

Impact Of Risk Survey On Profitable Underwriting Of Property Insurance From Selected Insurance Companies In Nigeria

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Abstract

The study focused on impact of risk survey on profitable underwriting of property insurance using selected insurance companies, based on their market share, as sample for the study. The essence of underwriting is to enable insurance companies to determine whether to accept a risk or not and if accepting it the terms and condition of such acceptance. It is pertinent to note that most insurance companies in Nigeria are making underwriting losses due to poor underwriting of risks. The aim of this study is to find out the impact of risk survey on profitable underwriting of property insurance and to investigate the relationship between identified risk exposures and profitable underwriting by insurance companies, etc. The descriptive research method was used in carrying out the study and a total of 355 copies of questionnaires were administered, 343 copies were well completed and returned, and were used for the data. The results from the analysed data showed that there is a positive relationship between risk exposure and profitable underwriting of risks presented to insurance companies for cover, and that loss exposure could have negative effect on profitable underwriting of risks in property insurance, etc. The study therefore recommends that insurance companies in Nigeria should put in place policies in use for risk survey which will enable them carry out proper assessment of risks before covers are granted among others.

Keywords: *Property insurance, Risk survey, profit, Underwriting.*

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I. Introduction

Risk survey, therefore, involves not only the identification of risk exposure in property insurance; it also helps in the elimination of these exposures. According to Finke, Belasco and Huston (2010), property insurance, although a fundamental aspect of individual financial planning, involves a common method of ensuring consistency in choice among insurance products. It thus plays an important role in choice coverage among insurance underwriters. In order to sustain the process the property insurance underwriter has a duty of ensuring that such risks are properly assessed before they are covered with insurance products.

Insurance companies contribute towards improving the market value of individual firms and also towards industrial growth through the overall growth and prosperity of the economy (Sharma, Jadi & Ward, 2018). On the other hand, for an insurance company to do this effectively, such a company must be run profitably. Profitability, according to Afolabi (2018), determines an insurance company's ability to make claims payments as at when due. The size of the company may determine its value which could translate to its profitability. This entails that if an insurance company is not run profitably, it will be difficult for it to meet its claims obligation. It is in maximising the profitability of these companies that insurance companies employ the services of risk surveying in their assessment of proposed property risks for insurance. To achieve this, there is the need for modelling the Estimated Maximum Loss (EML) scenarios on the proposed risks (Gustavsson, Shahriari & Lindgren, 2010). This can be more effectively carried out using a risk survey.

In this regard, surveying is useful in the process of underwriting of a risk for insurance cover. It is pertinent to note that where a risk is not properly assessed, the result could negatively impact on the financial results of the insurance company; hence, there is a need for proper use of survey in the assessment of large risks before insurance cover is placed on them.

Normally in an insurance contract, the underwriter will determine a price for the cover to be provided. This will depend on a number of factors that will include the type of the business, policy coverage, loss history and excess or deductible. A key part of the process is also the risk survey which is arranged for property insurances at the time of renewal. In addition, the insurance company will also review the Estimated Maximum Loss (EML) that is likely to be incurred in the event of a single major incident in the business. This will determine what percentage of the risk the insurance company will be able or wish to write on the policy, if it cannot be written as a 100% line, or whether other co-insurers and re-insurers will be required to participate.

In order to do this effectively and for large risks for that matter, the insurance company may appoint a risk surveyor to assist it in assessing the extent of risk exposure. Most insurance companies have suffered losses as a result of poor assessment of risk proposed for insurance which had affected their profitability as a result of the payment of claims which normally, they should not have paid. This also has equally affected the financial stability thereby leading to their becoming insolvent. The aim of this study is to find out the impact of risk survey on sustainable underwriting of property insurance in Nigeria.

Research Hypotheses

In line with the above research objectives and research questions and based on the gap in knowledge, the following research hypotheses stated in the null form will guide the study:

- i. There is no significant relationship between identified risk exposures and profitable underwriting of insurance firms
- ii. There is no impact of applying Estimated Maximum Loss figure concept on profitable underwriting of insurance firms
- iii. Information on adequacy of sum insured will not affect profitable underwriting of insurance firms

II. LITERATURE REVIEW

Yang & Shi (2018) argued that a contract of property insurance provides the insured with insurance cover against losses to the insured properties which could arise from a number of perils. It is in this line that Chilekezi (2018) equally argues that property insurance plays a vital role in the insurance industry as most of the classes of insurance under the general or non-life insurance fall into this group. He also notes that most of the physical assets are protected by property insurance (Chilekezi, 2018). As a result of the nature of property risks, Yang and Shi (2018) had proposed that a multivariate framework should be used in the pricing property insurance contracts with multi-peril coverage in a longitudinal context. Specifically, a two-part model should be employed to accommodate the heavy tails in the insurance loss cost which could be anticipated by the underwriter while assessing the risk for cover (Yang & Shi, 2018). This shows the complex nature of property insurance.

There is a need for a good description of the subject matter to be covered. Hence, Akintayo (2021) had maintained that the subject matter covered by the policy must be a physical object though it should not belong to an alien enemy or being used against public interest, e.g. a brothel. It is pertinent to note that in some rare cases the subject matter may not be physical e.g. rental income/expenses, cost of fire brigade charges, etc. (Akintayo, 2021).

At this juncture, it is important to note that the use of property insurance according to Zou (2010) can improve the value of the corporate body. Hence it is in the interest of any business entity to insure their assets, which includes their physical property.

Profitability in the insurance industry

Profit plays a very important part in the existence of any business concern including those in the insurance sector. Tomar, Sainy & Gupta (2019) argued that a business organization is always established with the aim of earning profit from its operations. Tomar et al (2019) added that it is the profit, which acts as a backbone for survival of every organization. Without earning profit, growth and stability of a business firm is not possible. This is the reason for investment in the insurance industry anywhere in the world.

The profitability of insurance companies, according to Hall (2021), depends on the volume of premiums they write, the return on their investments, business costs, and how much they have to pay out in claims. Hall (2021) further revealed that property and casualty insurance companies in the United States of America, for instance, has a Net Profit Margin (NPM) of 23.26% , Insurance brokers averaged 8.7% while Accident and health insurance companies had a Net Profit Margin of 5.53% (see also CSI Market (2021).

Hall (2021) argued that the calculation of net margins is very important to companies in the insurance sector because the values are so low. It makes these companies to know how to manage their revenue since they are in a business where they may pay out more than what they had collected from their clients. Many insurance firms operate on margins as low as 2% to 3%. Smaller profit margins imply that even the smallest changes in an

insurance company's cost structure or pricing can mean drastic changes in the company's ability to generate profit and remain solvent (Hall, 2021).

It is necessary to note that insurance companies make money from the insurance policies that they write, through collection of insurance premiums. They also invest these premiums with the goal of generating returns. Insurance companies have a variety of costs, as in all businesses: salaries, rent, etc., and then the insurance claims they pay out needs insurance coverage (Hall, 2021).

Concept of risk survey

One important aspect of risk survey is risk evaluation. Risk evaluation according to Akintayo (2006) comprises of a thorough review of frequency and severity of the past losses whether significant or not; measuring the effect of previous losses on the cash flow of the business and any project; quantification of effect that potential losses may have on the business, etc. In this way, the underwriter will be able to determine the appropriate risk exposures and how they could be handled. Little wonder then that Ngwuta (2005) sees risk evaluation as involving a critical evaluation of the frequency and the impact of loss. It ensures that the underwriting firm gets accurate records of past events in order that decisions taken in the future are taken on the basis of sound statistics.

Risk exposures and profitability of underwriting department

Aduloju & Ajemunigbohun (2017), in an empirical study examined the relationship between ceding office gross premium income, underwriting profit and financial stability, using both primary data obtained from 246 respondents selected from insurance companies through the use of structured questionnaire and secondary data obtained from the 2014 and 2015 published financials of the selected ten companies. Descriptive research design was employed using purposive sampling method while the study population comprised 56 insurance companies in Nigeria. The collected data was analysed using correlation analysis and the results of this study are quite in line with previous studies and show that reinsurance purchase increases significantly the insurers' premium income. The results also show that profitability of the firm is sensitive to change in reinsurance utilisation and has a positive relationship with it. It was established in the study that purchasing reinsurance reduces insurers' insolvency risk by stabilizing loss experience and increasing capacity (Aduloju & Ajemunigbohun, 2017). This study has shown that reinsurance could be used as a tool in increasing the profitability of an insurance company in any country of the world.

Abass, Dansu & Oyetayo (2021) evaluated the impact of technical characteristics on the financial performance on non-life insurance companies in Nigeria using descriptive research design. Data were gathered from the annual financial statements as contained in the Nigeria Insurance Digest a publication of the Nigerian Insurers Association. The study adopted firm size, premium growth, loss ratio, liquidity, investment, capital adequacy, reserves and underwriting capacity as proxies of technical characteristics while return on asset, return on equity and return on investment were used as proxies of financial performance. The results revealed a significant impact of joint technical characteristics variables on the financial performance. Specifically, the study revealed that reserves, shareholders' fund, firm size, capital adequacy and premium growth are the main technical characteristics that influence the financial performance. The study recommended that non-life insurance companies must constantly monitor their reserves, increase shareholders fund, increase capital base, capital adequacy, and grow their portfolio through premium generation. This study is important in the determination of the estimated maximum loss figure for a risk as it could be one of the variables that could affect underwriting risk retention.

An empirical study by Soye & Adeyemo (2018) attempted to address how underwriting capacity has affected the income of insurance industry in Nigeria; using expo-facto research design and inferential analysis; the study tested whether significant relationship existed between dependent variable (income of insurance) and set of independent variables (shareholder's fund, underwriting profit, investment income, earning asset ratio). Analysis was based on descriptive statistics, using secondary data that was extracted from the financial report of the selected insurance companies, the data covering a period from 2006 to 2015. Regression model analysis was used to find out the extent to which set of independent variables impacted the dependent Variable. The findings of the study showed that underwriting profit and earning asset have positive impact on income of insurance companies in Nigeria. For shareholder's fund and total investment the study shows that they impacted the income of Nigeria insurance companies negatively as at the period this study is carried out. The study concluded that insurance companies in Nigeria should improve their underwriting techniques, and train their staff more in this area. Therefore, the study recommended that insurance companies should put in more effort in investment of their premium. The study further recommended that insurance companies should efficiently manage their asset properly to increase their earning capacity basically to boost their profitability.

III. RESEARCH METHODOLOGY

Research Design

The method adopted for this study was a cross sectional survey research design. This method was adopted because it provided for the collection of data from a number of cases or subjects within the same time frame and at a single point in time.

Population of the study, sampling technique and sample size

The population consists of all the companies underwriting property insurance in the market whether they are composite or specialist general insurance companies. According to the Nigerian Insurance Digest (2020), there are 14 composite companies and 26 general insurance companies in the Nigerian insurance market. These 30 companies will form the total number of insurance companies underwriting property insurance risks in the market.

The sampling unit consisted of six companies in the market with three each from the composite and general insurance companies respectively. And the purposive sampling method was used in selecting the companies from the population. The reason for this is that, these companies were among the leaders as composite companies or specialist general insurance companies. The selected companies, also, have same characteristics when it comes to the assessment of proposed risks in the market.

The sample size for the study using Cochran's formula $n_0 = (z^2 Pq)/e^2$

Where z = normal standard score = 1.96

$P = 0.5$

$Q = 1 - P = 0.5$

e = error margin = 0.05, and

n_0 = sample size = $n = n_0 / 1 + (n_0 - 1) / N$ will consists of 355 respondents drawn from the sample companies as stated above. The companies selected as sample are Leadway Assurance Co. Limited, AIICO Insurance Plc, AXA Mansard Insurance Plc., Custodian and Allied Insurance Plc., Zenith General Insurance and NEM Insurance Plc.

Data Collection Method

For this study, primary data was used. The advantage of sourcing primary data and using it is that the researcher is allowed to collect precise data from the appropriate sources, and it provides the opportunity to understand the respondents better (Ajayi, 2019).

Presentation of Data

Data were presented using frequency counts, percentages and tables. A total number of 355 copies of questionnaires were distributed to the respondents from the selected companies that form the sample for the research. Out of these 355 copies, 343 copies were correctly filled and returned. These were analysed as presented in the table below.

Table 1: Selected Companies and the number of questionnaires distributed

Company	No of employees 2021	Premium income 2021	No of Questionnaire Distributed	Returned & Good
Leadway Assurance	644	N70.1 bn	60	59
AIICO Insurance	875	N62 bn	74	70
AXA Mansard Ins	615	N44 bn	59	56
Custodian & Allied Ins	365	N47.3 bn	54	52
Zenith General Ins	160	N16.1 bn	49	49
Nem Insurance Plc	500	N19.3 bn	59	57
Total	3,159		355	343

Source: NIA/NAICOM, Field Survey, 2022

Data Analysis

The data was analysed with the aid of Statistical Package for Social Science (SPSS) 23 and the tools employed descriptive, correlation and regression analysis for hypotheses testing. Descriptive statistical is used to analysis the mean, standard deviation, minimum, maximum and skewness values of variables included in the model for the study. Inferential statistics such correlation and regression model analysis will be used to determine the relationship among the variables. The findings relate to the research questions and objectives that guided the study. The findings of the study were also discussed in relation to the literature and in comparison, to other related works.

Table 2: Descriptive Statistics of Variables

Descriptive Statistics							
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
REP	343	3	5	3.90	.614	.094	
MLP	343	2	4	3.78	.425	-.940	
SIP	343	3	5	3.89	.359	.103	
Valid N (Listwise)	343						

Source: Researchers field survey, 2022

Where: REP: Risk Exposure; MLP: Maximum Loss; SIP: Sum Insured

Descriptive statistics presented in table 3 revealed that average risk exposure on profit as far as this study concern is 3.90, standard deviation is .614, minimum and maximum values are 3 and 5 respectively; maximum loss figure for mean, standard deviation, minimum and maximum value are 3.78, .425, 2 and 4 respectively; sum insure for mean is 3.89, standard deviation is .359, minimum and maximum values are 3 and 5 respectively; data skewness explain the normality of the variable used, which shows that all the variable fall within the range under the standard normal curve of ± 1.96 .

Analysis base on Research Question

Research Question 1: Are there any relationship between identified risk exposures and profitable underwriting of insurance firms?

Table 3: Relationship between identified risk exposures and profitable underwriting of insurance firms

S/N	Identified risk exposure and profitable underwriting	SA (%)	A (%)	U (%)	D (%)	SD (%)
1	You are aware of importance of identified risk exposure on profitable.	76(22)	86(25)	73(21)	61(18)	47(14)
2	Poor risk exposure can impact negatively on profitable underwriting.	92(27)	110(32)	90(26)	51(15)	
3	Your company introduces measures to reduce poor risk exposure on its performance.	107(31)	96(28)	77(23)	63(18)	
4	Risk surveying is an effective tool to improve profitable underwriting	99(29)	114(34)	88(26)	33(11)	

Source: Researchers field survey, 2022

Table 3 revealed that 47% of the respondents agreed that they are aware of importance of identified risk exposure on profitable, 21% of the respondents are undecided, while the remaining 32% disagreed to this statement. 59% of the respondents agreed that Poor risk exposure can impact negatively on profitable underwriting, 26% are undecided, while the remaining 15% of the respondents disagreed to this statement as far as this research is concern. In addition to this, 59% of the respondents agreed that company introduces measures to reduce poor risk exposure on its performance, 23% of the respondent are undecided about this statement, while the remaining 18% disagreed with this statement. Furthermore, the table revealed that 63% of the respondents agreed that risk surveying is an effective tool to improve profitable underwriting, 26% are undecided and while the remaining 11% of the respondents disagreed to this statement. This implies that there is relationship between the identified risk exposures and profitable underwriting of insurance firms as far as this study is concerned

Research Question 2: what is the impact of estimated maximum loss figure on profitable underwriting of insurance firms?

Table 4: Impact of estimated maximum loss figure on profitable underwriting of insurance firms

Source: Researchers field survey, 2022

S/N	Estimated maximum loss and profitability	SA (%)	A (%)	U (%)	D (%)	SD (%)
1	There is a significant relationship between estimated maximum loss and profitable underwriting.	116(34)	107(31)	75(22)	45(13)	
2	Estimated maximum loss could lead to underwriting losses in property insurance.	113(33)	73(21)	83(24)	42(12)	32(10)
3	Estimated maximum loss could be need by the property insurer to determine its loss retention.	72(21)	126(37)	75(22)	44(13)	26(7)
4	Premium determination is often based on the estimated maximum loss of policy holder.	62(18)	71(21)	93(27)	91(27)	26(7)
5	Poor estimated maximum loss determination can impact on property insurance underwriting results.	103(30)	104(31)	90(26)	46(13)	

Table 4 revealed that 65% of the respondents agreed that there is a significant relationship between estimated maximum loss and profitable underwriting, 22% of the respondents are undecided, while the remaining 13% disagreed to this statement. 54% of the respondents agreed that estimated maximum loss could lead to underwriting losses in property insurance, 24% of these respondents are undecided, while the remaining 22% disagreed as far as this study is concerned. In addition to this objective, 58% of the respondents agreed that estimated maximum loss could be needed by the property insurer to determine its loss retention, while 22% are undecided and the remaining 20% of this respondent disagreed to this statement. 39% agreed that premium determination is often based on the estimated maximum loss of policy holder, 27% are undecided, while the remaining 34% of this respondent disagreed with this statement. More so, 61% of the respondents agreed that poor estimated maximum loss determination can impact on property insurance underwriting results, 26% are undecided, while the remaining 13% of the respondents disagreed to this. This implies that estimated maximum loss figure has a negative impact on profitable underwriting of insurance firms as indicated in this study.

Research Question 3: How will information on adequacy of sum insured affect profitable underwriting of insurance firms?

Table 5: Information on adequacy of sum insured and profitability

S/N	Adequacy of sum insured and profitability	SA (%)	A (%)	U (%)	D (%)	SD (%)
1	Good risk pricing can enhance performance in profitable underwriting.	82(24)	70(20)	114(33)	56(16)	21(7)
2	There is a significant relationship between the adequacy of the sum insured and profitable of underwriting in property insurance.	138(41)	121(35)	84(24)		
3	There is a relationship between adequacy of sum insured and the changing of adequate premium in property insurance.	116(34)	137(40)	90(26)		
4	Risk pricing will improve the portfolio of property insurance.	70(20)	101(29)	113(33)	59(18)	

Source: Researchers field survey, 2022

Table 5 revealed that 44% of the respondents agreed that good risk pricing can enhance performance in profitable underwriting, 33% of the respondents are undecided about this statement while the remaining 23% of the respondent disagreed to the statement. 76% of the respondent also agreed that there is a significant relationship between the adequacy of the sum insured and profitable underwriting in property insurance, while the remaining 24% are undecided about this statement and as such, no respondents disagreed to the statement in this study. Furthermore, 74% of the respondent agreed that risk pricing will improve the portfolio of property insurance, while 26% were undecided. Finally, 49% of the respondent agreed that risk pricing will improve the portfolio of property insurance, 33% of the respondents are undecided about this statement, while the remaining 18% disagreed to this statement. This implies that information on adequacy of sum insured affects profitable underwriting of insurance firms positively.

Analysis of correlation and regression

Table 6: Summary of correlation analysis establishing the relationship between the identified risk exposures and profitable underwriting of insurance firms.

Correlations			
		RISK EXPOSURE	PROFITABLE UNDERWRITING
RISK EXPOSURE	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	343	343
PROFITABLE UNDERWRITING	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	343	343

Source: Researchers field survey, 2022

Table 6 presents a summary of correlation analysis that establishes the relationship between risk exposure and profitable underwriting of an insurance firm in Nigeria. Table 7 revealed a positive Correlation between risk exposure and profitable underwriting with correlation coefficient of 0.995 which implies that there is strongly positive linearly correlation which is also significant between risk exposure and profitable underwriting. The finding implies that when there is increment or improvement in risk exposure, the profitable underwriting will equally increase.

Table 7: Summary of simple regression analysis that examines the impact of estimated maximum loss figure on profitable underwriting of insurance firms in Nigeria.

Variable	B	S.E	t-statistic	P
LOSS FIGURE	-.366	0.129	-2.842	.001
C	2.519	.489	5.152	.005
$R^2 = .064$; Adj $R^2 = 0.56$				

Source: Researchers field survey, 2022

The simple regression model obtain is:

Profitable underwriting = 2.519 - .366*Loss figure

Table 7 presents a summary of simple regression analysis examining the impact of estimated maximum loss figure on profitable underwriting of insurance firms in Nigeria. R^2 is .064 which indicates that about 64 percent of changes in profitable underwriting are explained by the loss figure. The t value of -2.842 is significant at $p < 0.001$ and this shows that the equation has a good fit; that is, the explanatory variable is good explainer of changes in profitable underwriting. The regression model above shows that a unit increase in loss figure will reduce the profitable underwriting by .366 and it is significant. The finding implies that loss figure has significant impact on profitable underwriting, which is an indication that loss figure will always have a negative effect in profitable underwriting of an insurance firm.

Table 8: Summary of simple regression analysis that examines the effect of adequacy of sum insured on profitable underwriting of an insurance firm.

Variable	B	S.E	t-statistic	P
SUM INSURED	.240	0.075	3.214	0.002
C	2.963	.284	10.446	0.001
$R^2 = .064$; Adj $R^2 = .56$				

Source: Researchers field survey, 2022

The simple regression model obtain is:

Profitable underwriting = 2.963 + 0.240*Sum insured

Table 8 presents a summary of simple regression analysis examines the effect adequacy of sum insured on profitable underwriting of an insurance firm. R^2 is 0.064 which indicates that about 64 percent of changes in profitable underwriting are explained by sum insured. The t value of -3.214 is significant at $p < 0.002$ and this shows that the equation has a good fit; that is, the explanatory variable is good explainer of change in profitable underwriting. The regression model above shows that a unit increases in sum insured will increase profitable underwriter by 0.240 and significant. The finding implies that sum insured has significant effect on profitable underwriting, which is an indication that sum insured will always have a positive effect in achieving profitable underwriting of an insurance firm.

IV. Discussion of Finding

Analysis based on research questions revealed that there is relationship between identified risk exposures and profitable underwriting of insurance firms. Furthermore, the study revealed that there is a negative impact of estimated maximum loss figure on profitable underwriting of insurance firms, and also revealed from the study is that adequacy of sum insured affects profitable underwriting positively. The first stated hypothesis revealed a positive correlation between risk exposure and profitable underwriting with correlation coefficient of 0.995 which implies that there is strongly positive linearly correlation which is also significant between risk exposure and profitable underwriting. This finding is supported by an empirical work on risk exposure as found by Yankson, Kwaning, Pomegbe & Dogbe (2022), although the research was carried out using data from composite companies. The same result was found using Panel Data Investigation of the Serbian market (Vojinovic, Milutinovic, Sertic & Lekovic, 2022).

On the second hypothesis, the result of R^2 is .064 which indicates that 64 percent of changes in profitable underwriting are explained by the loss figure. The t value of -2.842 is significant at $p < 0.001$ and this shows that the equation has a good fit; that is, this variable is a good explainer of changes in the underwriting firms' profitability. The regression model above shows that a unit increase in loss figure will reduce the underwriting profitability by .366 and significant. The finding implies that loss figure has significant impact on underwriter profitability as far as this study is concerned, which is an indication that loss figure will always have a negative effect in profitable underwriting of an insurance firm. This finding is supported by an empirical work in Romania (Dankiewicz & Simionescu (2020).) which shows that estimated maximum loss could affect the profitability of an insurance company's performance.

The third stated hypothesis from regression model above shows that a unit increase in loss figure will reduce the underwriting profitability by .366 and significant, and also R^2 of .064 indicates that about 64 percent of changes in profitable underwriting are explained by the loss figure. The t value of -2.842 is significant at $p < 0.001$ and this shows that the equation has a good fit; that is, the explanatory variable is a good explainer of change in underwriting profitability. Also, the results from the test of the last hypothesis from the regression model above showed that a unit increase in sum insured will increase profitable underwriting by 0.240 and significant and that R^2 is 0.064 which indicates that about 64 percent of changes in profitable underwriting are explained by sum insured. The t value of -3.214 is significant at $p < 0.002$ and shows that the equation has a good fit; that is, the explanatory variable is good explainer of changes in profitable underwriting. In an empirical study on adequacy of sum insured, Vnukova, Kavun, Kolodiziev, Achkasova & Houter (2022) confirmed the relationship between the adequacy of sum insured and profitability of insurance companies.

V. Conclusion

The analysis from both the primary and secondary data have addressed the research objectives of investigating the relationship between identified risk exposures and profitable underwriting of insurance firms; examining the impact of estimated maximum loss figure on profitable underwriting of insurance firms; and determining how information on adequacy of sum insured affects profitable underwriting of insurance firms. Using the primary data as analysed above it has been established that there is relationship between risk exposures and profitable underwriting of insurance firms.

Furthermore, the study revealed that there is a negative impact of estimated maximum loss figure on profitable underwriting of insurance firms, and also revealed from the study is that adequacy of sum insured affects profitable underwriting positively. This is in tandem with Angima & Mwanga (2017) who had establishing data from the East African market that there is a positive relationship between the underwriting of risks and profitability of insurance companies. The essence of risk surveys is to assist insurance companies to appropriately assess proposed risks so as not to provide covers at a loss.

Recommendation

In view of the above findings and conclusion, the following recommendations are hereby made:

1. Insurance companies should put in place policies in use of risk survey to enable them carry out profitable underwriting of proposed risks for cover
2. There is need to establish the estimated maximum loss of risks for large risks as this could affect their profitability
3. Companies should ensure that the sum insured for proposed risks are adequate especially in providing cover in property insurance.

Contribution to knowledge

There have been lots of researches in various aspects of insurance especially from the point of general underwriting and claims administration but not much has been done in examining the relationship between risk survey and profitable underwriting of property risk. This study examines the impact of risk survey on profitable underwriting of insurance in Nigeria. The study tends to close the gap in knowledge on the availability of study in this area of insurance. In this way, insurance scholars and researchers will find the study very useful in their research efforts. Similarly, insurance practitioners and industry regulators will also find the study useful.

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