} + \beta_2 Size\ Score\ for\ segment\ i_{t-1} + \beta_3\ average\ ROI\ for\ segment\ i_{t-1}$ **(4.3)**

Equation 4.1 expresses the levies charged today as function of realizations yesterday since it may be impractical to concomitantly determine the right-hand side variable together with the levies. To yield revenues to RBA we propose a rules-based determination of the $\beta's$. In particular we propose that $\beta_0 - \beta_3$ will be considered admissible if:

- β_0 is the industry's previous year mean levy rate
- $\beta_1, \beta_2\ and\ \beta_3$ are less than one
- $\beta_1 > \beta_2 > \beta_3$ in absolute terms
- β_1 should be assigned a negative since a higher risk score shows deterioration of market conditions

To avoid punitive levies, we limit the extra penalty added by the variable component in 4.3 to one percent or less. To achieve this, we limit the β' s as shown in equation 4.4.

$Levy\ rates\ expenditure\ for\ segment\ i_t = \beta_0 - 0.01 Risk\ Score\ for\ segment\ i_{t-1} + 0.1 Size\ Score\ for\ segment\ i_{t-1} + 0.08\ average\ ROI\ for\ segment\ i_{t-1}$ **(4.4)**

For instance, if the average levy rate in 2018 were 0.4625%. The levy rate for 2019 for the large RBS segment with an average risk score of 2.1, an average CMSI score of 7% and average return on investment of 8% would pay levies given by equation 4.4.

$Levy\ rates\ for\ the\ large\ segment\ of\ RBS\ in\ 2019$

$$= 0.004625 - 0.001(2.1) + 0.0009(0.07) + 0.0008(0.08) = 0.002647 = 0.265\%$$

SECTION 5: CONCLUSIONS AND POLICY RECOMMENDATIONS

5.1. Summary of the Findings

The findings of this study provide a broad overview of the pension industry in Kenya and framework for market segmentation of the sector as follows. The review of size, scope and composition of the 1,033 schemes in the country established that 79% of the schemes had less than 500 members, 72% had a fund value of less than Kshs. 300 million and operated mostly in the service, education and manufacturing sectors.

In terms of the current market segmentation in Kenya showed that the current status of segmentation of retirement benefits schemes in the country has over-relied only on scheme type as the main criteria for segmenting pension schemes in Kenya. As such schemes are segmented into four – NSSF, CSPS, occupational scheme and individual schemes. It is thus inadequate because the clustering is wide, overlapping and does not take into account other factors as well as other salient features as possible means of segmentation. In contrast, membership and fund value seem to be more pronounced and salient features of schemes in the country that should be taken into considerations.

In addition, the research team proposed a framework for segmentation based four additional criteria, such as sector/industry, membership, levy category and fund value. These four have not been utilised hitherto. There are numerous schemes across sectors/industry including services, manufacturing, education, and trade just to mention but a few. Scheme membership is characterised by small and medium-sized schemes, albeit smaller ones constitute of the majority. Thus consolidation of schemes according to membership would give scheme leverage due to economies of scale.

The research team developed criteria for segmentation of schemes in Kenya based fund value or asset management but derived from portfolio structure. RBA reports showed that there about 12 formal classes thus research team suggest that it the credible basis for segmentation or consolidation of the market. Already stakeholders agree that segmentation exists because of different institutional, investment, and risk frameworks in the industry. According to the research team CMSI provides the basis for segmentation of RBS in the country.

Lastly, the risk-based approach is used to develop a framework that link market segmentation to risk exposure, RBA risks and causes, as well as management, can be identified, classified and categorized per market segment. Some of the major risks in the pension industry include portfolio risk, agency risk, and systematic risks. Lastly, but not least, the research team also made efforts to develop a framework for reviewing levy rates and subsequently used the PPF Levy determination model to realise such workable adaption for the industry.

5.2. Conclusions

Arising from the study objectives the research team arrived at the following conclusions.
The first objective sought to examine the size, scope and composition of the retirement benefits schemes in Kenya. The study established that 79% of the schemes had less than 500 members, 72% had a fund value of less than KES300 million and operated mostly in the service, education and manufacturing sectors. The study therefore concluded that the retirement benefit schemes are typically small, have few members and are distributed across a few sectors of the economy.

The second objective of the study sought to document the current market segmentation of retirement benefits schemes in Kenya. The study established that the RBA has continued to rely on the scheme type as the main criteria for segmenting pension schemes in Kenya. Therefore, the study concluded that the current segmentation framework is one-dimensional and only a typology. The typology has led to wide and overlapping clustering as well exclusion of aspects such as membership, fund value and sectors of operations.

The third study objective was to design and develop a framework for market segmentation of the pensions industry in Kenya. The research team proposed a framework for segmentation that deviates from the scheme type to a composite market share index (CMSI). The CMSI overcomes the weaknesses of the current segmentation criteria by considering the salient characteristics of the scheme rather than the type. The CMSI considers the size as proxied by a schemes investment, membership and scope as proxied by the sectors in which the scheme operates in. To get a single score the CMSI is operationalized as a weighted average of a schemes investments, membership and sectors of operation. Shaped by the importance of each argument the weights are different. The research team assigned a weight of 50% to size, 40% to membership and 10% to sectors of operation. Arising from this weighting, retirement benefit schemes with similar investments, membership and sectors of operation tend to cluster and are put in a segment. Three segments arise, the large, medium and small segment. The large segment comprises of pension schemes with a CMSI score greater than six, the medium components has a CMSI scores greater than three or equal to six while the small pension schemes have a CMSI ranging equal to one but less than three.

The fourth study objective was to develop a framework for levy rates review in accordance with market segmentation. The research team proposed a levy rate review framework that is segment specific and considers the previous levy rates, the average size of a segment, the average risk scores and average return on investment for a segment. The proposed use of the previous levy rates is meant to ensure productivity of the formula while the segment-based characteristics are meant to capture the prevailing economic conditions. To avoid punitive levies, the research team limited the extra penalty added by the segment-based characteristics to one percent or less. To achieve this the average risk score for each segment is assigned a negative parameter (-0.01). This avoids further destabilization of risky schemes. The average size score is assigned a positive parameter (0.1) and the average profitability of the schemes as proxied by the average return on investment

for each segment is assigned a positive weight of 0.08. This ensures that the levy rate review formula has a risk return trade off.

The fifth study objective was to develop a framework that links market segmentation to risk exposures of retirement benefits Schemes. The consultant proposes a framework that anchored on the statistical tool of cross tabulation. As a natural consequence of this objective, the consultant had to develop a risk assessment module to facilitate the cross-tabulation. The research team proposed a risk rating framework derived from the qualitative RBA risk assessment module. In this module, each retirement benefit scheme is assigned a risk scores for the various domains of the risk matrix. An overall risk score is calculated for each retirement benefit scheme using a weighted average. The weighted risk scores lead to clustering of retirement benefit schemes in terms of risk profiles. The most risky retirement benefit schemes have risk scores greater than or equal to 5.05, the moderately risky retirement benefit schemes have risk scores ranging between 2.53 and 5.04 while the least risky ones have risk scores ranging between zero and 2.53. The resulting risk scores are cross tabulated with those from the segmentation framework to match each retirement benefits scheme to its size score, risk score and risk category.

5.3. Recommendations

Arising from the study objectives and conclusions are a following recommendations:
First the pensions industry is highly fragmented with many small players who, have few members and are distributed across a few sectors of the economy. We therefore recommend that RBA finds a robust segmentation framework that captures this industry uniqueness.

Secondly, the current segmentation framework is one dimensional. We therefore recommend that the RBA adopts the multidimensional segmentation framework as proposed in this report. In particular, the RBA should either do away with the current segmentation based on the type or adopt the CMSI based segmentation and complement it with the type-based segmentation.

Third, the proposed segment specific levy review framework be subjected to a simulation and industry analysis. The simulation analysis should test its fairness, productivity, alignment with other macroeconomic objectives by the government as well as permitting any adjustments to the parameters. The industry analysis will help popularize the framework and gauge its practicality.

Fourth, since the proposed frameworks are in algorithmic format, the RBA should endeavour to create both physical and soft copies of self-reporting modules for the retirement benefit schemes. This will permit segmentation based on the CMSI and calculation of the risk categories of the retirement benefit schemes.

Finally, since the proposed frameworks are in algorithmic format, the RBA should automate them for ease of operations. The automations will automatically place the retirement benefit schemes in

the right category, calculate their risk exposure and place them in the correct risk category and finally cross-tabulate the risk scores with the size scores. This would ideally aide in timely preparation of detailed industry annual reports.

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APPENDICES

APPENDIX 1: Survey Questionnaire for RBS

University Of Nairobi
Institute For Development Studies (IDS)

QUESTIONNAIRE (SEGMENTATION)

Introduction and Informed Consent Statement

Good morning/afternoon. My name is _____. My colleague is _____. We are working with the Institute for Development Studies, University of Nairobi. We are currently conducting a study on *'Segmentation of Retirement Benefits Schemes in Kenya'* on behalf of the Retirement Benefits Authority (RBA). The aim of the research is to assess the current retirement benefits industry and provide a framework for market segmentation of retirement benefits schemes.

We are talking to various stakeholders in the country, including participants like you. The goal is to obtain your views on the segmentation of pension schemes in the Kenyan pension industry. We believe that your knowledge, ideas and experiences on this issue will greatly help in the improving pension coverage in Kenya and thus improve on social security in old age.

The information you will provide will be treated with confidentiality and will be used only for the purpose of this research. Please note that your participation is voluntary. We hope that the outcome of this research will inform the government and the RBA in addressing the challenges facing pension schemes. I would be glad if you could agree to participate. Your participation will take about 40 minutes.

If you would like to make follow-up even after we have concluded the interview you can get in touch with us (IDS) or the RBA by using the following contacts.

1) Dr. Paul Kamau, IDS. Email: pkamau@uonbi.ac.ke; (Tel. 0722-970366)
2) Dr. Anne Kamau, IDS. Email: anne.kamau@uonbi.ac.ke; (Tel. 0711-966332)
3) Dr. Paul Gachanja, KU. Email: GACHANJA.PAUL@ku.ac.ke; (Tel. 0722-328057)
4) Lazarus Keizi, RBA. Email: lkeizi@rba.go.ke; (Tel. 0722-229994)

I would now request for your permission to continue with the interview. Please confirm whether I can continue.

Do you agree to continue to participate?

1. **YES** (Verbal consent given) – I thank you for your willingness to take part in this study.

2. **NO** (Thank the unwilling participants and continue with those that will consent, and record the outcome on the call sheet).

SECTION A: BACKGROUND INFORMATION

1. Name of the Scheme: _____

2. Sector of scheme:

Sector	Tick applicable
a) Manufacturing	
b) Trade	
c) Service	
d) Education	
e) Hospitality	
f) Agriculture	
g) Informal sector	
h) Other (specify)	
i) Other (specify)	

3. Year of Establishment: _____

4. Location of the Scheme: _____

5. Nature of scheme: *(tick applicable)*

NSSF	1	Civil Service	2	Occupational	3	Individual	4

6. Legal Structure: *(tick applicable)*

Trust deed	1	Act of Parliament	2

7. Type of scheme:

S/No.	Scheme Type	Tick applicable
a)	Defined Contribution	
b)	Defined Benefit	
c)	Hybrid (Both DC & DB)	
d)	Provident Fund	
e)	Pension Fund	
f)	Others (Specify):	

8. Provide the following information on membership

S/No.	Membership criteria		Number *(response)*
a)	Scheme type		
b)	Number of Members		
c)	Nature/Type of membership*		
d)	Workers affiliation*		
e)	Contributions	Employer	
		Employee	
f)	Geographical area *(% of workforce)**		

9. Type of regulation: *(tick applicable)*

RBA	1	Act of Parliament	2

10. Type of funding of your scheme: *(tick applicable)*

Funded (defined benefits scheme)	1	Unfunded (undefined benefits schemes)	2

11. Please

12. Provide information on the Board composition and diversity

S/No.	Characteristic		Number (response)
a)	Size	Membership	
		Fund value	
b)	Male Directors		
c)	Female directors		
d)	Average level of education of the directors		
e)	Average age of the directors		
f)	Primary representation*		
g)	Secondary representation*		

13. Provide the following information about your pension scheme

S/No.	Actors	Name
a)	Sponsor	
b)	Administrator	
c)	Fund Manager	
d)	Custodian (e.g. banks)	
e)	Fund Trustee	
f)	Other relevant information	

SECTION B: SCHEME INVESTMENTS, LEVY RATES AND SEGMENTATION

14. What was the fund value of the scheme (as at 31st December 2018)
_____

15. What is the return on investment (2018): _____ (%)

16. How much was the Scheme's Investment (in KES 'million') in the following asset classes for the stated years

S/No.	Asset Class	Year	
		2017	**2018**
a)	Cash		
b)	Fixed Deposits		
c)	Listed debt Instruments		
d)	Non-listed Debt instruments		
e)	Government Securities		
f)	Listed equity instruments		
g)	Non-listed equity instruments		
h)	Offshore investments		
i)	Immovable property in Kenya		
j)	Guaranteed Funds		
k)	Exchange traded derivatives		

l)	Equity/Mortgage backed Real Estate Investment Trusts (REITs)		
m)	Private equity & Venture Capital		
n)	Any other assets (specify)		

17. What is your RBA levy category?

S/No.	Fund Value	Levy	Tick
a)	Up to 500 million	0.2%	
b)	>500 – 1 Billion	0.15%	
c)	1 - 5 Billion	0.1%	
d)	Above 5 Billion	0.05%	

18. How much did your pension scheme pay as RBA Levy in 2018? _____
    (KES)

19. What factors should be incorporated in levy rates decision to ensure accountability, effectiveness, efficiency and fairness? (Tick appropriately).

S/No.	Factor	Tick all that apply (and specify)	Remarks
a)	Ability to pay		
b)	Market conditions		
c)	Competitor actions		
d)	Trade margins		
e)	Input costs		
f)	Others (specify)		
g)	Others (specify)		

20. Provide information on the following (for 2017 and 2018):

Category	Year	
	2017	2018
Annual growth rate (fund value)		
a) Enrolment rate of member		
b) Different brand packages (and numbers)		
c) Annual Turnover		
d) Average Administrative costs		
e) Average Marketing Costs		
f) Others Costs (specify)		

21. Provide information on your main competitors (for 2017 and 2018):

Please tell us who are your main competitors Number of competitors	Explain why they are your competitors
a)	
b)	
c)	
d)	
e)	

22. Do you consider the pension industry in Kenya as:-
    i) Fragmented [_____]
    ii) Consolidated? [_____]
    Explain your answer

_____
_____
_____

23. In your view, would there be value in consolidating the pension schemes in Kenya *(if the answer above in fragmented)?* _____
_____
_____

24. What would be the best criteria for consolidating pension schemes?

S/No.	Criteria	Tick where applicable	Explain
a)	Membership		
b)	Fund value		
c)	Levy rates		
d)	Industry/Sector		
e)	Other (specify)		

SECTION C: RISKS

25. Indicate the Risks faced by/exposed to your scheme, their causes and risk management capacity: *(Tick appropriately)*

Risk Exposure	Causes	Risk management capacity	Risk mitigant
a) Portfolio risk *(investment risk)*			
b) Agency risk *(when agents are used)*			
c) Systematic risks *(affecting the whole economy)*			
d) Inherent risk *(by virtue of being in a particular sector/ occupational risk)*			
e) Management and Control risks[3]			
f) Others (Specify)			

26. How are risks in your scheme measured?
_____
_____

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[3] *A possible source of loss that might arise from the pursuit of an unsuccessful business plan, making poor business decisions, from the substandard execution of decisions, from inadequate resource allocation, or from a failure to respond well to changes in the business environment.*

SECTION D: PERCEPTIONS ON SCHEME'S RISKS

27. Considering your retirement Benefit Scheme are the following statements TRUE or FALSE

Risk Category	Risk sub-Category	Statement	True	False
1) Inherent risk	**Investment**	a) We have a satisfactory investment policy		
		b) We have evidence of updated of investment statement		
		c) Our return to investment was above the industry average *(obtained from RBA reports)*		
		d) Our holding of individual asset classes[4] are within the thresholds as per policy/law		
	Insurance	a) Life insurance and disability benefits are within the capacity of the scheme to absorb		
		b) We have insured against pensions at retirement for DB and DC scheme		
	Non-financial	a) We have relatively simple plan provisions and procedures *(effective, enforceable and user-friendly provisions and plans)*		
		b) We have a transparent outsourcing procedure		
		c) We have greater capacity to handle complexity *(issues beyond the capacity of the scheme)*		
2) Management and Control	**Trustee oversight**	a) We have a satisfactory trustee oversight process		
		b) We have a regularly completed governance self-assessment questionnaire		
		c) Our trustees meet the fit and proper criteria *(e.g. actuarial qualifications, experience)*		
		d) We have proper documentation that is in compliance with RBA requirements		
	Operations and control	a) We satisfactorily complete interrogatories *(a written question which is formally put to one party in a case by another party and which must be answered to ensure adherence to set policy e.g. for investments, incurring expenses etc.)*		
		b) We satisfactorily file records including payment contributions on time		
		c) We have low number of complaints and complaints are satisfactorily resolved		
		d) Our expenses as percentage of normal cost/contributions are below the industry average		
	Independent review	a) We use independent professionals in review process *(Probe for Actuarial reports, Audited Financial reports, Management Consultancy Reports etc.)*		
		b) We use professionals in good standing *(members of professional bodies)*		
		c) We have easily understandable reports without qualifications *(user friendliness of reports to staff and pension members and whether technical terms are explained)*		
3) Capital Support	**Fund**	a) Our DB schemes funded ratio and solvency ratio is in excess of 100 % *(A funding ratio above 100% indicates that the pension scheme is able to cover all payments it is obligated to make)*		

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[4] *An asset class is a grouping of investments that exhibit similar characteristics and are subject to the same laws and regulations. Historically, the four main asset classes have been equities (stocks), fixed income (bonds), cash equivalent or money market instruments and real estate.*

Risk Category	Risk sub-Category	Statement	True	False
		b) Our DB schemes with unfunded liability/solvency deficit have a satisfactory recovery plan in place that is being implemented		
		c) Our DB schemes actuarial valuation basis is satisfactory compared to peers *(An actuarial valuation is a type of appraisal of a pension fund's assets versus liabilities to determine ability to meet obligations.)*		
		d) Our rates of Rates of return on fund over last 3 years are in excess of average industry return		
	Employer	a) The employers make timely remittance of employee and employer contributions		
		b) Our DB schemes have satisfactory actuarial assumptions for current service cost *(pension schemes has an ability to invest enough funds to make payments to their workers in the future, after they have retired and other financial obligations)*		
		c) Our Schemes with unfunded liabilities/solvency deficits have a satisfactory recovery plan *(A solvency deficit means that, if the pension plan were closed up today, it would not be able to pay all of the benefits owed to the plan's members)*		
		d) We satisfactorily monitor contribution holidays *(A period of time when an employer does not make payments into the pension fund of its employees)*		
		e) Our DC schemes have objectives and target well communicated		
		f) Our industry and scheme sponsor are in good shape financially *(meet obligations)*		

28. Give us suggestions on what can be done to improve the performance and sustainability of pension schemes and pensions industry in Kenya

_____
_____
_____
_____

29. How can RBA improve performance of pension schemes in Kenya

_____
_____
_____
_____

THANK YOU FOR YOUR TIME

APPENDIX 2: Key Informant Guide - For Fund Managers and Administrators

Introduction and Informed Consent Statement

Good morning/afternoon. My name is _____. My colleague is _____. We are working with the Institute for Development Studies, University of Nairobi. We are currently conducting a study on extending pension coverage to the informal sector workers in Kenya. We are talking to various stakeholders in the country, including experts like you. The goal is to get your views on whether informal sector workers have pension coverage and the reasons that make them not to join or to remain in the pension systems/schemes. We believe that your knowledge, ideas and experiences on this issue will greatly help in the improving pension coverage to the informal sector workers in Kenya and therefore improve their social security in old age.

The issues that we will discuss with you will be treated with confidentiality. The information which you are going to share with us will be used only for the purpose of this exercise. Please note that participation in this focus group is voluntary. We hope that the outcome of this research will inform the government and the RBA in addressing the challenges and barriers that prevent or hinder informal sector workers from joining pension schemes. Please note that RBA is keen to extend pensions coverage to the informal sector workers in Kenya. I would be glad if you could agree to have a discussion with us. This discussion should to take about 30 minutes. Please confirm whether I can continue.

Do you agree to continue with the discussion?
1. YES (Verbal consent given) – I thank you for your willingness to take part in this study.
2. NO (Thank the respondent and close the interview, record the outcome on the call sheet)

1. How are your schemes' pension benefits segmented? If so, what are the criteria?
2. What is the typical method of paying pension benefits and why is it so?
3. Does this particular payment mode expose the scheme to risks? If so, can identify those risks?
4. Do beneficiaries have other choices on receiving their benefits? If not, why?
5. What is the amount of assets held by your pension scheme?
6. Are these assets segmented?
7. In your view, do the schemes invest their funds in viable ways?
8. Is your scheme compliant with all the government policies and regulations on retirement benefits?
9. How can government agencies such as Retirement Benefits Authority and other stakeholders ensure income security in old age?
10. What suggestions do you have on improving market segmentation of retirement benefits industry?

APPENDIX 3: Risk Weights as per the RBA Risk Assessment Module

Table 7.1: Risk Weights as per the RBA Risk Assessment Module

Risk Category	Risk sub-Category	Statement	True(satisfactory)	False (Unsatisfactory)
Inherent risk	Investment	We have a satisfactory investment policy	0	1
		We have evidence of updated of investment statement	0	0.5
		Our return to investment was above the industry average	0	0.25
		Our holding of individual asset classes are within the thresholds	0	0.25
	Insurance	Life insurance and disability benefits are within the capacity of the scheme to absorb	0	0.5
		We have insured against pensions at retirement for DB and DC scheme	0	0.5
	Non-financial	We have relatively simple plan provisions and procedures	0	0.5
		We have a transparent outsourcing procedure	0	0.5
		We have greater capacity to handle greater complexity	0	0.5
Management and Control	Trustee oversight	We have a satisfactory trustee oversight process	0	0.5
		We have a regularly completed governance self-assessment questionnaire	0	0.5
		Our trustees meet the fit and proper criteria	0	1
		We have proper documentation that is in compliance with RBA requirements	0	0.5

Risk Category	Risk sub-Category	Statement	True(satisfactory)	False (Unsatisfactory)
	Operations and control	We satisfactorily complete interrogatories	0	0.5
		We satisfactorily file records including payment contributions on time	0	0.5
		We have low number of complaints and complaints are satisfactorily resolved	0	0.5
		Our expenses as percentage of normal cost/contributions are below the industry average	0	0.25
	Independent review	We use independent professionals in review process	0	0.5
		We use professionals in good standing	0	1
		We have easily understandable reports without qualifications	0	0.5
Capital Support	Fund	Our DB schemes funded ratio and solvency ratio is in excess of 100%	0	1
		Our DB schemes with unfunded liability/solvency deficit have a satisfactory recovery plan in place that is being implemented	0	1.5
		Our DB schemes actuarial valuation basis is satisfactory compared to peers	0	2
		Our rates of Rates of return on fund over last 3 years are in excess of average industry return	0	1.25
	Employer	The employers make timely remittance of employee and employer contributions	0	0.5

Risk Category			True(satisfactory)	False (Unsatisfactory)
	Risk sub-Category	Statement		
		Our DB schemes have satisfactory actuarial assumptions for current service cost	0	1
		Our Schemes with unfunded liabilities/solvency deficits have a satisfactory recovery plan	0	2
		We satisfactorily monitor contribution holidays	0	2
		Our DC schemes have objectives and target well communicated	0	3
		Our industry and scheme sponsor are in good shape financially	0	1

APPENDIX 4: CMSI Score of Retirement Benefit Schemes

Table 7.2: CMSI Score of Retirement Benefit Schemes

		Investments	Percentage of the Total	Members	Percent of the Total	Sectors	percent of the total	size
	Weight		50		40	10		
	Large RBSs CMSI>6%							
1	Kenya Railways Staff Retirement Benefit	33500	46.58	8829	16.41	1	12.5	31.10
2	Moi University Pension Scheme	13278.3	18.46	5176	9.62	1	12.5	14.33
3	Teleposta Pension Scheme	1.1	0.00	12000	22.30	1	12.5	10.17
4	Kenyatta University Pension	7449.3	10.36	2400	4.46	1	12.5	8.21
5	MTRH SPS	2310.4	3.21	4583	8.52	1	12.5	6.26
	Medium RBSs 3<CMSI<6							
6	PAG Pastors scheme	0	0.00	4483	8.33	1	12.5	4.58
7	Moi University Provident fund	957.1	1.33	2309	4.29	1	12.5	3.63
8	Maseno University	2918.6	4.06		0.00	1	12.5	3.28
9	Kenya Bureau of Standards	1737.7	2.42	993	1.85	1	12.5	3.20
10	KNEC SRBS 2011	2096.1	2.91	413	0.77	1	12.5	3.01
11	KESREF Staff retirement benefit scheme	1789.8	2.49	132	0.25	1	12.5	2.59
	SMALL RBSs 0<CMSI<3							
12	Stanbic Bank Staff Retirement Benefit	0	0.00	1500	2.79	1	12.5	2.37
13	AFC Staff Retirement Benefit Scheme	1009.2	1.40	478	0.89	1	12.5	2.31
14	Pension Scheme - New KCC	278.5	0.39	1103	2.05	1	12.5	2.26
15	PCEA Staff Retirement Benefit Scheme	0	0.00	1200	2.23	1	12.5	2.14
16	Mt Kenya Academy	946.7	1.32	171	0.32	1	12.5	2.04
17	Equator Bottlers Staff Pension scheme	0	0.00	960	1.78	1	12.5	1.96
18	Kenya school of government	326.2	0.45	561	1.04	1	12.5	1.89
19	Sovereign Group	0	0.00	805	1.50	1	12.5	1.85
20	Tarda Staff Pension Scheme	362.3	0.50	400	0.74	1	12.5	1.80
21	PSI/PS Kenya Retirement Benefits Scheme	535	0.74	176	0.33	1	12.5	1.75
22	Mayfair Holdings Limited Staff	0	0.00	612	1.14	1	12.5	1.71
23	Dedan Kimathi University of Technology	168.6	0.23	450	0.84	1	12.5	1.70
24	Rural Electrification Authority	271.8	0.38	284	0.53	1	12.5	1.65
25	Prime Bank Staff Provident Fund	0	0.00	475	0.88	1	12.5	1.60
26	Commission for Higher Education	402.8	0.56	79	0.15	1	12.5	1.59
27	Car and General Kenya PLC	199.09	0.28	220	0.41	1	12.5	1.55
28	Kura Staff retirement benefit Scheme	100	0.14	306	0.57	1	12.5	1.55
29	Amana pension Scheme	100	0.14	288	0.54	1	12.5	1.53
30	Kenya Ordinance Factory Corporation	0	0.00	360	0.67	1	12.5	1.52
31	Coast Development Authority	243.4	0.34	130	0.24	1	12.5	1.52
32	UAP (DB) Pension Scheme	101	0.14	232	0.43	1	12.5	1.49

		Investments	Percentage of the Total	Members	Percent of the Total	Sectors	percent of the total	size
	Weight		50		40	10		
33	Taifa Sacco Staff Fund Provident Fund	82.2	0.11	211	0.39	1	12.5	1.46
34	LBDA Staff	0	0.00	249	0.46	1	12.5	1.44
35	Anti-Counterfeit Authority (ACA)	142.727	0.20	64	0.12	1	12.5	1.40
36	Rusinga Pension Scheme	0	0.00	183	0.34	1	12.5	1.39
37	Emirates Airlines	101.82	0.14	80	0.15	1	12.5	1.38
38	Vintage Africa Limited Staff Provident Fund	66.71	0.09	108	0.20	1	12.5	1.38
39	Saham Assurance Co. Ltd	71.7	0.10	83	0.15	1	12.5	1.36
40	Competition Authority of Kenya	86	0.12	47	0.09	1	12.5	1.34
41	Parklands Sports Club	0	0.00	117	0.22	1	12.5	1.34
42	Sima Marine Ltd	100	0.14	23	0.04	1	12.5	1.34
43	OCBL SPS	0	0.00	113	0.21	1	12.5	1.33
44	Anglo Africa Properties LTD	21.1	0.03	84	0.16	1	12.5	1.33
45	TSC Staff retirement benefit Scheme	100	0.14		0.00	1	12.5	1.32
46	Commission for University Education	0	0.00	68	0.13	1	12.5	1.30
47	Legal Resources Foundation Trust	8.5	0.01	53	0.10	1	12.5	1.30
48	RCEA Staff Pension Scheme	3.3	0.00	47	0.09	1	12.5	1.29
49	TFC Staff Retirement Benefit Scheme	0	0.00	44	0.08	1	12.5	1.28
50	Nacico Staff SRBS Scheme	0	0.00	40	0.07	1	12.5	1.28
51	Good News Production International Africa	0	0.00	34	0.06	1	12.5	1.28
52	Lighthouse for Christ Provident Fund	30.1	0.04		0.00	1	12.5	1.27
53	PEFA Christ church of Kisumu	0	0.00	23	0.04	1	12.5	1.27
54	Higher Education Loans Board	16	0.02		0.00	1	12.5	1.26
55	Ufundi Sacco Provident Fund	6.1	0.01	9	0.02	1	12.5	1.26
56	Agency France - Press	0	0.00	8	0.01	1	12.5	1.26
57	Paper Converters (K) LTD	0	0.00	5	0.01	1	12.5	1.25
58	Nyeri Water and Sewerage Services		0.00		0.00	1	12.5	1.25
59	Kenya Society for the Blind	0	0.00	0	0.00	1	12.5	1.25
60	Almasi Bottlers (from 2013 to 2015)	0	0.00			1	12.5	1.25
	Total	71919.247		53801		8		

APPENDIX 5: List of the sampled schemes for the study

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Introduction
The sampled schemes were picked randomly in each region based on fund portfolio using a randomizer. The list for selected schemes are provided below based on region and fund value.

1. NAIROBI COUNTY - NAIROBI

a) *Fund value: KSh 0 to 300 million*

S/No	Name	Fund Value	Location	Contact Person	Telephone
11	Uniafric Provident (Kenya) Fund	277,336,000			
15	Kaplan & Stratton Staff Provident Fund	116,874,265			
35	Armstrong and Duncan Staff Retirement Benefits Scheme	41,079,404			
70	Rusinga Investments Limited T/A Rusinga School, Nairobi Staff Pension Scheme	93,766,739			
79	Wangu Investments Limited Staff Pension Scheme	39,264,132			
83	MAZARS Staff Retirement Benefits Scheme	39,814,878			
93	The Advertising Company Limited Staff Retirement Benefits Scheme	33,348,674			
103	Mercantile Insurance Company Limited Staff Retirement Benefits Scheme	57,366,555			
138	Population Services International - Staff Provident Fund	190,168,500			
144	EARS Group of Companies Staff Retirement Benefits Scheme	55,074,793			
181	Delamere Estates Limited Staff Retirement Benefits Scheme	31,054,362			
257	Kituo Cha Sheria Staff Provident Fund	16,516,800			

S/No	Name	Fund Value	Location	Contact Person	Telephone
267	Wanandege Savings & Credit Co.-operative Society Provident Fund	21,240,351			
287	Good News Productions International Africa Staff Retirement Benefits Scheme	9,751,523			
341	Procter and Gamble (E.A) Ltd Staff Retirement Benefits Scheme	189,194,835			
368	Paper Convertors (K) Ltd Pension Scheme	3,596,006			
370	Unicorn Insurance Brokers Ltd Staff Retirement Benefits Scheme	80,747,813			
387	Agence France Presse Ltd Staff Retirement Benefits Scheme	17,273,857			
412	Kenya Tourist Development Corporation Staff Retirement Benefits Scheme	56,681,969			
456	Karen Rose Limited - Staff Retirement Benefits Scheme	32,704,897			
461	Kenya Credit Traders Limited Staff Retirement Benefits Scheme And Group Life Assurance	41,168,539			
463	Kenya Society for Deaf Children Staff Retirement Benefits Scheme	4,652,232			
476	Parklands Sports Club Staff Retirement Benefits Scheme	101,105,177			
518	International Union for Conservation of Nature (IUCN)Retirement Scheme	128,438,465			
530	Chemserve Cleaning Services Staff Retirement Benefits Scheme	5,971,722			
550	Avenue Service Station (1977) Staff Retirement Benefits Scheme	67,631,245			
577	Mantrac Staff Pension Scheme	239,627,812			
581	Kenya Co-operative Creameries Royal Guardians Fund	9,683,554			
586	Ultimate Security Ltd Staff Retirement Benefits Scheme	57,835,300			
600	Ufundi Savings and Credit Society Limited Staff Provident Fund	14,334,938			
639	Intra Africa Assurance Co. Limited Staff Retirement Benefits Scheme	170,053,936			
664	Africa Inland Mission International Services Staff Retirement Benefits Scheme	98,671,842			
668	Shibli Enterprises Limited Staff Retirement Benefits Scheme	3,636,225			

S/No	Name	Fund Value	Location	Contact Person	Telephone
687	PDM (Kenya) Limited Staff Pension & Life Assurance Scheme	91,511,792			
707	Energy Regulatory Commission Staff Pension Plan	236,583,333			
725	Treadsetters Tyres Limited Staff Retirement Benefits Scheme	279,572,391			
746	Horticultural Crops Development Authority Staff Retirement Benefits Scheme	299,843,920			
769	Environment Liaison Centre International Staff Pension Scheme	7,560,146			
775	Legal Resources Foundation Trust Staff Provident Fund	16,816,710			
823	Twiga Stationers & Printers Limited Employees Provident Scheme.	82,260,389			
831	Kenya Institute of Administration Staff Retirement Benefits Scheme	294,425,877			
838	Outreach Community Center Staff Provident and Life Assurance Scheme	5,701,959			
859	Fidelity Commercial Bank Limited Staff Retirement Benefits Scheme	103,638,899			
887	"Don Bosco Boys' Town Technical Institute Staff Retirement Benefits Scheme"	7,687,467			
923	United Nations Co-operative Savings & Credit Society Ltd Staff Provident Fund	64,576,000			
931	Anglo African Property Holdings Ltd. Staff Retirement Benefits Scheme	28,549,774			
932	Fiesta Restaurants Ltd. Staff Retirement Benefits Scheme	1,504,272			
939	Sovereign Group Limited Staff Retirement Benefits Scheme	97,024,749			
940	Amana Personal Pension Plan	41,050,764			
964	Vintage Africa Limited and Vintage Travel and Tours Services Limited Staff Provident Fund	47,851,755			
972	Polyflex Industries Ltd Staff Provident Fund	57,496,636			
986	Qatar Airways Staff Provident Fund Scheme	38,950,307			
1022	International Christian Centre - Staff Provident Fund Scheme	31,430,544			
1041	PCTL Automation Ltd Staff Provident Fund	5,157,966			

S/No	Name	Fund Value	Location	Contact Person	Telephone
1070	Rapid Kate Services Limited Retirement Benefits Scheme	108,653,495			
1084	Amana Umbrella Pension Scheme	6,024,305			
1089	Nacico Co-operative Savings & Credit Society Limited Staff Pension Scheme	47,646,174			
1094	Insurance Regulatory Authority Staff Pension Scheme	291,404,444			
1095	Blue MSMEs Jua Kali Individual Retirement Benefits Scheme	118,873,310			
1127	PG Bison (K) Limited Staff Provident Fund	38,160,483			
1157	UAP Umbrella Retirement Benefits Scheme	229,074,429			
1175	Technoserve Staff Provident Fund	159,066,674			
1190	University Research Company LLC Staff Provident Fund	45,432,398			
1204	Anti-Counterfeit Agency Staff Pension Scheme	40,738,979			
1280	Competition Authority of Kenya Staff Retirement Benefits Scheme	22,142,281			
1308	Liberty Life Boresha Maisha Individual Provident Fund	235,840,209			

b) *Fund value: KSh 301 to 600 million*

S/No	Name	Fund Value	Location	Contact Person	Telephone
221	Commission for Higher Education Staff Retirement Benefits Scheme	318,247,748			
278	Veer Investments Group Staff Pension Fund	597,540,851			
291	Agricultural Finance Corporation Pension Scheme	409,918,935			
521	Consolidated Bank of Kenya Ltd Staff Retirement Benefits Scheme	494,981,494			
616	Farmer`s Choice Limited Staff Retirement Benefits Scheme	429,188,247			
688	Higher Education Loans Board Staff Retirement Benefits Scheme	372,594,011			
821	G4S Kenya Limited Staff Retirement Benefits Scheme 'B'	558,812,283			
865	Bank of Africa Kenya Limited Staff Provident Fund	564,511,218			
1189	Old Mutual Individual Retirement Benefits Scheme	353,809,419			

c) *Fund value: KSh 601 million to 1 billion*

S/No	Name	Fund Value	Location	Contact Person	Telephone
114	Presbyterian Church of East Africa Staff Pension And Life Assurance.	756,652,509			
206	Kenya Industrial Research and Development Institute Staff Retirement and Group Life Assurance Scheme	690,637,184			
506	Deloitte Limited Staff Pension Scheme	949,206,663			
896	Prime Bank Limited Staff Provident Fund	683,794,161			
1026	Kenya Bureau Of Standards Staff Retirement Benefits Scheme 2011	988,018,957			
1225	Nestle Kenya Staff Pension Scheme	759,669,587			

d) *Fund value: over KSh 1 billion*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
19	Stanbic Bank Limited Staff Pension and Life Assurance Scheme	3,492,660,432			
94	The Gertrude`s Garden Childrens Hospital Staff Retirement Benefits Scheme	1,285,358,956			
97	UAP Insurance Pension Fund	1,060,722,395			
250	Telposta Pension Scheme	15,081,335,000			
290	The Local Authorities Pensions Trust (LAP Trust / LUP Trust)	23,904,232,000	Nice & lovely house, Mombasa road		
328	Kenyatta University Staff Retirement Benefits Scheme	4,925,804,111			
426	Teachers Service Commission Staff Superannuation Scheme	1,918,004,758			
491	Commercial Bank of Africa Staff Retirement Benefits Scheme	2,378,213,718			
578	Kenya Railways Staff Retirement Benefits Scheme	30,888,488,000			
719	Family Bank Staff Pension Scheme	1,210,611,482			
928	Alexander Forbes Retirement Fund	9,281,720,000			
1115	The Kenya Power and Lighting Company Limited Staff Retirement Benefits Scheme 2006	11,336,734,000			

COAST REGION - MOMBASA

a) *Fund value: KSh 0 to 300 million*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
1167	Coast Development Authority Staff Provident Fund	177,089,852			
819	Kenya Ferry Services Limited Staff Provident Fund Scheme	151,019,514			
880	Lighthouse For Christ Eye Centre Staff Provident Fund	21,400,270			
1010	Fayaz Bakers Ltd Staff Provident Fund Scheme	23,764,014			
1264	Sima Marine (K) Limited Staff Retirement Benefits Scheme	6,279,605			

b) *Fund value: KSh 301 to 600 million*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
231	Ocean freight (East Africa) Limited Staff Retirement Benefits Scheme	504,838,850			

e) *Fund value: KSh 601 million to 1 billion*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
560	Mbaraki Port Warehouse(K)Ltd Staff Retirement Benefits Scheme	640,983,923			

f) *Fund value: over KSh 1 billion*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
22	Kenya Ports Authority Pension Scheme	26,006,976,000			

RIFT VALLEY REGION – ELDORET

a) *Fund value: KSh 0 to 300 million (Rift Valley)*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
1282	Reedemed Church of East Africa Watumishi Pension Scheme	1852347			
90	Eldoret Club Staff Retirement Benefits Scheme	28234607			
685	Kenya Fluorspar Company Limited Provident fund	81574802			
618	Kenya Ordinance Factories Corporation Staff Retirement Benefits Scheme	84656558			
685	Kenya Fluorspar Company Limited Provident fund	81,574,802			

b) *Fund value: KSh 301 to 600 million*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
342	Kerio Valley Development Authority Staff Retirement Benefits Scheme	321,896,566			

c) *Fund value: KSh 601 million to 1 billion*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
1057	Moi University Provident Fund	656,743,804			

d) *Fund value: over KSh 1 billion*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
758	Moi Teaching and Referral Hospital Staff Pension Scheme	3,781,714,322			
57	Moi University Pension Scheme	7,666,057,472			

2. CENTRAL REGION - NYERI

a) *Fund value: KSh 0 to 300 million*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
469	Mount Kenya Bottlers Ltd Staff Retirement Benefits Scheme				
701	Taifa Sacco Society Limited Staff Provident Fund	283527795			
818	Nyeri Water & Sewage Company Limited Staff Retirement Benefits & Life Assurance Scheme	209,211,484			
1008	Mount Kenya Academy Staff Pension Scheme	35497002			
1097	Dedan Kimathi University College of Technology Staff Retirement Benefits Scheme	288218427			

b) *Fund value: KSh 301 to 600 million*

There is no scheme in the central region with a fund value of over 1 billion shillings provided in the list.

c) *Fund value: KSh 601 million to 1 billion*

There is no scheme in the central region with a fund value of over 1 billion shillings provided in the list.

d) *Fund value: over KSh 1 billion*

There is no scheme in the central region with a fund value of over 1 billion shillings provided in the list.

3. NYANZA REGION – KISUMU

a) *Fund value: KSh 0 to 300 million*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
373	PEFA Christ Church of Kisumu Staff Pension Scheme	4,962,335			
991	Opportunity Kenya Ltd Staff Provident Fund	29,768,589			
1017	Mayfair Holdings Limited Staff Provident Fund	80,402,245			
958	Spectre International Limited Staff Provident Fund	95,859,998			
371	Equator Bottlers Limited Staff Pension Scheme	129,645,634			
771	P.A. G (K) Pastors Staff Provident Fund	261,840,977			

b) *Fund value: KSh 301 to 600 million*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
764	Kenya Sugar Research Foundation Staff Retirement Benefits Scheme	305,442,137			
372	Lake Basin Development Authority Provident Fund	465,976,598			

c) *Fund value: KSh 601 million to 1 billion*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone
45	gREAT LAKES UNIVERSITY KISUMU PROVIDENT FUND				

d) *Fund value: over KSh 1 billion*

S/No	Name	Fund Value	Physical location	Contact Person	Telephone/email address
55	Maseno University College Staff Retirement Benefits Scheme	2,163,291,636			