



Competition in the Financial Services Sector: A Case of Kenyan Annuities Market

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ABSTRACT

Competition in the financial services sector influences information, allocation and cost efficiency. The annuity market segment of insurance companies is particularly important as it is characterized by “entry and permanent lock in” of consumers to the firms thus creating permanent contractual claims. This study examines the annuity industry in Kenya using the Structure Conduct Performance (SCP) paradigm and sought to determine the market concentration, provide a behavioral explanation of how firms acquire and sustain market power and establish how the concentration affects conduct and performance of the annuity providers in Kenya. A mixed design is applied where secondary data is collected from the 8 firms offering annuity products in Kenya between 2009 and 2011. Focus group discussions are then conducted with key industry informants to explain the results. Market concentration is measured using the concentration ratio (C4) and the Herfindahl-Hirschman Index (HHI). An SCP model for the annuity market segment is then conceptualized. The findings point to a highly concentrated industry with HHI indices averaging 98% in the three years to 2011. Evidence generated shows that market power in the market is enabled by regulation, irreversible long term nature of the products, collusion between pension administrators and the players, lack of close substitutes to annuities and absence of differentiation – factors which have led to tendency for mergers and strategic partnerships, low returns for the annuitants, information asymmetry, low bargaining power of the consumers, diseconomies of scale and lack of innovation. The study recommends some policy implications to minimize the abuse of dominant positions by firms.

Keywords: Annuities, concentration, structure-conduct-performance.

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1.0 INTRODUCTION

Competition in the financial services sector influences production, service delivery, product attributes, pricing, innovation and cost efficiency which enable households and firms access financial Services

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(Claessens, 2009). The ideal competition model is characterized by numerous buyers and sellers, free entry and exit of firms, perfect substitutability of products, information symmetry and total resource mobility – conditions that are utopia in the financial services sector. Recent debate has thus focused on whether to exclude the financial sector from the general competition law; a concern that is of special interest to developing countries as growth of the sector has empirically been proven to influence economic growth and reduced poverty. In the financial services sector, extreme competition affects not only the financial stability of the players but also macro-economic variables of a country primarily because too many players lead to inefficiencies resulting from diseconomies of scale prevalent in high fixed cost industries. However, studies by Troya-Martinez (2006) and Claessens (2009) have shown that markets and especially financial markets function efficiently and deliver information, allocation and cost efficiencies to consumers when they are subjected to a competitive framework.

Insurance companies face a myriad of specific risks (operational and solvency) and market failures (externalities and asymmetric information); risks that might lead to market collapse leaving firms and households exposed to risks that would hitherto be covered. This forces the players to adopt combative policies to protect their markets resulting to creation of entry barriers, price competition and low information disclosure amongst other measures that affect the overall stability of the industry and hence the case for focused competition regulation that protects both the demand and supply sides (Boone, 2008).

Evolution of the insurance industry has led to the development of long-term products (life insurance policies and annuities) that were not originally common. While traditional insurance focused on insurance of property for lesser periods (usually annual) the new products are long-term and focus on savings resulting to the creation of new assets and liabilities that require different management and competition strategies.

Annuities are key financial products that provide annuitants with a steady stream of income, offers tax advantages and provide a safe mode of investment (Morales and Rocha, 2006; Rusconi, 2008; Antolin, 2010). However, annuities are unprofitable and risky to underwrite especially in developing countries (Doyle and Piggot, 2000; Orszag, 2000) due to their low volume and margin nature. In terms of market competition, the annuity market is unique as few firms have market power, generally lacks the switching option as the contracts are irreversible, products are long term and has huge sunk and fixed costs – variables that create entry barriers for new players.

Empirical studies have focused on different aspects of competition in business. Nickell (1996) studied the effect of competition on efficiency, Aghion et al (2005) examined the effect of competition on creativity and innovation, Nickell (1999) determined the effect of competition on wage levels, while Amir (2002) and Boone (2008) explored alternative ways of measuring competition. Amir and Lambson (2002) examined competition in concert markets and Claessens (2009) reviewed alternative competition policies in the financial sector.

The current study addresses the organization of the annuity industry in Kenya. This market is important as the retirement law (Retirement Benefits Act) mandates pensioners whose retirement income exceeds the trivial threshold to invest at least two-thirds of the income in annuities. With the retirement assets in Kenya estimated to be worth Ksh. 549 billion (USD 6.9 billion) in 2012 (RBA, 2013) and over 35% of the savers having attained the minimum voluntary retirement age of fifty, a huge chunk of these assets will be invested in the annuity market in due course. Like in other developing countries, little is known about the annuity industry in Kenya.

This study examines the organization of the annuity industry in Kenya using the Structure Conduct Performance (SCP) model. This approach is used in industrial economics to analyze the structure of the industry, behavior of firms and the resulting performance. Empirical studies have identified a positive relationship between concentration and profitability. For instance Mann (1996) shows that when an

industry has few dominant firms, the players should be able to yield higher rates of return as they can create entry barriers. Studies have also been carried out in other industries using the SCP model. [Byeongyong & Weiss \(2005\)](#) applied the model in analyzing the property liability insurance, [Jedlicka & Jumah \(2006\)](#) applied it in the analysis of the Australian insurance industry, [Allen & Shaik \(2005\)](#) used it to review competition in agricultural commodities while [Shaiket et al. \(2009\)](#) applied it in the transport industry. More recently, [Holloway & Bayaner \(2013\)](#) analyzed the food market industry using the model and [Garcia \(2013\)](#) applied it in the cut flowers industry in Philippines.

This study seeks to determine the level of concentration, establish how the players acquire and sustain market power, explain the implications of market power on the firms' conduct and performance and recommend policy measures to enhance the annuity market in Kenya.

The rest of the paper is organized as follows; section 1.1 and 1.2 discusses the overall insurance industry in Kenya, section 2 provides an overview of literature, section 3 discusses the methodology used in the study, while sections 4, 5 and 6 detail the findings and policy implications, limitations of the study and the conclusions respectively.

1.01 THE INSURANCE INDUSTRY IN KENYA

The Kenyan insurance industry accounts for an estimated 5% of the GDP. Like other insurance industries in the Sub Saharan Africa, the penetration rate remains low with most business being in the general insurance sector as opposed to the life insurance sector. Table 1 shows the key performance indicators of the Kenyan insurance industry.

Table 1: Insurance industry in Kenya

	2008	2009	2010	2011	2012	2013F	2014F	2015F
GDP at market prices (KES billions)	2111	2356	2551	3025	3327	3660	40026	4429
Short term penetration rate	1.75%	1.82%	2.05%	2.01%	2.21%	2.41%	2.61%	2.81%
Long term penetration rate	0.87%	0.90%	1.05%	1.02%	1.07%	1.12%	1.17%	1.22%
Industry short term premium (KES billions)	36.89	43.11	52.35	60.67	73.39	88.05	104.91	124.26
Growth	12%	17%	21%	16%	21%	20%	19%	18%
Industry life insurance premium (KES billions)	18.3	21.36	26.71	30.93	35.69	41.09	47.21	54.14
Growth	21%	17%	25%	16%	15%	15%	15%	15%

Source: Standard Investment Bank, 2013

The Kenya, insurance industry had 45 companies (49% and 20% exclusively offering general and life insurance products respectively and 31% offering both general and life products) in June 2013 ([IRA, 2013](#)). In the general insurance sector, 40% of the market was held by the top 5 companies, while in the life insurance branch, 70% of the market was dominated by the top 5 companies ([Standard Investment Bank, 2013](#)). Since 2008, 5 companies have wound up due to insolvency primarily attributed to high and fraudulent claims – a situation that led the Insurance Regulatory Authority to place minimum capital hurdles (short term insurance KES 300 million, long-term insurance KES 150 million and composite insurance KES 450 million).

1.02 POSITION OF KENYA'S INSURANCE INDUSTRY IN AFRICA

In terms of penetration, Kenya's insurance industry (penetration ratio 3%) is ranked after South Africa (11.6%) and Namibia (7.3%). Table 2 shows the comparative performance of selected African countries. The industry underwriting profits in Kenya averaged 3% in the 2010-2012 years with the biggest insurance class being motor insurance. Within the life insurance segment, deposit administration and pension accounts accounted for 35% of the premiums ([Standard Investment Bank, 2013](#)). The key hurdles facing the Kenyan insurance industry are; negative public perception, low awareness of the products, fraudulent claims and limited offerings by reinsurers.

Table 2: Penetration rates in select African countries

Country	Non-Life		Life		Total	
	Premium USD m	Penetration %	Premium USD m	Penetration %	Premium USD m	Penetration %
Kenya	714	2	361	1.02	1075	3.02
Algeria	1042	0.5	101		1143	0.5
Egypt	953	0.4	1320	0.6	2273	1.0
Morocco	1943	2.0	799	0.8	2732	2.8
Nigeria	1726	0.7	366	0.2	2092	0.9
Tunisia	711	1.7	114	0.3	825	2.0
South Africa	10340	2.6	36230	9.0	46570	11.6

Source: Standard Investment Bank, 2013

2.0 LITERATURE REVIEW

2.01 HISTORICAL OVERVIEW OF INDUSTRY ORGANIZATION

Industry Organization is defined as encompassing the workings of markets and industries, in particular the way firms compete with each other (Pepalls *et al*, 2005). Understanding the concept enables policy makers to undertake informed decisions and judgments on the industry relevant issues. Industry organization and the structure conduct performance model date back to the 1940-1960 period in what Joe Bain described as the “Harvard tradition” which broadly involved conduct of statistical tests to establish the effect of concentration and barriers to entry on performance with the postulate that concentration was unfair for consumers and hence the origin of the anti-trust laws. Between 1960 and 1980, the Chicago School of thought gained ground and developed the Harvard ideology by applying econometric techniques and using different market structures to understand different industries and markets. The commonly documented themes were that markets are operational, monopoly has different dimensions and monopoly exists in an ephemeral state as other firms mimic monopolies to erode excessive industry profits. The Game Theory ideology was then developed between 1980 and 1990 with prominence on strategic decision making using the Nash equilibrium concept and the development of models that were considered perceptive theoretically (Tirole, 1998). Between 1990 and 2000, researchers integrated theoretical and econometric principles in to structural models. As a result, more complex models were developed to explain the market situations. Beyond 2000, behavioral economic thinking is applied to augment economic models and explain the workings of the industry and digressions between theory and practice in industry organization. This paper uses this approach to describe the organization of the annuity industry in Kenya.

2.02 STRUCTURE CONDUCT PERFORMANCE (SCP) MODEL IN CONTEXT

The SCP paradigm postulates that the industry’s performance depends on the conduct or behavior of buyers and sellers, which in turn depend on the structure of the market. Each of the pillars in the model is discussed in turn.

2.2.1 STRUCTURE

Structure in the SCP paradigm implies the aggregate firms making up industry or the relative market share of the largest firms. Concentration increases if loss in market share for one firm is taken up by another, there is barriers of entry and if mergers occur (Hall & Tideman, 1967; Weiss, 1974; Sahoo & Mishra, 2012). Empirical studies have documented two main measures of concentration as the four-firm concentration ratio (C4) and the Herfindahl-Hirschman Index (HHI). C4 is documented as the most widely used proxy for the market structure of an industry that considers the share of the industry’s sales accounted for by the four major players. A higher C4 indicates higher market power in terms of price setting since few firms account for the overall activity in the industry (Pepall *et al*, 2005).

HHI on the other hand determined as the sum of the its firm's squared market share putting in to consideration all the market players (Scherer & Ross, 1990). The big players are assigned more weight than the relatively smaller players (Jedlicka & Jumah, 2006: 10). The formula for the index is stated in equation 1 and varies between 0 (perfect competition) and 1 (monopoly) and can be stated in absolute or relative terms.

$$HHI = \sum_{i=1}^N s_i^2 \quad (1)$$

An alternative formula for viewing the HHI index is stated in formula 2, an expression that takes in to consideration the absolute number and size distribution of the firms.

$$HHI = \frac{1}{N} + N\sigma^2 \quad (2)$$

HHI has gained much acceptance as it is used to evaluate mergers in the US. The European Competition policy considers a market to have low concentration if HHI is less than 1000, moderately concentrated if the HHI falls between 1000 and 1800 and highly concentrated if the index exceeds 1800. Moreover it's the most appropriate index to explain prices in industries where firms exhibit the Cournot competition behavior (Church & Ware, 2000). Empirical studies have attributed a higher HHI (meaning higher concentration) to barriers of entry characterized by minimum efficiency scale, high advertising costs, sunk capital costs and huge research and development costs, buyer power concentration and presence of vibrant unions but increased buyer concentration and unionism lowers the price cost margins.

Comparing the C4 and HHI, Hall & Tideman (1967) and Curry & George (1983) conclude that the HHI index outweighs the C4 ratio as it considers all the players in the industry, it is more explicit and is less affected by extreme variables.

Concentration measures however have several limitations; *firstly*, it is contentious on whether profitability influences concentration. Does a concentrated structure lead to higher profitability or do higher industry profits lead firms to protect their markets thus leading to increased concentration? The outcome of this argument may be different if analyzed in the short run or if analyzed in the long run. The C4 has specifically been singled out as it does not consider exogenous measures of market performance. *Secondly* concentration measures are biased by improper market definitions. The impact is that seller concentration can lead to higher prices while buyer concentration leads to lower prices. *Thirdly*, concentration measures fail to observe the behavioral aspects that explain market structure, conduct and performance. The last concern is addressed in this study.

2.2.2 CONDUCT

Conduct in the SCP model implies the behavior of buyers and sellers in the industry. Structure may lead sellers to adopt entry barriers or collude to influence prices, supply, regulatory policies and level of industry innovation. Buyer behavior would influence the industry performance if the consumers are highly organized, are in a country with intensive consumer protection policies and generally have the market information and consistently use it to inform their decisions.

Jerger (2004) documents the firm conduct indicants as pricing strategies, advertising, industry technology, collusion and research and development expenditures. These indicators point to the degree of differentiation of the products offered by different firms. Lerner measures the conduct by observing the deviation of price from marginal costs as indicated in equation 3. The use of the marginal cost and average variable costs however cause a serious bias (Schmalensee, 1989).

$$\frac{p - AVC}{p} = -\frac{1}{\varepsilon} + (r + \delta) \frac{p_k K}{pq} \quad (3)$$

The measures of firm's conduct defined have inherent limitations and are difficult to use hence Jerger (2004) proposes the use of collusion measures including industry concentration, barriers of entry, product differentiation, firm size and the level of diversification. This according to Jerger (2004: 12) renders the SCP to analogical analysis between structure and performance.

2.2.3 PERFORMANCE

Performance in the SCP archetype explains the success of an industry in providing benefits to the consumers. Market performance explains the extent to which market power is exercised in an industry and establishes the competitive bench marks based on firm size. The proxies used to measure market performance include the rate of return, the price cost margin and the Tobin q ratio.

The rate of return typically measures the firm's profitability by use of accounting or market based measures. These measures are discredited by Fisher and McGowan (1983) and Waldman and Jensen (1998) as they are products of estimates, accounting rules and generally reflect past information as opposed to future information that is necessary to assess the long run competition position of an industry.

2.3 SCP AND POLICY

The SCP paradigm is not only used in industry analysis but also as a guide to policy (Jedlicka & Jumah, 2006). Jerger (2004); Motta (2004); Perloff, Karpis & Golan (2007) distinguishes between competition and regulatory policy; while competition policy tends to influence industry structure, the regulatory policy influences the conduct of the players. This distinction is applied in the interpretation of the results of the present study.

3.0 METHODOLOGY

3.01 RESEARCH DESIGN

To understand the behavioral issues in the annuity industry, a mixed research design was used. The study involved two phases; *first* a collection and analysis of relevant secondary data from all the 8 insurance companies that offer annuities in Kenya and *secondly* individual and focus group discussions with key informants to explain the results. The secondary data related to the number of annuity accounts and the value of annuities. It was not possible to collect secondary data on profitability, advertising and research and development expenditure as the insurance companies reported aggregate data for all their products. The qualitative study involved the key informants in the annuity market. Two participants were drawn from each of the eight companies that offer annuities in Kenya. Additionally, informants from the Insurance Regulatory Authority, pension fund administrators and actuaries were also invited. In total, 43 respondents participated in the different focus group discussions. To maintain anonymity the actual names of the companies were not disclosed and in this study. The companies are coded as C100, C200, C300, C400, C500, C600, C700 and C800 respectively in no specific order.

3.02 DATA ANALYSIS

Quantitative data was described by use of descriptive statistics to explain the nature of the industry, the C4 and HHI indices were calculated to explain the industry concentration and conduct. The performance indices were not calculated due to the lack of disaggregated data for the annuity market. To answer the questions on how players acquire and sustain market power (conduct), the implications of market power and the policy implications, the responses from the qualitative survey were used. The qualitative data was transcribed and categorized in to specific themes that reflected the characteristics of the study. A conceptual SCP model was then developed.

4.0 FINDINGS

4.01 THE ANNUITY MARKET IN KENYA

4.1.1 NUMBER OF ANNUITIES TRADED

In three years (2009-2011), the annuity market in Kenya was served by 8 companies and in total opened 14007 accounts as indicated in table 3. The distribution shows that 95% of the accounts are held by three companies namely; C400 (55%), C500 (21%) and C200 (19%).

Table 3: Number of annuity accounts

Company	2009		2010		2011		Total (2009-11)	
	N	%	N	%	N	%	N	%
C100	81	2.2	114	2.6	133	2.3	328	2.3
C200	788	21.1	897	20.1	968	16.7	2,653	18.9
C300	11	0.3	39	0.9	40	0.7	90	0.6
C400	2280	61.1	2685	60.2	2811	48.4	7,776	55.5
C500	512	13.7	655	14.7	1753	30.2	2,920	20.8
C600	4	0.1	5	0.1	9	0.15	18	0.1
C700	52	1.4	53	1.2	53	0.9	158	1.1
C800	4	0.1	15	0.3	45	0.8	64	0.5
Total	3,732		4,463		5,812		14,007	100

The number of accounts grew by 19.6% and 30.2% in 2010 and 2011 respectively indicating a growing industry. C500 was the major gainer in 2011 –market share increased by 15%, essentially reducing the market shares of C200 by 3% and that of C400 by 12%.

4.1.2 VALUE OF ANNUITIES TRADED

In the three years to 2011, the total value of annuities traded amounted to Ksh. 20 billion (USD 250 million). The amount grew by 12.5% in 2010 and 32.2% in 2011 as indicated in table 4.

Table 4: Value of annuities traded

Company	2009		2010		2011		Total 2009-11	
	Ksh. Millions	%	Ksh. millions	%	Ksh. Millions	%	Ksh. Millions	%
C100	106	1.9	146	2.3	182	2.2	434	2.2
C200	1580	28.0	1807	28.9	2027	24.8	5414	27.0
C300	27	0.5	63	1.0	85	1.0	175	0.9
C400	3265	57.8	3352	53.6	3636	44.6	10253	51.1
C500	406	7.2	560	9.0	1800	22.1	2766	13.8
C600	17	0.3	4	0.06	19	0.2	40	0.2
C700	239	4.2	290	4.6	290	3.6	819	4.1
C800	9	0.15	30	0.5	119	1.5	158	0.8
Total	5649		6252		8158		20059	

Table 4 shows that C500 increased its market share by 13% while C200 and C400 lost 4% and 9% respectively. Comparing the results in table 3 and 4 shows that C500 was the major gainer in 2011.

4.1.3 VALUE PER ANNUITANT

The average investment per annuitant was Ksh. 1.5 million (USD 18,750) in 2009 and Ksh. 1.4 million (USD 17500) in both 2010 and 2011. Table 5 shows that the amount per annuitant varied significantly amongst the companies. While C700 has a market share of 1.1% and controlled 4% of the value of annuities traded, it had significantly higher investment per annuitant compared to the other

companies. C700 has only one annuity product that offers a 10 year guarantee and a consequent life annuity. The two main companies; C400 and C500 had negative deviations from the 2011 mean implying that these companies focus on high volumes and low value while C700 focuses on high values and low volumes.

Table 5: Amount per annuitant

Company	2009 Ksh. Millions	2010 Ksh. Millions	2011 Ksh. Millions	2011 Deviation from Mean Ksh. Millions
C100	1.3	1.3	1.4	(0.31)
C200	2.0	2.0	2.1	0.69
C300	2.5	1.6	2.1	0.72
C400	1.4	1.2	1.3	(0.11)
C500	0.8	0.9	1.0	(0.38)
C600	4.1	0.8	2.1	0.67
C700	4.6	5.5	5.5	4
C800	2.3	2.0	2.7	1.2
Total	1.5	1.4	1.4	

4.1.4 CONCENTRATION RATIO

The C4 ratio was calculated based on both the number and value of annuity accounts traded in each of the three years. As shown in table 6, the annuity industry in Kenya is highly concentrated with the average C4 ratios measured by the number of accounts and value of the annuities traded estimated at 98% and 94% respectively.

Table 6: Market share of the top 4 companies based on the number of annuities

Company	Market Share 2009		Market Share 2010		Market Share 2011	
	Number of accounts %	Value %	Number of accounts %	Value %	Number of accounts %	Value %
C400	61.1	57.8	60.2	53.6	48.4	44.6
C500	13.7	7.2	14.7	9.0	30.2	22.1
C200	21.1	28.0	20.1	28.9	16.7	24.8
C100	2.2	1.9	2.6	2.3	2.3	2.2
C4 Ratio %	98.1	94.9	97.6	93.8	97.5	93.7

4.1.5 HERFINDAHL-HIRSCHMAN INDEX

As shown in table 7, the HHI for each of the years exceeds the European competition benchmark of 1800 when measured on the basis of both the number of accounts and value of annuities traded giving evidence of a highly concentrated industry. The HHI however reduced by 2.8% and 8.8% in 2010 and 2011 respectively when measured on the basis of the number of accounts. When measured on the basis of the value of annuities traded, the HHI reduces by 9% and 18.4% in 2010 and 2011 respectively. These changes are attributed to the gain in market share by C500. This however has no major implications on the C4 or HHI as C500 is a member of the “big four”.

Table 7: HHI of the annuity market in Kenya

Company	2009		2010		2011	
	M ² Number of Accounts	M ² Value of Annuities traded	M ² Number of accounts	M ² Value of Annuities traded	M ² Number of accounts	M ² Value of Annuities traded
C100	4.84	3.61	6.76	5.29	5.29	4.84
C200	445.21	784.00	404.01	835.21	357.21	615.04
C300	0.09	0.25	0.81	1.00	0.36	1
C400	3733.21	3340.84	3624.04	2872.96	3080.25	1989.16
C500	187.69	51.84	216.09	81.00	432.64	488.41
C600	0.01	0.09	0.01	0.0036	0.01	0.04

C700	1.96	17.64	1.44	21.16	1.21	12.96
C800	0.01	0.0225	0.09	0.25	0.25	2.25
HHI	4373.02	4198.29	4253.25	3816.87	3877.22	3113.70

The findings on the high level of concentration of the annuity market in Kenya were triangulated by focus group discussions. All the participants perceived the market to be dominated by three players.

4.02 HOW MARKET PLAYERS ACQUIRE AND SUSTAIN MARKET POWER

The respondents estimated the number of annuity accounts held by pensioners to be almost 100% of all the accounts. One of the participants stated “annuities are forced products imposed upon pensioners by law...if there was a choice; I doubt anyone would invest in the products”. The general themes that emerged to the causes and sustenance of market power are; *regulation, the irreversible nature of the annuity contracts, lack of substitutes for annuities, collusion between the market players and pension fund administrators and absence of differentiation*. Each of these attributes is discussed in turn.

4.2.1 REGULATION

The *Retirement Benefits Act (1997)* was amended in 2005 to compel retiring members of occupational retirement schemes operated as pension schemes to invest two thirds of their accumulated retirement savings in annuities (exceptions are available for those permanently migrating away from Kenya, those with terminal illness and those whose pension earnings are considered trivial). The implication of the regulation according to the respondents is that over 90% of the retirees in occupational retirement schemes must invest in annuities. This law according to the Retirement benefits Authority, was implemented to protect pensioners from longevity risk (chances of outliving their retirement savings) and stabilize the financial markets as the funds are ordinarily invested in the financial markets. The law thus creates market power for the few firms in the annuity industry.

According to the Insurance Regulatory Authority, only insurance companies engaged in life insurance business can accept annuity deposits in return for future payments to the annuitants. This essentially blocks the market to 9 life insurance and 14 composite (offers both life and general insurance products) insurance companies during the period of study. According to the Kenya Insurance Sector report (2013), the top 5 life insurance companies controlled 70% of the life insurance premiums. This gives a clear indicator of the supply side of the annuity business in Kenya. This law ensures that the firms doing annuity business have the requisite fund management knowledge and are licensed to offer long term insurance products.

4.2.2 LONG-TERM, IRREVERSIBLE NATURE OF THE ANNUITY CONTRACTS

All the respondents reported that the annuity products they offer are life annuities (even where guarantees are available, the life annuity continues on expiry of the agreed period). This implies that annuity products are long term in nature. In all cases, the annuitant cannot opt out of the contract once they sign. The insinuation is that there is no switching option from one firm to another and consequently the annuitant is locked in the contract. The “original error” is therefore very costly and can affect the firm due to adverse selection or the consumer due to moral hazard. *Keizi (2007)* documents that the long term nature of annuity contracts makes them desirable to protect individuals against the non-diversifiable longevity risk. The presence of huge sunk costs in terms of brand investment, technology and capital further serve as incentives for the firms to lock in the customers and eliminate switching costs.

4.2.3 LACK OF CLOSE SUBSTITUTES FOR ANNUITIES

Respondents were in agreement that annuities do not have close substitutes especially at the payout phase of retirement. The substitutes available for annuities at retirement include *lump sum payments, income draw downs or a hybrid of lump sum payments and income draw downs*. Each of these options is discussed in turn.

LUMP SUMS

With lump-sums, retirees are paid the whole value of the assets accumulated for retirement in a single payment with no restrictions on how the funds will be used. Retirees can then invest, buy annuities, clear debts or spend freely on discretionary items. Pension payments on lump-sums require strong financial discipline and management skills, which is not prevalent amongst many individuals even in developing countries. Lump-sum payments further fail to provide protection from longevity risk. Evidence of payment of pensions on lump-sum is evident in Malaysia, Hong Kong and Sri Lanka while Indonesia offers a choice of a single lump-sum or annual payment over five years.

INCOME DRAW DOWN

Under the income drawdown model, individuals commit to an agreed plan of periodic fixed or variable payments. In this regard, income draw downs provide more financial discipline than lump-sums while maintaining some flexibility, access to liquidity and the possibility of leaving bequests. Unfortunately, they also fail to provide any protection from longevity risk, which only annuities do. Two options exist for the income draw down; fixed and variable draw downs (table 8).

Incomes drawn from the retirement schemes can be determined by dividing the accumulated amount in various ways, for example, by a fixed number of years or by the expected life expectancy in each period or payments can be flexible. Income drawdown allows pensioners to benefit from gains in portfolio investments. Moreover, as long as returns on investment are above inflation income drawdown protects pensioners from purchasing power losses and allows for flexibility, liquidity and bequests to dependents. However, income drawdown still exposes the pensioners to longevity risk since the pensioners can outlive their incomes.

Table 8: Options for income drawdowns of pension benefits

Feature	Fixed Draw Down	Variable Draw Down
Period involved	Fixed	Fixed
Share of gains from the portfolio	Yes	Yes
Protection against Inflation Risk	Yes IF portfolio returns exceed the inflation rate	Yes IF portfolio returns exceed the inflation rate
Flexibility of withdrawal of funds	Yes	Yes
Liquidity	Yes	Yes
Bequests to dependants	Yes	Yes
Longevity risk	Retirees are exposed	Retirees are exposed
Amount paid to the retiree	Fixed	Variable
Market Risk	Borne by the provider	Borne by the retiree

A *fixed income drawdown* pays a periodic constant stream of income for a certain period. It can be calculated by dividing the assets accumulated at retirement by an annuity factor corresponding to an annuity certain (Antolin, 2010). In the case of a fixed programmed withdrawal, the downside risk of market returns falls on the pension fund. A *variable income drawdown* pays a variable periodic stream of income, which is variable because, every year, the amount of assets remaining, adjusted for portfolio gains the previous year, is divided by a changing life expectancy to obtain that year's payment. For example, one might assume the life expectancy at age 55 to be 20 years. However, after reaching 75 the individual's life expectancy may be expected to be eight more years, bringing the age the person may be expected to live to 83, in which case the retiree bears the market downside risk.

An alternative model to the retirement benefits payout phase is to combine a deferred life annuity and an income drawdown. The deferred life annuity may be bought before retirement but would start paying pension benefits at a later stage (for example age 75 when the income in the drawdown fund is exhausted) or can be bought after the drawdown. The amount remaining after buying the deferred life annuity can be used to finance an income drawdown for the transitional period (from the age of 75 to 83). This combination protects retirees from longevity risk through the deferred annuity and provides flexibility, liquidity and the bequest needs.

Table 9 summarizes the comparison between the annuities, lump sum payments and income draw downs. It is evident that annuities are the only available financial products to protect individuals against longevity risk.

Table 9: Comparison of annuities and its substitutes

Exposure	Annuities	Lump Sum	Income Draw Down
Longevity risk	No	Yes	Yes
Market risk	No as it is borne by the provider	Yes, as it is borne by the individual	Yes, as it is borne by the individual
Inflation risk	Yes, if no escalation clause	No	No
Liquidity	No	Yes	Moderate
Bequests to dependants	Yes, within guarantee period, if any.	No	No
Amount paid to the individual	Fixed	One off payment	Series of withdrawals
Income volatility	No	Yes	Yes
Riders for instance medical and life insurance covers	Available	Not available	Not available

4.2.4 COLLUSION BETWEEN PENSION FUND ADMINISTRATORS AND SUPPLIERS OF ANNUITY PRODUCTS

Fund administrators are charged with the responsibility of handling all administrative affairs of the pension fund, ensuring that the pension fund is run in accordance with the trust deed and rules and ensuring that the fund is run within the law (RBA, 2008). The role of pension fund administration may be performed in-house by the staff of the sponsor, by trustees or by contracted professionals with proven competence and capacity to perform the role (RBA, 2008).

According to the respondents, the administrators interact with members of the occupational retirement schemes during the schemes’ annual general meetings and are occasionally involved in pre-retirement training. The administrators further communicate market information regarding the annuity products to the retiring members. One administrator mentioned “we guide the retiring members on how and where to buy annuities...I cannot refer them to people who do not have appropriate systems, who I do not trust or who are too small.” The implication is that the pension fund administrators are the main intermediaries between the consumers and the firms and will always refer the consumers to friendly annuity providers thus failing to achieve optimality.

A scrutiny of the list of the 31 approved administrators listed in the Retirement Benefits Authority website shows that all the companies offering annuities are listed as fund administrators implying that there could be conflicts of interest as the advisor to the retiring members of the schemes is also a service provider.

4.2.5 ABSENCE OF DIFFERENTIATION OF ANNUITY PRODUCTS

Desk surveys and respondent’s own reporting led to the conclusion that annuity products offered in the Kenyan market are not significantly differentiated. The products are broadly life annuities and where guarantees are available, the guarantee periods range from 5 to 10 years (one firm has a 15 year guarantee period). There are no major differences in the choice of various products offered by the same or different firms. Table 10 summarizes the main features of the annuity products offered by different companies.

Table 10: Annuity products available in Kenya

Type of Annuity	Firms with similar annuity	Key Features
Life	7	- Immediate annuities - No guarantee

Guaranteed		- Higher returns for men compared to women
	4	- Minimum guarantee period is five years
Certainty		- Maximum guarantee period is 10 (one company has 15 years)
	1	- Guarantee period to the choice of consumer
Joint with spouse		- No life annuity
	3	- Guarantee of 5 or 10 years
Deferred		- In the case of death of a spouse, a reversion of 30%, 50% or 100% depending on the time of bereavement
	1	- Annuitant can earn interest pending commencement of the contract

There are however significant price differences amongst the companies offering the products.

4.03 INFLUENCE OF CONCENTRATION ON CONDUCT AND PERFORMANCE OF THE ANNUITY INDUSTRY

Focus group discussions were conducted to explain the effect that the industry concentration have on the conduct of the players and their consequent performance. The following themes emerged from the discussions; tendency for mergers and strategic partnerships, low returns for the annuitants, information asymmetry, low bargaining power of the consumers, diseconomies of scale and lack of innovation.

On mergers and strategic partnerships, a respondent stated “the dominance by the top firms has forced industry players to scabble for the pension fund administrators who are not controlled by any service provider.” It appears that the need to seek approval to play the pension administrator’s role is not driven by commitment and diligence to the market, but by the need to have a distribution channel for the annuity products.

Due to the irreversible nature of the annuity contracts, the consumers always hold the “short end of the stick.” Once the contract is signed, the firm has no motivation to improve the service or to cushion the consumer against inflation and other risks prevalent in long term financial contracts. This results to low returns for the annuitants. Additionally, firms fail to disclose market information for instance none of the 8 firms reported disaggregated data for the annuity section of the market despite the importance that such information have on consumer’s purchase decision. According to Keizi (2007) information asymmetry in the annuity markets are experienced when it becomes difficult or costly to obtain adequate information to facilitate effective decision taking. The consumer thus becomes susceptible to fraud and unfair treatment.

It was also noted that as a result of the industry concentration, retirement regulations, irreversible nature of the annuity contract, absence of reliable market information, lack of differentiation and reliance on pension administrators to advice on appropriate annuity products, consumers tend to have low bargaining power. Moreover the market players have no incentives to innovate and develop new products.

The end result for a limited competition has been minimal industry growth as the industry is not able to attract other consumer segments except pensioners and made it less profitable to smaller firms. The reasons for failure of Kenyan insurance companies to attract new customers are; poor reputation of insurance companies as a result of misrepresentation of the products by agents, hidden charges and nonpayment of claims.

Annuity business can only thrive in the presence of economies of scale (Keizi, 2007). If firms have limited funds for investments, the annuity business becomes risky and unprofitable to underwrite. This points to why small firms in the Kenyan annuity market find it difficult to survive in the industry.

Jedlicka and Jumah (2006) attributes this to the fact that small companies are undergoing serious diseconomies of scale result to sub optimal investments. The consequences for the consumers who are locked in life annuities is that they bear the under investment risk through low returns.

Moreover, in the annuity market, the level of competition is pre contractual – once the contract is signed, the consumer is locked to the company in question in entirety. The market players cannot benefit from switching and can only diversify their customer base by creating new products. The absence of switching costs is itself an entry barrier in the financial services sector (Troya-Martinez, 2006). Standard Investment Bank (2013) describes the Kenyan insurance industry as one concentrated with similar products with “minimal switching costs; a situation that has led to price wars with smaller players offering low rates to stay in business.”

However, insurers argue that annuities are not profitable to underwrite, markets are competitive and annuity products are particularly risky to underwrite especially in developing countries (Doyle and Piggot, 2000; Orszag, 2000).

The main problems facing annuity providers relate to adverse selection and mortality risk associated with mortality improvements and to interest rate, reinvestment and inflation risk (Blake, 1999; Blake and Hudson, 2000; Keizi, 2007). Morales and Rocha (2006) mention other problems as; the use of outdated tables that fail to reflect the modern market conditions, governance issues in the management of the insurance companies and mispricing. These risks threaten the solvency of the companies forcing them to adopt protective policies that could be eventually harmful to the overall industry.

In terms of performance, it was noted that the three main dominant firms their profitability targets on annuities but other firms struggle to achieve. According to Jedlicka and Jumah (2006), an industry with few dominant firms yield higher rates of return as a result of entry barriers, which may be explained by having large well diversified firms or firms that have better management and more superior technology. The high concentration of the firms implies that the firms have low efficiency (Claessens, 2009).

4.04 SCP MODEL FOR THE ANNUITY MARKET

From the discussion, a model is developed to explain the SCP aspects of the annuity market in Kenya. The model (figure 1) shows that there are supply and demand side market characteristics that create inherent problems with annuity products. These factors influence the market structure and firm conduct and consequently affect the performance of the firms. The model shows that regulatory policy is required to address the market structure issues while a competition policy is required to intervene on the conduct of the firms as structure and conduct are the drivers of performance postulated in the model.

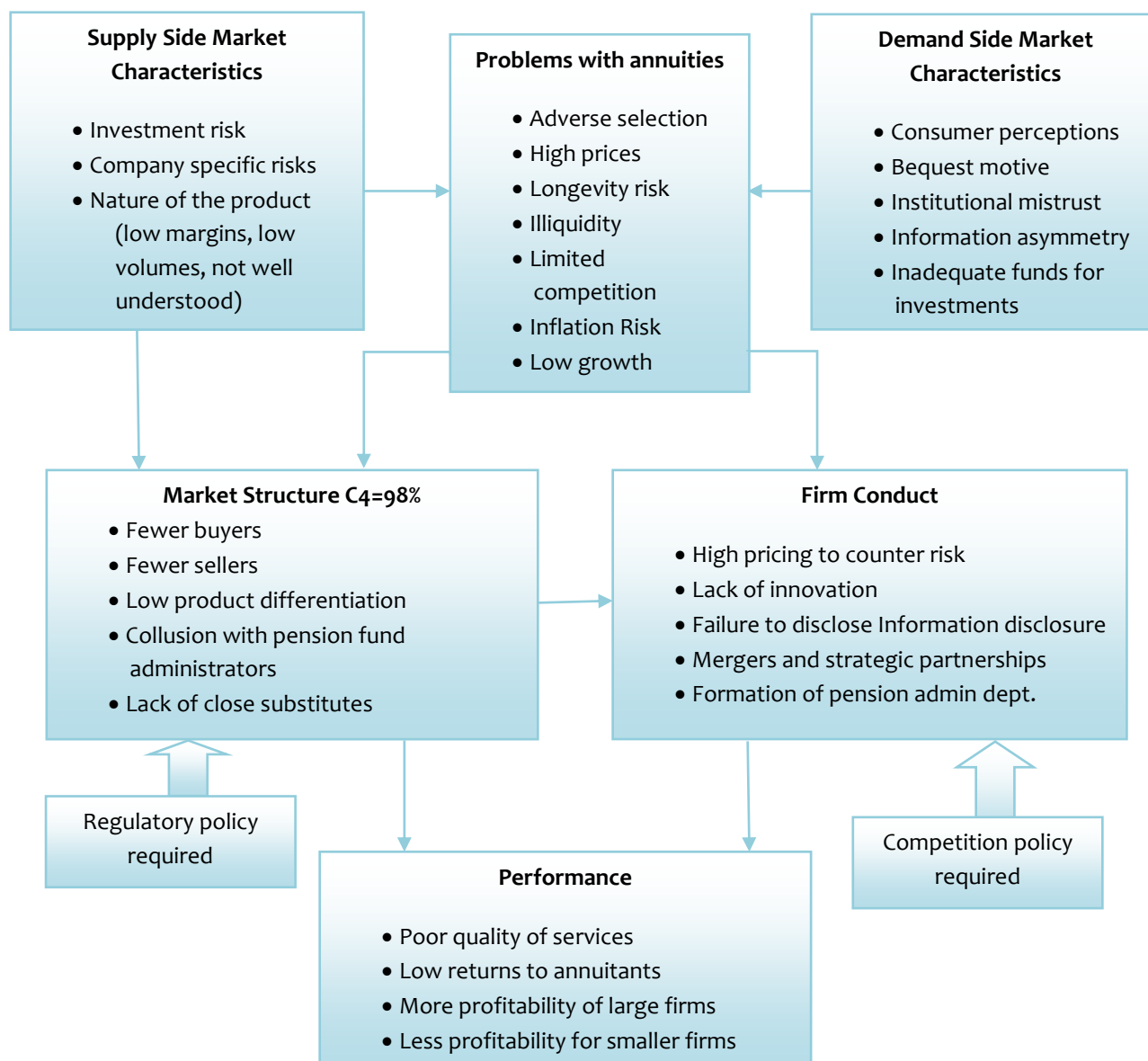
4.05 POLICY INTERVENTIONS

This study has made significant discoveries in the way the annuity industry in Kenya is structured, the factors that give market power to the firms and the influence that the industry concentration has on conduct and performance of the firms. Specifically, the study has found that:

- The market is highly concentrated with the top 4 companies controlling over 90% of the market share
- The main contributors to acquisition and protraction of market power are; the enabling retirement regulation, the long-term irreversible nature of the annuity contracts, absence of close substitutes in provision of retirement income, collusion between the pension fund administrators and the firms providing annuities and lack of differentiation of the products

- As a result of high concentration market leaders conduct themselves in such a way that they protect their market shares while market followers adopt aggressive strategies to capture the elusive market share. The firms conduct is described as; creation of mergers and strategic partnerships, offering low returns to annuitants, information asymmetry, low bargaining power of the consumers, diseconomies of scale and lack of innovation.
- The leading firms have reported better performance than the followers

Figure 1: Structure conduct performance model for the annuity industry



Keizi (2007) argues that the use of insurance companies in providing annuities entails serious inherent risks and hence calls for regulation to protect the consumers in the presence of market inefficiencies. Keizi thus calls for regulation in the annuity market to ensure fair pricing and healthy competition. To improve the industry situation, the study makes policy recommendations with regard to the regulations and competition

4.5.1 COMPETITION POLICY RECOMMENDATIONS

The Insurance Regulatory Authority is urged to put in place regulation to govern the relationship between the consumers and annuity providers and also between the annuity providers themselves. The practice of having annuity providers as pension fund administrators should be reviewed as it exposes

the firms to serious conflict of interest – a situation where the advisor has vested interests in a financial product.

Firms should also be required by law to disclose financial and other material facts that affect the investment in annuities since the contracts are long term and irreversible. Information disclosure on prices and costs helps to spot uncompetitive products and forms the basis of the objection or protest to breach of contract. This coupled with fit in proper tests can result to ethical conduct on the part of the market players.

Another critical competition policy relates to the conduct of mergers and acquisitions (M&A). M&A transactions are undertaken to synergize firms, allow economies of scale and acquire market power. The regulators should see to it that M&A transactions do not lead to monopolies and acquisition of market power beyond the 50% mark.

4.5.2 REGULATORY POLICY RECOMMENDATIONS

Prudential regulation of insurance companies offering annuities is important to ensure that the firms maintain an appropriate capital that matches the present and potential liabilities. This according to Daykin (2002) enhances internal risk management. Another measure suggested in Keizi (2007) and supported by the present study would be for the government to issue long-term bonds to provide annuity providers with investment vehicles that can be used to immunize the annuity products. This will lead to sustained development, lower investment and management costs, enhance market efficiency and greater access to the annuity products. Consumers will be encouraged to invest indirectly in the immunized bonds.

Regulations focusing on credit rating of life insurance companies can also be used to encourage consumers look at other parameters such as capital adequacy and exposure to long term risks not just the market share of the companies offering annuities.

Another measure suggested is to create an annuity holders contributory fund. The fund would provide assurance that annuitants would be compensated in the event that the annuity provider winds up. This will entice more consumers to the annuity market hence influencing the conduct of the firms.

Lastly, regulators should also consider supply substitution, which implies sourcing alternative supply sources of products including having annuity service providers from other countries. This should be undertaken taking in to account the tradeoff between capital flight, regulatory jurisdictions and the returns to the annuity consumers.

5.0 CONCLUSION, LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The study revolves around the SCP model that has been criticized for its postulation that structure determines performance. Claessens (2009, p. 9) argues that “structure is not (necessarily) exogenous since market structure itself is affected by the firm’s conduct and performance.” Moreover, market power by a few firms may be necessary to compensate them for risk taking, earlier entry in the industry, huge investments and the economies needed to sustain them.

Areas suggested for further research are what should the role of the competition authority be in the regulation of the annuity market? Future researchers are also urged to seek disaggregated data on performance (prices and costs) of the Kenyan annuity market and use the PMC approach to measuring the conduct of the annuity providers in Kenya.

This paper has assessed the competition in the annuities market segment of insurance companies in Kenya using the SCP model and provided policy recommendations. The findings suggest low efficiency in terms of information, allocation and costs of operation. The market has failed to attract new user

segments and relies on pensioners who are legally obligated to invest in annuities. The market is therefore inefficient and would not operate in the absence of the enabling regulation.

The findings lead to the conclusion that the high degree of market concentration has led to the conduct of the firms and the resulting sub optimal results to consumers of annuity products and lack of innovation.

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