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Risk Underwriting, Crisis Management, Regulatory Framework and Performance of Insurance Companies in Kenya: A Case of Sanlam General Insurance Company

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Abstract

Insurance companies are in the business of risk taking built on trust. Optimal underwriting and claims management standards are applied to safeguard insurers' against exposure to underwriting losses for enhanced performance. The main objective was to determine the relationship among underwriting, crisis management, regulatory framework and performance of Sanlam general insurance company in Kenya. Descriptive research design was adopted. The target population for this study was 72 employees whereby a census of all the employees was conducted. Questionnaires were used for data collection. The results also revealed that risk underwriting has positive and significant effect on performance of Sanlam insurance company (β=.682, p=0.000<0.05). Crisis management has mediating effect on the relationship between underwriting and performance of Sanlam general insurance company while insurance regulations has a positive moderating effect on the nexus between underwriting and insurance performance implying that insurance regulations enhances operational efficiencies of insurance companies thus their financial performance. The study concludes that risk underwriting influences the performance of insurance companies, crisis management is a significant mediator in the relationship between underwriting and performance of insurance company while insurance regulations moderates the relationship between underwriting and performance of insurance company. There is need for the Sanlam Insurance Company to enhance the capability of its personnel to appropriately draft insurance related risks and claims though periodic trainings on underwriting risk. There is need for Sanlam Insurance to enhance their capacity of managing business crisis like financial crisis, reputation damage, market volatility and unfair competition. The study urges insurance regulatory authorities to undertake periodic assessment of the insurance service providers to ensure that the suggested business policies and guidelines are observed. The study also recommends for the need of updating insurance policies and guidelines on periodic basis to ensure that they align with changing business environment.

Keywords: *Risk Underwriting, Crisis Management, Regulatory Framework, Performance of Insurance Companies, Sanlam General Insurance Company*

1.1 Introduction

Insurance is a business of trust. It is a business whereby a promise is sold and such a promise must be kept (Angima & Mwangi, 2017). An insurance company offers insurance cover and it is called underwriter. The insured is the person who has taken the policy of insurance. Three parties come to take part: the policyholders, shareholders and the insurance company management (OECD, 2018). Policyholders are the buyers of policies of insurance. They always need to be compensated in the case of claim. The shareholders of insurance company are shareholders. From the insurance fund, they expect get profit (Marović, Njegomir & Maksimović, 2010). The management is involved in everyday operationalization of the insurance company on behalf of shareholders.

Globally, insurance industry has been growing though with dynamic experiences and market turbulences due to the prevailing economic circumstances. In developed economies insurance industry has been experiencing dynamism. The United States insurance industry has experienced dramatic changes since 1600s (Klein, 2015). During this time, insurance dominated cover on accidents like fire and life insurance. However, the industry has grown substantially with regard to amount, products offered and the numbers of insurers. There are wide range of insurance products and services that are reflective of the country's economy and diversity in commercial and individual preference. US insurance industry has grown faster than the country's Gross Domestic Product (GDP). In 2010, the total industry GDP was $398 billion as compared to $ 140 billion in 1980, the increase translate to 284% growth. The performance of insurance companies has been viewed to depend on risk underwriting, crisis management and regulatory framework (Coombs, 2014; OECD report, 2020).

Risk underwriting allows the insurer to group risks accordingly for proper pricing and mitigation. The main factor that leads to the successful operation is the capability to underwrite well as poor selection of risks leads to remarkable failure of insure and losses (Browne & Kamiya, 2012). Insurers always have a way to include data that seem significant in selection of risk and pricing (Angima & Mwangi, 2017). Underwriting risk is due to computation of premiums inaccurately, reserves set aside by the company are inadequate, modelling of aggregate incorrectly.

Insurance firms form crisis management team to make decisions on future course of action and devise strategies to help them come out of difficult times as soon as possible when their claims rockets. The management team usually comprise of the head of departments, human resources representative and representation of the insurance stakeholders (Coombs, 2014). They are usually tasked to analyze the situation and formulate crisis management plan to save the firm's reputation, profits and standing in the industry (Eckles, Hoyt & Miller, 2014). Crisis management will be a success if it can address the internal and external factors that are bedeviling the firm. For insurance firms to prosper their prices management, claims management should be of best practices. Consequently, crisis management team should help the firm to take the right step at the right time and help the firm overcome critical situations.

Policy regulations in the insurance sector are meant to ensure that insurance service providers operate with certain level of credibility, integrity and legitimacy (OECD report, 2020). In the sector of insurance, the supervision of insurance is done by on-site and off-site supervision of (re) insurers that work to verify compliance together with requirements taking part in activities of finance and by giving measuring regarding the administration and enforcement actions according to the regulations that are non-legislative or legislative (OECD, 2018). In Kenya, the Insurance Act, Cap 487 Laws of Kenya paved way for insurance regulations. Some of main insurance regulators in Kenya include the Association of Kenya Insurers (AKI) and The Insurance Regulatory Authority (IRA).

Sanlam in Kenya first established a branch of Pan Africa Insurance Holdings in 1946 with the aim of taking over the largely under-developed life assurance market in Kenya. The company traces its rich history to Pan Africa Insurance Holdings which started the underwriting life business in 1947. The company's main interest is on positioning the Company Business to Promising segments of the Economy and diversifying the product offering. The company going forward is investing in re-designing the structure of an organization and moving towards an integrated target operating model (Sanlam report, 2019). In 2015, Sanlam company acquired an additional five per cent stake in Gateway Insurance, raising its equity in the subsidiary to 56 per cent (AKI report, 2019). It has also used the internal risk-based model complying with the Risk Based Compliance Model Expected to be rolled out by the Insurance Regulatory Authority.

1.2 Statement of the Problem

Many insurance companies in Kenya are closing down business operations resulting from unsustainable performance. Since 2015, at least five insurance companies in Kenya have closed due to insolvency resulting from high claims (IRA, 2019). However, short term intervention on competition like commission increment may cumulatively result to lose. This has forced most of the companies to short term risk taking intervention such as commission increment which may cumulatively result to lose (Kathanga, *et al.*, 2016). Too much risk-taking may cause high losses in insurance which may lead to high expenses of management in investigation of claims and adjustment of loss, cost of monitoring claims, payment of claims and litigation (Nduati, 2016).

In 2017, the claims that were incurred by general insurers amounted to KES 14.60 billion in the first quarter of 2017, representing 5.2% growth compared to KES 13.87 billion incurred during the previous year. Similarly, the management expenses grew by 11.9% from KES 8.68 billion reported in the first quarter of 2016 to KES 9.71 in the corresponding period of 2017 (Insurance Regulatory Authority Report, 2019). This is despite the reduction in the overall spending on commissions for the period under review which was KES 2.92 billion, constituting a decline of 6.6% from KES 3.12 billion reported in the first quarter of the previous year. Insurance crisis may arise from commission increment, increase in claims and management expenditure. Looking at the 2017 insurance trend on claims and management expenses, then it is apparent that crisis in at hoofing.

Past studies that have been conducted on insurance did not link claims management to crisis management. For instance, Njoroge (2013) studied strategic risk management practices by AAR insurance Kenya Limited. Chipa and Wamiori (2017) examined the effect of management of risk on performance of insurance company. A study by Kathanga, Awino and Kabiru, (2016) concluded that regulatory hitches are not the only determinants influencing the insurance sector, they are also impacted by fraud, lack of public awareness, competition and claims that are excessive. The studies focused on strategic risk management practices, role of communication and risk management while the current study focused on underwriting, crisis management, regulatory framework and performance of Sanlam general insurance company in Kenya thus providing a conceptual gap that this study bridged. The specific objectives are;

1. To determine the influence of risk underwriting on performance of Sanlam general insurance company in Kenya.
2. To determine the mediating effect of crisis management on the relationship between underwriting and performance of Sanlam general insurance company in Kenya.
3. To examine the moderating effect of regulatory framework on the relationship between underwriting and performance of Sanlam general insurance company in Kenya.
4. To establish the joint effect of risk underwriting, crisis management and regulatory framework on performance of Sanlam general insurance company.

2.0 Literature Review

2.1 Theoretical Literature Review

The theories that inform this study are the expected utility theory, Financial Economics Theory and Regulatory – lag hypothesis theory.

2.1.1 Expected Utility Theory

This theory was established by Von Neumann and Morgestern (1944). The theory was meant to address the risk management aspect of the demand for insurance. It expresses that the decision-maker selects a risky or asset and less risky one by contrasting their normal utility qualities which is the weighted aggregates acquired by adding the utility upsides of results duplicated by their particular probabilities (Nyman, 2001). The principle of maximizing expected monetary values antedates expected utility theory. The theory presumes that insurers are afraid of risks and will always try to minimize them (Abrahamsen & Asche, 2011). Basing on Expected Utility Theory, Borch (1962) indicated that will always strive to reduce claims.

Similarly, Mayers and Smith (1990) expressed that the choice of the insurer to diminish claims looks like the choice of any profit making firm seeking to improve its financial performances. It is therefore the view of this study that, the motivations that explain why firms' hedge and why insurers aims at reducing claims may be similar. With this approach it is prudent that insurance expertise work on risk management, provide real services to primary insurers and they will be able to mitigate agency problems within insurance companies. Garven and Tennant (2003) extended the theory and argued that the decision to reduce claims is seen as task of managing risks.

Expected utility theory is prescriptive and rational but it is not always fine as a descriptive model. The merit of prospect theory is that it is descriptive in nature and it explains investors' behaviour well. On the contrary it has some disadvantages like it is not entirely prescriptive and it is relatively complicated in nature (Wu, 1996). Interestingly, prospect theorem has its fundamental strength in its graphic legitimacy, yet it is somewhat muddled in determining applications (Smelser & Baltes, 2001). The mean-variance theorem like the pragmatic decision theory is regularly utilized in settling on reasonable choices. Notwithstanding, it can give extremely off-base depictions.

The theory informs the claims variable, in that for insurance firm to prosper, its claims should drop or reduce otherwise, a disaster will be at the hoofing. When the claims increase the monetary gain to the insurance company reduces and this is a loss to the company. Insurance claim experts should always work to minimize the claims in order to maintain premiums that are acquired by the company. The decisions by the claims manager should always be considerate of the impending risks in the insurance environment.

2.1.2 Financial Economics Theory

Financial economics theory was proposed and improved by d' Ambrosio (1969). It evaluate how time, opportunity cost, risk and information result to the creation of incentives or disincentives in certain context. The theory is useful in making critical decision pertaining use of financial resources in a firm (Jossa, 2010). Financial economics focuses money use across different forms of exchange as compared to conventional economics which concentrates in exchange in which money is one.

Financial Economics way to deal with monetary danger the board expands upon the exemplary Modigliani and Miller (1958) which expresses the conditions for immateriality of monetary construction. This was subsequently stretched out to hazard the executives which specify that supporting prompts lower instability of incomes and along these lines lower unpredictability of the firm worth (Fabozzi, Neave & Zhou, 2011). Supporting is a type of hazard the board which was liked during the 1970s and 1980s through subsidiaries (Kashif & Sridharan, 2014). A definitive after effect of supporting was without a doubt advantageous to the firm and brought about a higher worth – a supporting premium. Proof to help the forecasts of monetary financial aspects hypothesis way to deal with hazard the board is poor. Be that as it may, as indicated by Jin and Jorion (2006), hazard the board prompts lower inconstancy of corporate worth (Georges, 2013).

This theory is useful as it informs crisis management which is a mediating variable in this study. If risks are managed prudently loses shall be minimized considerably. Risk managers should create risk models that can enable them evaluate risks at hand before they incur loses. Time, opportunity cost and risk information should be assessed prior to engaging in new venture or taking a new opportunity.

2.1.3 Regulatory lag hypothesis theory

This theory was proposed by Harrington (1984). The regulatory – lag hypothesis theory postulates that delays arise for delaying to approve fling rates make firms unable to adjust appropriately to market changes. Reyner (2011) observed that interactive process when discharging services may imply delay in service and product processing. As mentioned, CAP 487 requires every insurer to present insurance rates to the insurance regulatory authorities in time (Tennyson, 1993). The delays in submitting premium rates hinder prompt firm response to changes in the market. The hypothesis keeps on saying that over the long haul, there are no distinctions in benefit proportions between rate managed and unregulated locales. Nonetheless, in the short run, rate guideline gives a to some degree cyclic conduct.

A more broad analysis of the hypothesis of market disappointment is its restricted illustrative force. The market disappointment hypothesis is a conflicting and superfluous piece of the public premium speculations of guideline (Den Hertog, 2010). A sufficient illustrative administrative hypothesis should clarify how and why guideline is relatively the best exchange cost limiting foundation in the proficient distribution of assets for specific products, administrations or cultural qualities (Zerbe, 2002). The idea of market disappointments doesn't add to that errand. This conduct prompts greater inconstancy in guaranteeing brings about the rate managed states subsequently higher danger. In the event that this hypothesis remains constant, since quite a while ago run endorsing benefits ought not to be influenced by the rate guideline. In the short run, underwriting results may be affected by rate regulation. In the long-run the market evens out and hence profits are largely unaffected by the rate regulation.

2.2 Empirical Literature Review

Schich (2010) conducted a study on insurance companies and the financial crisis. This was literature based study relying on past studies to make conclusion. It was found that financial crisis had significant impact on performance of the insurance sector in the US. The current study determines the effect of risk underwriting on performance of insurance firms under mediating effect of crises management.

Marović, Njegomir and Maksimović (2010) investigated the effects of financial crisis in the case of insurance sector. This was literature based study relying on past studies to make conclusion. It was established that insurance crisis negatively impact the business operations and subsequent performance of insurance companies. This study determines the effect of risk underwriting on performance of insurance firms under mediating effect of crises management.

Protopopescu and Teau (2012) studied crisis Management in insurance companies in Romania. This was literature based study relying on past studies to make conclusion. It was found that crisis management helped reduce financial loss to the insurance firms. The current study determines the effect of risk underwriting on performance of insurance firms under mediating effect of crises management. Berry-Stolzle and Born (2012) studied the impacts of insurance regulations on pricing insurance products in Germany. This was literature based study relying on past studies to make conclusion. It was found that policy regulations did not increase prices above competitive levels. The current study investigates the effect of underwriting on performance of insurance companies under moderating effect of insurance regulations. Ibrahim (2013) investigated the factors that influence performance of insurance firms in Tanzania with special focus to Zanzibar Insurance Corporation. Primary and secondary data were employed. Key factors identified include fake claims and poor risk underwriting. However, the study focused at insurance firms in Tanzania. Regulations targeting insurance firms vary from country to country.

Murigu (2014) investigated the determinants of financial performance of . Descriptive research design was adapted to guide the study. It was established that underwriting risk positively but insignificant impacts the performance of general companies.

Focusing at Property and Casualty Insurance Companies in East Africa, Angima and Mwangi (2017) conducted a study on the on how claims management and underwriting effect performance. Both primary and secondary data from 82 insurance firms from Kenya, Tanzania and Uganda were studied. Multiple linear regression was adapted to measure relationship between study variables. It was found that underwriting had insignificant effect on performance of insurance firms.

Kusi, Alhassan, Ofori-Sasu and Sai (2019) conducted a study on insurance regulations, risk and performance in Ghana. A total of 30 insurance firms over the period 2009-2015 were included in the study. The OLS and random model were employed. It was found that regulations on credit premium did not have significant effect on insignificant effects performance of insurance firms. Polices mitigated the impacts of rusk underwriting on the profitability of insurance firms.

3.0 Methodology

Descriptive research design was employed in this study. The design is suitable in accurately and systematically describing a population. The target population for this study was 72 employees of Sanlam Insurance Company where a census of all the 72 employees was conducted. Structured questions were employed to collect data from insurance companies. Data was analyzed using inferential statistics. Simple linear regression modeling was employed to determine the influence of underwriting on performance of Sanlam general insurance company in Kenya. The mediating effect of crisis management on the relationship between underwriting and performance of Sanlam general insurance company in Kenya and the moderating effect of regulatory framework on the relationship between underwriting and performance of Sanlam general insurance company in Kenya was determined using Baron and Kenny (1986) approach. The joint effect of risk underwriting, crisis management and regulatory framework on performance of Sanlam general insurance company was analysed using multiple regression model.

4.0 Findings

4.1 Response Rate

A total of 72 questionnaires were administered and a total of 64 questionnaires were duly filled and returned representing 88.9 percent response rate hence satisfactory enough for a viable study. Thus, response rate of 88.9% is every good for the study. The higher response rate is attributed to early notification of participants, and observation of research ethics including seeking consent and maintaining confidentiality of data collected and anonymity participants.

4.2 Inferential statistics

4.2.1 Influence of underwriting on performance of Sanlam general insurance company

The first objective of the study was to establish the influence of underwriting on performance of Sanlam general insurance company in Kenya. Simple linear regression was employed to answer the research question. The results are presented in 1.

Table 1: Influence of underwriting on performance of Sanlam general insurance

Model Summary						
Model	R	R Square		Adjusted R Square	Std. Error of the Estimate	
	.541[a]	.292		.281	.68254	
Analysis of Variance						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	11.934	1	11.934	25.618	.000[a]
	Residual	28.883	62	.466		
	Total	40.818	63			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
(Constant)		1.478	.499		2.960	.004
Risk underwriting		.682	.135	.541	5.061	.000

a. Dependent Variable: Performance of Sanlam insurance company
b. Predictors: (Constant), risk underwriting

From the results on Table 1, risk underwriting was found to be satisfactory variables that explain performance of Sanlam insurance company. This fact is supported by coefficient of determination also known as the R square of .292. This implies that risk underwriting explain 29.2% of the performance of Sanlam Insurance Company. Inadequate measurement of risks, by insurance agencies, prompts collection of cases from the customers subsequently prompting expanded misfortunes and thus poor monetary execution. Hazard the executives exercises are influenced by the danger conduct of chiefs. A strong risk management plan the executives system can assist insurance firms with decreasing their openness to dangers, and improve their financial performance.

ANOVA results showed that the model is satisfactory. Further, the outcomes suggest that risk underwriting is a fairly satisfactory predictor of performance of Sanlam insurance company. This was supported by an F statistic of 25.618 and the calculated p value<0.000). The regression of coefficient model equation between risk underwriting and performance of Sanlam insurance company is;

$Y= 1.478+.682X_1$

Where

Y = Performance of Sanlam insurance company

X_1 = Risk underwriting

The results also revealed that risk underwriting and performance of Sanlam insurance company has a positive and significant relationship (β=.682, p=0.000<0.05). The regression of coefficient implies that if risk underwriting improves by one unit, the performance of Sanlam insurance company increases by .682 units. Performance of general insurance companies is influenced by claim underwriting. During underwriting, risks are collected, assessed and ranked based on the impacts to the insurance company. Underwriting entails risk estimation and assessment prompting assurance of the similar expense to cover that danger. Sound endorsing rules are basic to an insurance agency's exhibition including ideal right estimation of hazard openings and properly valuing them for cover. Most organizations will target acknowledgment of a larger part of dangers at standard rates, yet at the same time force altered premium that consider misfortune experience and different variables for chances not fulfilling guideline standards. Specific guaranteeing may reduce expenses prompting further developed productivity however piece of the pie might be lost to contenders. Settling for what is most convenient option by decreasing costs might bring about higher case costs which thus might prompt contracting/poor endorsing results. The results also agree with Deyganto and Alemu (2019) who studied factors that affect financial performance of insurance companies operating in Hawassa city region, Ethiopia and found that underwriting significantly impacts financial performance of the insurance companies. However, the results do not agree with Angima (2017) underwriting has insignificant effect on performance of insurance firms.

4.2.2 Mediating effect of crisis management on the relationship between underwriting and performance of Sanlam general insurance company

The second objective was to determine the mediating effect of crisis management on the relationship between underwriting and performance of Sanlam general insurance company in Kenya. This was conducted by employing step wise regression method. The method involved four steps.

Step 1

In the first step, risk underwriting was regressed against performance of Sanlam General Insurance Company. The results are presented in Table 2.

Table 2: Influence of underwriting on performance of Sanlam general insurance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.541[a]	.292	.281	.68254

Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	11.934	1	11.934	25.618	.000[a]
	Residual	28.883	62	.466		
	Total	40.818	63			

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
(Constant)	1.478	.499		2.960	.004
Risk underwriting	.682	.135	.541	5.061	.000

a. Dependent Variable: Performance of Sanlam insurance company
b. Predictors: (Constant), Risk underwriting

The results in Table 2 show that, in step one, the influence of risk underwriting on performance of Sanlam general insurance company is significant (β=1.682, R^2=.292, $p<0.05$), implying that 29.2% of change in performance of Sanlam General Insurance Company is attributable to a unit change in risk underwriting. The first mediation condition which states that, dependent variable is significantly affected by independent variable in the absence of the mediating variable is thus satisfied.

Step 2

The independent variable is significantly related to the intervening variable (crisis management). The second step involved regression of risk underwriting on crisis management (intervening variable). The results are presented in Table 3.

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Table 3: Influence of underwriting on Crisis management of Sanlam general insurance

Model Summary							
Model	R	R Square		Adjusted R Square		Std. Error of the Estimate	
	.455[a]	.207		.194		.68323	
Analysis of Variance							
Model		Sum of Squares	df	Mean Square	F	Sig.	
	Regression	7.542	1	7.542	16.157	.000[b]	
	Residual	28.942	62	.467			
	Total	36.484	63				
Coefficients							
Model		Unstandardized Coefficients			Standardized Coefficients	t	Sig.
		β		Std. Error	Beta		
	(Constant)	2.186		.500		4.373	.000
	Risk underwriting	.542		.135	.455	4.020	.000

a. Dependent Variable: Crisis management
b. Predictors: (Constant), Insurance underwriting

The results in Table 3 show that, the influence of risk underwriting on crisis management is positive and statistically significant (β=.542, R^2=.207, p<0.05), thus satisfying the second condition which states that, the independent variable should be significantly related to the mediator variable, for the process to continue to step 3.

Step 3

Third step was intended to test for the influence of crisis management (mediator) on performance of Sanlam insurance company as shown in Table 4.

Table 4: Influence of Crisis management on performance of Sanlam insurance company

Model Summary							
Model	R	R Square		Adjusted R Square		Std. Error of the Estimate	
	.573[a]	.329		.318		.66469	
Analysis of Variance							
Model		Sum of Squares	df	Mean Square	F	Sig.	
	Regression	13.425	1	13.425	30.385	.000[b]	
	Residual	27.393	62	.442			
	Total	40.818	63				
Coefficients							
Model		Unstandardized Coefficients			Standardized Coefficients	t	Sig.
		β		Std. Error	Beta		
(Constant)		1.442		.466		3.095	.003
Risk underwriting		.607		.110	.573	5.512	.000

a. Dependent Variable: Performance of Sanlam insurance company
b. Predictors: (Constant), Crisis management

As shown in the Table 4, the influence of crisis management on growth in earning per share was significant (β=.607, R^2=.329, p<0.05), thus satisfying the third condition that, the mediator variable should be significantly related to the dependent variable, for the process of testing for mediation to continue to the final step. Crisis management is significantly related to the performance of Sanlam insurance company.

Step 4

Fourth step was to test if crisis management and risk underwriting are significantly related to performance of Sanlam insurance company. The results are presented in Table 5.

Table 5: Mediating effect of crisis management on the relationship between underwriting and performance of Sanlam general insurance company

Model Summary						
Model	R	R Square		Adjusted R Square	Std. Error of the Estimate	
	.654[a]	.428		.409	.61882	
Analysis of Variance						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	17.458	2	8.729	22.795	.000[b]
	Residual	23.359	61	.383		
	Total	40.818	63			
Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	β	Std. Error	Beta			
(Constant)	.523	.518			1.011	.316
Risk underwriting	.445	.237	.353		1.878	.062
Crisis management	.437	.115	.413		3.798	.000

a. Dependent Variable: Performance of Sanlam insurance company
b. Predictors: (Constant), Crisis management, Insurance underwriting

Table 5 shows that, the influence of the risk underwriting on performance of Sanlam insurance company was insignificant in the presence of the crisis management (mediator) (β=.445, R^2=.428, p=.062>0.05), and thus satisfying the fourth condition which states that, the effect of risk underwriting on performance of Sanlam insurance company is insignificant in the presence of crisis management (mediator). This implies that crisis management has mediating effect on the relationship between underwriting and performance of Sanlam general insurance company. Crisis management is very important in minimizing possible risks in the insurance sector. Crisis management involves identifying and minimizing probable risks like that might pose significant impact on financial performance and operational sustainability of insurance companies. The results agree with Protopopescu and Teau (2012) that crisis management helped reduce financial loss to the insurance firms. The results also agree with Mwangi (2015) who carried out a study to on challenges in claims management by Kenya's reinsurance firms and found that incorrect documentation of claims resulted to delay in payment of claims.

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4.2.3 Moderating effect of insurance regulation on the relationship between underwriting and performance of Sanlam general insurance company

The third objective examined the moderating effect of insurance regulation on the relationship between underwriting and performance of Sanlam general insurance company in Kenya using the method advanced by Baron and Kenny (1986). Regression results are presented in Table 6.

Table 6: Moderating effect of insurance regulation on the relationship between underwriting and performance of Sanlam general insurance company

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
	.629[a]	.396	.365	.64119	
Analysis of Variance					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.150	3	5.383	13.094	.000[b]
Residual	24.667	60	.411		
Total	40.818	63			
Coefficients					
Model	Unstandardized Coefficients β	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	-.975	2.354		-.414	.680
Risk underwriting	1.005	.654	.797	1.536	.130
Insurance regulations	.688	.578	.688	1.190	.239
Interaction term (Risk underwriting*Insurance regulations)	-.102	.158	-.545	-.643	.523
a. Dependent Variable: Performance of Sanlam insurance company					
b. Predictors: (Constant), Risk underwriting, Insurance regulations and interaction term					

The coefficient of determination (R^2) before introducing the insurance regulations as the moderator in the relationship between underwriting and performance of Sanlam general insurance company was 29.2% but after introducing the insurance regulations, the R^2 improved to 39.6%. This implies that insurance regulations enhances operational efficiencies of insurance companies thus their financial performance. Better characterizing what protection guideline and protection oversight would help to more readily comprehend which organizations are involved and which job they play. The absence of lucidity can make vulnerabilities and conflict among the partners that are involved.

Building up an institutional system that cherishes freedom and responsibility is basic for a protection position to have the essential command and powers, just as guaranteeing that its decisions have credibility and legitimacy. An insurance regulator will likewise have forces to give non-authoritative guideline that upholds enactment just as non-restricting texts like rules,

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notices and proposals are given by the controller with enforceability not typically needed, yet expected in the protection market. Protection guideline and oversight is done under the Insurance Act, Cap 487, laws of Kenya. Protection guidelines in developing business sectors keep on turning out to be all the more firmly lined up with worldwide best practice.

The administrative specialists are finding a way ways to upgrade or carry out hazard touchy and monetary based dissolvability guideline systems. In 2017, various rules were circled to guarantors and reinsurers and the draft rules distributed. These were intended to help and fortify the current administrative structure in the country. The Statute Law (Miscellaneous Amendments) Act, 2017 engaged the business' controller (IRA) to direct bancassurance business done by banks in a similar way as the standard protection business. The Guidelines on Valuation of Technical Provisions for General Insurance Business were intended to fortify danger based management in everyday protection business. The Insurance (Amendment) Act, 2017 was additionally passed to accommodate legitimacy of safety net provider's permit until its denial, upgrade the punishment for working without enrollment and give guideline to Insurance Group of firms. The results agree with Berry-Stolzle and Born (2012) studied the impacts of insurance regulations on pricing insurance products in Germany and found that policy regulations did not increase prices above competitive levels. However, the results do not agree with Kusi, Alhassan, Ofori-Sasu and Sai (2019) who conducted a study on insurance regulations, risk and performance in Ghana and found that regulations on no credit premium and required capital have insignificant effects on profitability of insurers.

4.2.4 Joint effect of underwriting, crisis management and regulatory framework on performance of Sanlam general insurance company

The forth objective was to establish the joint effect of underwriting, crisis management and regulatory framework on performance of Sanlam general insurance company in Kenya. The results presented in Table 7 indicate the fitness of model used of the regression model in explaining the study phenomena.

Table 7: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.728[a]	.530	.506	.56562

a. Predictors: (Constant), insurance regulations, crisis management, risk underwriting

From the results on Table 7, insurance regulations, crisis management, risk underwriting were found to be satisfactory variables in explaining performance of Sanlam general insurance company. This fact is supported by coefficient of determination also known as the R square of .530. This implies that insurance regulations, crisis management, risk underwriting explain 53.0% of the variations in the dependent variable, which is performance of Sanlam general insurance company. For insurance business to flourish, it must operate under some guidelines and regulation as per the country of operations. Underwriting allows to insurance companies to classify risks accordingly and set price for each of them. Moreover, insurance firms form crisis management team to make decisions on future course of action and devise strategies to help them come out of difficult times as soon as possible when their claims rockets. Table 8 gives the results of the analysis of variance (ANOVA).

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Table 8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	21.622	3	7.207	22.527	.000[b]
1	Residual	19.196	60	.320		
	Total	40.818	63			

a. Dependent Variable: performance of insurance
b. Predictors: (Constant), insurance regulations, Crisis management, Underwriting

The outcomes of the analysis of variance indicate that the model is satisfactory. Further, the outcomes suggest that insurance regulations, crisis management, risk underwriting are satisfactory indicators of the performance of Sanlam general insurance company. This was supported by an F statistic of 22.527 and calculated p value0.000<0.05. The regression of coefficient table is presented in Table 8.

Table 8: Multiple Regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.486	.550		-.883	.381
Risk underwriting	.352	.128	.279	2.752	.008
Crisis management	.442	.105	.417	4.199	.000
Insurance regulations	.327	.091	.327	3.607	.001

a. Dependent Variable: Performance of Sanlam general insurance company

Basing on the predictive model, crisis management (β=.442) had the highest positive effect on performance of Sanlam general insurance company, followed by risk underwriting (β=.352). Insurance regulations had the smallest positive effect (β=-.282) on performance of Sanlam general insurance company.

The results also revealed that risk underwriting and performance of Sanlam general insurance company have a positive and significant relationship (β=.352, p=0.008<0.05). The regression of coefficient implies that if risk underwriting improves by one unit, performance of Sanlam general insurance company increases by .352 units. The most convoluted part of the insurance business is the endorsing of approaches. Utilizing a wide combination of information, guarantors foresee the probability that a case will be made against their arrangements and value items as needs be. Safety net providers utilize actuarial science to measure the dangers they will accept and the top notch they will charge to expect them. Information is investigated to reasonably precisely extend the pace of future cases dependent on a given risk. Endorsing is finished by gathering comparable dangers for rating and the resultant rates are changed in accordance with consider the gathering experience. This is then changed in accordance with cater for expansion, vulnerability and costs. Stochastic models and modern relapse investigation and information mining instruments are utilized by statisticians to consider seriousness and recurrence of cases to adequately value the risk. Claim costs comprise an enormous extent of a safety net provider's costs and claims disintegrate income and, its expenses exceptionally impact the benefit of guarantors. Subsequently, accurately evaluated and reasonable cases organization rehearses that are in accordance with ideal guaranteeing approaches assume a critical part in improving better exhibition of insurers. The results agree with Dey, Adhikari and Bardhan (2015) who explored

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the factors determining financial performance of life insurance companies of India and shows that there is significant positive relationship of underwriting risk and financial performance of life insurance companies in India. Likewise, Ibrahim (2013) who conducted a study on the factors influencing performance of Zanzibar Insurance Corporation in Tanzania indicated that, performance of Zanzibar insurance Corporation were affected by insured by delaying to pay premium on time, to report fake claim and lack of know how about insurance service.

The results also revealed that crisis management and performance of Sanlam general insurance company have a positive and significant relationship (β=.442, p=0.000<0.05). The regression of coefficient implies that if crisis management improves by one unit, performance of Sanlam general insurance company increases by .442 units. Effective crisis preparedness can be achieved by forming a crisis team, analyzing vulnerabilities, creating strategies, working the plans, and assessing plan performance. Crisis management involves managing business related risks including financial risks, market volatility, operations and claims risk. There are other external risks like disasters, macroeconomic factors like inflation that must be contained. Poor management of risk, by insurance companies, leads to accumulation of claims from the clients hence leading to increased losses and hence poor financial performance. A robust risk management framework can help organizations to reduce their exposure to risks, and enhance their financial performance. The results agree with Marović, Njegomir and Maksimović (2010) who investigated the effects of financial crisis in the case of insurance sector and established that insurance crisis negatively impact the business operations and subsequent performance of insurance companies. According to Sing'ombe (2016) in a study assessed the relationship between reinsurance and financial performance indicators for insurance companies such as net premiums, claim ratios and underwriting profitability in was study indicated that retention levels were negatively related to underwriting profit ratio.

The results also showed that insurance regulations and performance of Sanlam general insurance company have a positive and significant relationship (β=.327, p=0.000<0.05). The regression of coefficient implies that if insurance regulations increase by one unit, the performance of Sanlam general insurance company increases by .327 units. This implies that insurance regulations enhances operational efficiencies of insurance companies thus their financial performance. Insurance regulation relates to rule-making in the insurance sector. Insurance regulations are meant to ensure that insurers operate within the acceptable regulatory framework with aim of protecting stakeholders and customers. Defining roles and functions of insurance firms through regulations help guide operations of the insurance firms. Obscure regulatory framework may derail the clarity of functions and code of conduct within the insurance sector. A clear institutional framework instills accountability, transparency, efficiency and clarity of insurance functions. The results agree with Pasiouras and Gaganis (2013) on regulations and soundness of insurance firms and found regulations that allow the early and late intervention of insurance supervisors may have a negative impact on the soundness of the firms. Yet, regulatory powers in relation to enforcement and sanctions have a positive impact on soundness. Higher requirements in relation to technical provisions, more regulatory principles on investments and the adoption of an approach of detailed regulations on admissible assets have a positive and significant influence on soundness that is robust across most of the specifications. The results also agree with Kwo and Wolfrom (2017) who conducted a study on analytical tools for the insurance market and macro-prudential surveillance and established that insurance regulatory surveillance facilitates the operations of an insurance company.

5.0 Conclusions

The study concludes that risk underwriting influences the performance of insurance companies. Performance of general insurance companies is influenced by claim underwriting. During underwriting, risks are collected, assessed and ranked based on the impacts to the insurance company. Sound endorsing rules are basic to an insurance agency's exhibition including ideal right estimation of hazard openings and properly valuing them for cover.

Conclusion can be made further that crisis management mediates the relationship between underwriting and performance of insurance companies. Crisis management is very important in minimizing possible risks in the insurance sector. Crisis management involves identifying and minimizing probable risks like that might pose significant impact on financial performance and operational sustainability of insurance companies. Effective crisis management through proper analysis of situations minimizes claims.

The study further concludes that insurance regulation moderates the relationship between underwriting and performance of Sanlam general insurance company in Kenya. The explanatory power of risk underwriting on performance of Sanlam general insurance company significantly improved after applying insurance regulations as the moderator in the relationship between underwriting and performance of Sanlam general insurance company. Insurance regulation relates to rule-making in the insurance sector. Insurance regulations are meant to ensure that insurers operate within the acceptable regulatory framework with aim of protecting stakeholders and customers. Defining roles and functions of insurance firms through regulations help guide operations of the insurance firms. Obscure regulatory framework may derail the clarity of functions and code of conduct within the insurance sector while clear institutional framework instills accountability, transparency, efficiency and clarity of insurance functions.

It was also concluded that the joint effect of risk underwriting, crisis management and regulatory framework on performance of insurance companies is greater than the individual effect of risk underwriting, crisis management and regulatory framework on performance of insurance companies. This is because the explanatory power (coefficient of determination) of risk underwriting, crisis management and regulatory framework on performance of Sanlam general Insurance Company improved significantly compared to the individual effect of risk underwriting. For insurance business to flourish, it must operate under some guidelines and regulation as per the country of operations. Moreover, insurance firms form crisis management team to make decisions on future course of action and devise strategies to help them come out of difficult times as soon as possible when their claims rockets.

6.0 Recommendations

It was established that risk underwriting influences the performance of an insurance firm. The study recommends for the need of the Sanlam Insurance Company to enhance the capability of its personnel to appropriately draft insurance related risks and claims though periodic trainings on underwriting risk. Proper risk underwriting help better plan for risks and price them accordingly.

Crisis management mediates the relationship between underwriting and performance of insurance companies. There is need for insurance companies to enhance their capacity of managing business crisis like financial crisis, reputation damage, market volatility and unfair competition. The crisis management strategies should aim at creating competitive advantage over other insurance service providers while holding business risks at manageable level. Crisis management is very important in minimizing possible risks in the insurance sector. Crisis management should involve identifying and minimizing probable risks like that might pose significant impact on financial performance and operational sustainability of insurance companies.

Insurance regulation moderates the relationship between underwriting and performance of Sanlam general insurance company in Kenya. The study urges regulatory framework authorities to undertake periodic assessment of the insurance service providers to ensure that the suggested business policies and guidelines are observed. Likewise, individual insurance companies need ensure that all the insurance policies and guidelines are being observed by the company. The study also recommends for the need of updating insurance policies and guidelines on periodic basis to ensure that they align with changing business environment. Insurance regulations help guide the operations of the insurers within the acceptable business ethical guidelines.

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