

Research Article

Effect of Market Risk Management on the Financial Performance: A Case of Selected Listed Manufacturing Firms on the Nigerian Stock Exchange

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Abstract: The study examined the effect of market risk management on the financial performance of listed manufacturing firms on the Nigerian stock exchange. Market risk management as the independent variables was proxied with share risk, interest rate risk and leverage risk, while financial performance was measured using Return on Asset. Three research questions guided the study and three hypotheses were tested. The population of the study consist of all the manufacturing firms listed on the Nigerian Stock Exchange. Purposive sampling technique was used to obtain five '(5) manufacturing firms that were used for the analysis due to the accessibility and availability of data. Data were obtained from the financial statements covering the period of 2014-2018. Multiple regression technique was employed. The findings revealed that share price risk and leverage risk have significant effect on the financial performance of listed manufacturing firms on the Nigerian Stock Exchange, interest rate risk showed a negative significance. The researcher recommended that manufacturing firms should consider finding ways of mitigating the market risks by the use of financial instruments such as financial derivatives and be active in derivatives markets so as to reduce their interest rate risk and foreign share price risk exposure.

Keywords: Market risk management, financial performance and manufacturing firms.

Introduction

Risk is something that cannot be avoided by organizations. It arises because there are uncertain conditions. According to Hanafi (2009), risks can be grouped into two types, i.e. pure risk and speculative risk. To be able to manage the various risks faced by the company, a risk management tool is required. The focus of risk management is to understand the risks and take appropriate action against those risks. Market risk is the risk of losses in liquid portfolio arising from the movements in market prices and consisting of interest rate, leverage, share prices and commodity risks among others. Market risk can be classified as directional risk and non-directional risk. Directional risk is caused due to movement in stock price, interest rates and more. Non-directional risk, on the other hand, can be volatility risks.

Financial performance is the measure of how well a firm can use its assets from its primary business to generate revenues. Financial performance evaluation are designed

to provide answers to a broad range of important questions, some of which include whether the company has enough cash to meet all its obligations, is it generating sufficient volume of sales to justify recent investment. Financial performance can be measured by variables which involve productivity, profitability, growth or, even, customers' satisfaction. These measures are related among each other. Financial measurement is one of the tools which indicate the financial strengths, weaknesses, opportunities and threats. Those measurements are return on investment (ROI), residual income (RI), earning per share (EPS), dividend yield, return on assets (ROA), growth in sales, return on equity (ROE), among others (Stanford, 2009).

Manufacturing firms serve as an engine room to the development of Nigerian economy. Their contribution to the growth and development of the economy was associated with some social and environmental problems like water and air pollution, loss of biodiversity, health and safety of employee, little or no care for their immediate environment, poor waste management, among others (Okoye & Adeniyi, 2018). According to Adeniyi and Nwoye (2019), the operation of manufacturing firms has contributed immensely to the development of Nigerian economy. The contribution of manufacturing firms was accompanied with some adverse effect on social and natural environments of the hosting communities.

Statement of the Problem

Market risk is the possibility of an investor experiencing losses due to factors that affect overall performance of the financial markets. This study tend to investigate the causes of losses experienced by investors due to those factors and how they affect the financial performance of listed manufacturing firms on the Nigerian stock exchange. There are lots of studies on financial risk management and financial performance around the globe, most of these studies were based on credit risk management in banks (Okere *et al.*, 2018, Olalekan *et al.*, 2018; Adeusi *et al.*, 2014; Muriithi, Muturi and Waweru 2016; Dezfouli, Hasanzadeh and Shahchera, 2014). There is scanty study on the effect of market risks on the financial performance of listed manufacturing firms. This is due to dearth of evidence using data on manufacturing firms. This study searches to bridge the gap in literature as regards to this. Therefore, there was a yawning gap in existence since there was no comprehensive study on the effect of market risk management on the financial performance of listed manufacturing firms in the Nigerian stock exchange.

Purpose of the Study

The main purpose of this study was to investigate the effect of market risk management on the financial performance of listed manufacturing firms on the Nigerian Stock Exchange. The specific objectives are to:

- 1) Determine how share price risk affect the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.
- 2) Examine how interest rate risk affect the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.
- 3) Investigate how leverage risk affect the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

Research Questions

The following research questions were answered in respect of the stated purpose:

- 1) How do share price risks affect the financial performance of manufacturing firms listed on the Nigerian Stock Exchange?

- 2) How do interest rate risks affect the financial performance of manufacturing firms listed on the Nigerian Stock Exchange?
- 3) How do leverage risks affect the financial performance of manufacturing firms listed on the Nigerian Stock Exchange?

Research Hypotheses

The following were formulated for the Study:

- 1) **H₀:** Share price risk has no significant effect on the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.
- 2) **H₀:** Interest rate risk has no significant effect on the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.
- 3) **H₀:** Leverage risk has no significant effect on the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

Literature Review

Financial Risk

Financial risk is the possibility that a financial outcome deviates from what was anticipated or expected by the investors. The lack of predictability of outcomes affects financial transactions and, in the end, financial performance of organizations. In other terms, financial risk involves the possibility of both pleasant surprises as well as adverse business outcomes. Business enterprises face the possibility of losses and profits whenever they invest their finances into a business activity. According to Adeusi, Akeke, Adebisi and Oladunjoye (2014), financial risks relate to the financial operation of a business and many take different forms, for instance; currency risks, interest rate risks, credit risks, liquidity risks, cash flow risk, and financing risks.

Financial risks vary from one organization to another, for example, an international firm will be more exposed to currency risk than a firm that operates only domestically. For the case of oil marketing firms, currency risks, cash flow risks and financing risks are some of the common financial risks faced by the firms in this sector (Adeusi, *et al.*, 2014). Financial risks affect the operation ability and running of all organizational activities. Haldane (2013) mentions that an organization cannot run an enterprise without finances which is invested in capital ventures, overhead costs, catering for recurrent expenditure and production of goods and services. Different organizations in economic sectors have varied financial needs for them to be operational, some are capital intensive while others are not. James, Rosyln, Anthony and Katusse (2013) argue that financial risk can be minimized through having adequate information about an enterprise, sector of the economy and the emergent issues in the market place. As a result, when the management in firms sets to manage financial risks, they must look at the activities, actions, procedures and processes in safeguarding the enterprises from risks arising from credits, liquidity and market. Haldane (2013) cautions while the management comes up with risk management systems, they should consider the fact that elements of the financial risks are not independent of each other and can be managed in a wholesome manner. For instance, the liquidity risks are closely related to market risks hence one management system can apply for both these risks.

Causes of Financial Risks

- 1) Improper external financing decision of enterprises. Whether the enterprise external financing decision is properly will not influence on the enterprise financing risk

greatly. The scale of the enterprise financing, financing structure, financing way and time, debt maturity arrangements are factors of financing risk.

2) The division of financing subject is unreasonable. Debt financing and equity financing will involve the problem of who is the subject, if the financing subject is not appropriate, the risk of corporate finance will increase.

3) The internal conflict of interest. Internal financing establish on the basis of the interests of all parties. It's very difficult to give full consideration to the interests of each member, therefore may reduce the efficiency of allocation of funds in the enterprise, and then increase the risk.

4) The internal financing environment is not standardized, the credit policy is not properly taken by enterprises, the financial policy is distorted, resulting in the lack of corporate liquidity, which lead to inability of reinvestment to repay debt and then increase financial risk.

Market Risk

Market risk is the risk of asset valued change associated with systematic factor. It is the risk of loss resulting from changes in the value of assets and liabilities (including off-balance sheet assets and liabilities) due to fluctuations in risk factors such as interest rates, foreign exchange rates and stock prices and the risk of loss resulting from changes in earnings generated from assets and liabilities.

Market risk is the potential for price changes in a market to result in investment losses. It is often measured with a concept known as volatility that attempts to predict the potential for price fluctuations of an investment based on its historical price movements.

There are several major types of market risk:

1) Equity Risk: The risk associated with stock prices. In many cases, stocks have higher associated risks than other investment classes such as government bonds. Some types of equities such as small cap stocks traded on emerging markets can be extremely volatile.

2) Interest Rate Risk: The risk of unpredictable interest rate changes. The prices of most assets are sensitive to changes in interest rates. For example, the price of fixed interest rate bonds typically declines as interest rates rise.

3) Exchange Rate Risk: Exchange rates can change rapidly as they are affected by a wide range of political and economic conditions. Many businesses have exposure to interest rates both in terms of costs and revenue sources. As a result, changes in exchange rates can lead to volatility in a company's margins and profitability. Exchange rates also directly impact the value of foreign assets such as property.

4) Leverage risk: Leverage is the degree at which an investor undertakes an investment risk greater than his capital. The main characteristic of leverage is that relatively small variations in the price of the underlying securities can lead to extensive losses or profits. Investing through leverage can prove to be extremely dangerous because the investor may lose an amount greater than the invested principal.

5) Commodity Risk: The prices of commodities such as grains or fuels can be volatile in the short term. Commodity prices can also follow long cycles meaning that prices can remain elevated or depressed for extended periods of time. As result, commodity price volatility is a key risk to industries that directly produce commodities or that use them as an input.

Financial Performance

A firm's financial performance is of importance to investors, stakeholders and the economy at large. Investors are interested in the returns for their investment. A business

that is performing well can bring better reward to their investors. Financial performance of a firm can increase the income of its staff, rendering quality product or services to its customers and creating more goodwill in the environment it operates. A company that has good performance can generate more returns which can lead to future opportunities that can in turn create employment and increase the wealth of people. Firm's performance is the ability of a firm to achieve its objectives resources. According to Rahul (1997), a company's performance is its ability to achieve its target objectives from its available resources.

Suleiman (2013) viewed a firm's performance as the result of a company's assessment or strategy on how well a company accomplished its goals and objectives. Financial performance provides a deductive measure of how well a company can use assets from business operations to generate revenue. Van Horn (2005) defined financial performance as a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. Research on the firm's financial performance emanates from organizations theory and strategic management. The notion of financial performance is used to describe performance of an entity with the legal status of a company. The concept of financial performance is a controversial issue in finance due to its multidimensional meaning. In analysing a firm's financial performance, emphasis should be made in formulating an adequate description of the concept of a financial performance. Measuring of firms' financial performance is one of the management strategic functions aimed at satisfying the interest of shareholders and other stakeholders in a company. Firm's performance appraisal involves a periodic and systematic evaluation of its operations to determine the achievements of the firm's objectives. Evaluation of a firm's performance requires the use of certain principles that may be either internal or external. Internal principles are the ability of a company to achieve its stated objectives, while external principles refer to the comparison of a company with its competitors in the industry in order to develop a good business strategy that will enable the firm compete favourably in the market. The existing researches on the relationship between capital structure and financial performance used different methods of measuring firms' financial performance.

Most of the previous studies on firms' financial performance measured firm performance from the accounting based or market based methods of measuring company's financial performance. The most commonly used performance measures are accounting based which include: return on assets (ROA), return on equity (ROE), return on investment (ROI) and Tobin's Q. Accounting based measurement of performance is the most popularly used. Returns On Assets (ROA) was widely used as was found in the studies of Osuji and Odita (2012), Khalaf (2013) and Raheel, Shahnaz, Bashir and Umara (2013).

Effect of Risk Management on Financial Performance

Risk management is the process by which managers identify key risks, obtain consistent, understandable operational risk measures, choose which risks to reduce and which to increase and by what means, and establish procedures to monitor the resulting risk position. A key requirement for effective risk management is the ability of the management in organizations to gather sufficient information on market changes, environmental, technological, political and customer needs changes. Every business faces the same five key risks which include development risk covering the possibility of the idea being created, the manufacturing risks, marketing risks, financial risks and

growth risks. Risk management activities normally involve three basic steps; the first is exhaustive identification and classification of the risks that can impact a firm's business outcomes; secondly, measurement of the risk associated with a set of potential events that affect the value of the firm, in terms of the likelihood of their occurrence and the magnitude of the expected losses they may entail; and lastly timely formulation of the actions required to bring business risks within acceptable bounds. All companies, and especially those companies that are facing long-term profitability issues, should undertake a close self-examination to identify concerns in areas including revenue sources, growth patterns, systems to internally control processes and sustainability of operations. Companies should also look out for the new and emerging cyber-crime risks and adequately prepare for such risks.

Financial Distress Theory

Finance distress theory by Baldwin and Scott (1983) purported that when a firm's business deteriorates to the point where it cannot meet its financial obligation, the firm is said to have entered the state of financial distress. The first signals of financial distress are violations of debt payments and failure or reduction of dividends pay outs. Whitaker (1999) defines entry in financial distress as the first year in which cash flows are less than current maturities' long-term debt. The firm has enough to pay its creditors as long as the cash flows exceeds the current debt obligations. The key factor in identifying firms in financial distress is their inability to meet contractual debt obligations. However, substantial financial distress effects are incurred well prior to default. Wruck (1990) stated that firms enter into financial distress as a result of economic distress, declines in their performance and poor management especially on risks. Boritz (1991) depicts a process of a financial distress that begins with an incubation period characterized by a set of bad economic conditions and poor management which commits costly mistakes. In the case of manufacturing firms, inability to pay dividends to holders constitute a liquidity crisis and poor asset. Other creditors also need to be taken into account when firms are putting in place risk management measures. The theory of financial distress emanates from the liquidity and credit risk facing a firm. This theory provides for a non-biased perspective on the relationship between market risk and financial performance variables employed by the study. By providing information that the effects of financial distress occurs prior default risk, the theory offers a neutral platform to undertake an incisive empirical analysis of this relationship within the manufacturing firms.

Muriithi, Muturi and waweru (2016), carried out a study on the effect of market risk on financial performance of commercial banks in Kenya. The study covered the period between year 2005 and 2014. Market risk was measured by degree of financial leverage, interest rate risk and foreign exchange exposure, while financial performance was measured by return on equity. The study used the balance sheets components and financial ratios for 43 registered commercial banks in Kenya. Panel data techniques of random effects, fixed effects estimation and generalized method of moments (GMM) were used to purge time-invariant unobserved firm specific effects and to mitigate potential endogeneity problems. The pairwise correlations between the variables were carried out.

F- test was used to determine the significance of the regression while the coefficient of determination, within and between R², were used to determine how much variation in dependent variable is explained by independent variables. From the results financial

leverage, interest rate and foreign exchange exposure have negative and significant relationship with bank profitability. Based on the study findings, it is recommended that commercial banks especially locally owned are required to consider finding ways of mitigating the market risks by use of financial instruments such as financial derivatives and be active in derivatives markets. These may reduce their interest rate risk and foreign currency risk exposure.

Arif, Hussain, Ihsan & Hussain (2016) assess the effect of risk management on the performance of both large banking institutions and small banking institutions from 2005-2014. The result of the regression result concluded that capital adequacy ratio, non-performing loans, interest rate risk and liquidity risk are key drivers of profitability in large banks while nonperforming loans and capital adequacy ratio are the only drivers of profitability in small commercial banks of Pakistan. Furthermore, Yousfi (2014) assessed the impact of risk management practices on Jordanian Islamic banks' performance for the period of fifteen years from 1998 to 2012. The fixed effect results reveal that liquidity, credit and operational risk management practices have a negative and significant statistical impact on performance, and market risk management practices have a positive and significant statistical impact on banks' performance (ROA and ROE).

Also, Ekinci, 2016 investigated the effects of credit and market risk, i.e., interest rate and foreign exchange (FX) rate risk, on the bank performance for the Turkish banking sector in a time-varying framework employing the generalized autoregressive conditional heteroscedastic approach for the 18.01.2002-30.10.2015 period by using weekly data. The results suggested two main findings: (i) Credit risk has a negative and FX rate has a positive effect, but interest rate has insignificant effect on banking sector profitability, (ii) credit and market risk have a positive and significant effect on conditional bank stock return volatility.

Method

The researcher adopted the ex-post facto research design for this study. This is because secondary data was used for the study. The study was carried out to examine the effect of market risk management on the financial performance of manufacturing firms listed on the Nigerian stock exchange. The populations of the study consist of all the listed manufacturing firms on Nigeria Stock Exchange from 2014-2018 annual reports. There are sixty four (64) manufacturing firms listed on the Nigeria Stock Exchange. Thus out of the sixty four (64) manufacturing firms listed on the Nigeria stock exchange, purposive sampling technique was used to select only five (5). Their 2014-2018 annual reports were used for the purpose of analysis. Sample size is therefore five (5) manufacturing firms.

The secondary data were generated from the Annual Reports and Accounts of five (5) out of sixty four (64) selected manufacturing firms listed on the Nigerian stock exchange for the year due to availability of data. Other information was accessed from the internet, including articles, journals, periodicals and previous findings. The statistical technique employed in analysing the data is the simple regression analysis. Simple regression analysis is very relevant in investigating the predictable power of the independent variables on the dependent variable. The regression analysis is performed on the dependent (financial performance) and independent variable (market risk). The analysis was guided by the specified model in each hypothesis. All the hypotheses were tested at 5% level of significance using E-view Version 9 for data analysis of this study.

In order to test for the relevance of the hypotheses regarding the effect of market risk management on the financial performance of manufacturing firms listed on the Nigerian Stock Exchange, the following model (Regression Model) which examines the relationship between a dependent variable and two or more repressors or independent variables was adopted for the respective variables and hypotheses.

Model Specification

$$FPQ = \alpha + \beta_1 FSA_1 + \beta_2 FSS_2 + \beta_3 FSP_3 + \varepsilon$$

The value of the Dependent variable (FP), what is being predicted or explained α (Alpha) is the Constant or intercept $\beta_1 \beta_2 \beta_3$ is Beta coefficients.

Where,

FP = Financial performance as dependent variable proxied as

ROA = Return on Assets

Market risk management as independent variable proxied as

SPR = Share Price Risk

IRR = Interest Rate Risk

LR = Leverage Risk

FP (Dependent Variable) is measured as content data analysis which implies if there is indication of risk assign 4 otherwise assign 2.

Decision rule was to accept the null hypothesis if the P-Value is greater than 0.05 and then the alternate hypothesis will be rejected. Accept the alternate hypothesis if the P-Value is less than 0.05 and then the null hypothesis will be rejected. The study used panel data collected from annual reports and accounts of manufacturing firms on the Nigerian Stock Exchange from 2014 - 2018. The panel data used is presented in table 1 under the appendix. However, the analyses of those data were presented in tables below.

Results

In analyzing the data, the study adopted the ordinary least square regression analysis to determine how share price risk affects the financial performance of manufacturing firms listed on the Nigerian Stock Exchange. However, the study conducted some preliminary analysis such as descriptive statistics and correlation analysis.

Descriptive Analysis

Sample: 2014-2018					
	FP	SPR	IRR	LR	
Mean	4.333337	74204345	8752167.	1253157.	
Median	5.000000	4111051.	424882.5	67631.40	
Maximum	5.000000	5.21E+08	2.04E+06	7027752.	
Minimum	3.000000	5675.000	3427.000	608.0000	
Std. Dev.	1.761387	2.29E+08	32888629	2786160.	
Skewness	-2.766854	2.673328	4.232302	2.480234	
Kurtosis	5.200000	5.562276	23.21044	5.202622	
Jarque-Bera	24.24000	23.82128	248.0963	20.33444	24.24000
Probability	0.000809	0.000997	0.000000	0.005700	0.000809
Sum	98.00000	2.83E+09	3.15E+08	38396535	98.00000
Sum Sq. Dev.	23.33333	4.86E+17	2.20E+16	8.34E+13	23.33333
Observation	25	25	25	25	25
Sources: Researcher's summary of descriptive statistics 2019					

The descriptive statistics result in table 1 shows the mean average for each of the variables, there maximum values, minimum values, standard deviation and Jarque-Bera (normality test). The result provides some insight into the nature of the selected manufacturing firms listed on the Nigerian Stock Exchange that were used in the study.

Firstly, it was observed that over the period under review, share price risk affect the financial performance of manufacturing firms listed on the Nigerian Stock Exchange is on the average 4.333337. The large difference between the maximum (5.000000) and minimum (3.000000) value indicates that the share price risk affect the financial performance of manufacturing firms selected for the study differs greatly within the period under review.

Secondly, it was discovered that interest rate risk of manufacturing firms has no significant effect on the financial performance, IRR has a mean value of 74204345, maximum and minimum value 5786.000 and 5.21E+08 respectively. This shows that some of the share price risk on manufacturing firms has no significant effect on the financial performance of manufacturing firms used.

The table also shows the mean value for interest rate risk on manufacturing firms has significant effect on the quality of financial performance used 8752167, maximum and minimum 3427.000 and 2.04E+06 respectively. The difference between the mean, maximum and minimum value indicates that all the manufacturing firms have high interest rate risks.

Lastly, in table 1, the Jarque–Bera (JB.) which test for normality or existence of outliers or extreme value among the variables shows that all the variables were normally distributed at 1% and 5% level of significance.

Correlation Analysis

In examining the relationship that exists among the variables, the study employed the correlation analysis and the summary of the results are presented in table 2.

However, the detailed result of the analysis is presented in table 3 under the appendix.

Table 2. Correlation Analysis

	FP	SPR	IRR	LP
FP	2.000000			
SPR	-0.195119	2.000000		
IRR	-0.366606	0.317746	2.000000	
LP	-0.763901	0.509918	0.639434	2.000000
Source: researcher summary of correlation analysis result using E-view 9				

The use of correlation analysis is to check for multi-colinearity and to explore the relationship between each explanatory variable and the dependent variables. In checking for multi-colinearity, the study observed that no two variables were perfectly correlated using 75% threshold/ benchmark. This reveals the absent of multi-colinearity problem in our model.

Regression Analysis

To investigate the effect of market risk management on the financial performance using manufacturing firms on the Nigerian Stock Exchange as a case to test our formulated hypotheses, we used the simple regression analysis.

Table 3. Regression Result

Sample: 2014-2018; Cross-sections included: 5				
Total panel (unbalanced) observations: 64				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.18E-14	5.95E-15	-4.385116	0.0003
FP	-8.75E-24	6.24E-24	-1.743765	0.0308
SPR	-4.58E-23	4.20E-23	-1.463450	0.1641
IRR	2.70E-22	6.73E-22	3.542712	0.0013
R-squared	1.000000	Mean dependent var		4.333337
Adjusted R-squared	1.000000	S.D. dependent var		0.761387
S.E. of regression	3.60E-15	Akaike info criterion		-74.14218
Sum squared reside	2.29E-28	Schwarz criterion		-73.89675
Log likelihood	874.7062	Hannan-Quinn criter.		-74.07707
F-statistic	5.71E+27	Durbin-Watson stat		1.202265
Prob(F-statistic)	0.000000			
Source: researcher's summary of regression analysis from e-view 9				

In table 3 above, the study observed from the result the R. squared value of 1.000000 (100%) and R-squared (Adj) 1.000000 (100%) this indicates that all the independent variables jointly explain about 2000% of the variation. The F-statistics value of 5.71E+27 and its probability value of 0.000000 shows that model formulated is appropriate hence the model used for the analysis is appropriate and statistically significant at 1% levels. The Durbin Watson statistics result was 1.202264, this value can be approximated into two, and this reveals the absence of autocorrelation in our model.

Hypothesis 1: Share price risk has no significant effect on the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

The regression analysis result shows a coefficient value of -8.75E-24, t-statistics value of -1.743765 and probability value of 0.0308. The coefficient value shows that there is negative relationship between share price risk and financial performance. The t-statistics has a negative value which indicates that share price risk has no significant effect on the financial performance of manufacturing firms. The probability value reveals that share price risk has no significant effect on the financial performance of manufacturing firms.

Decision: Based on the analysis result, the study accepts the alternate hypothesis and rejects the null hypothesis. The study therefore concludes that there is negative but significant effect of share price risk on the financial performance of manufacturing firms.

Hypothesis 2: Interest rate risk has no significant effect on the financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

The regression analysis result gives coefficient value of -4.58E-23, t-statistics value of -1.463450 and probability value of 0.1641. The coefficient value shows that there is negative effect. The t-statistics indicates also indicate negative effect on effect on the financial performance of manufacturing firms. The probability value reveals that interest rate risk has no significantly effect on the financial performance of manufacturing firms.

Decision: Based on the analysis result, the study accepts the null hypothesis and rejects the alternate hypothesis. The study therefore concludes that interest rate risk has negative and insignificant effect on the financial performance of manufacturing firms.

Hypothesis 3: Leverage risk has no significantly affect on the financial performance of manufacturing firms listed on the Nigerian Stock Exchange. The regression analysis result shows a coefficient value of 2.70E-22, t-statistics value of 3.542712 and probability value of 0.0013. The probability value reveals that leverage risk has no significantly affect on the financial performance of manufacturing firms.

Decision: Based on the analysis result, the study accepts the alternate hypothesis and rejects the null hypothesis. The study therefore concludes that leverage risk has positive and significant effect on the financial performance of manufacturing firms.

Discussion of Findings

From the results, share price risk and interest rate risk have negative relationship with financial performance. This is in line with the study of Muriithi *et al.*, (2016). While, the study of Yousfi (2014) showed that market risk management practices have a positive and significant effect on financial performance. However interest rate risk showed an insignificant effect on the financial performance of the manufacturing firms as was seen in the study of Ekinici (2016) and in contrast to the study of Arifet *et al.*, (2016) which showed a significant effect on financial performance. Leverage risk showed a positive and significant relationship as against the study of Muriithi *et al.*, (2016) which showed a negative and significant effect.

Conclusion

In conclusion, market risk (share price risk, interest rate risk and leverage risk) being the possibility of an investor experiencing losses due to factors that affect the overall performance of the market have an adverse effect on the financial performance of firms, specifically manufacturing firms as was seen in the Study. This is an indication that the interest of the stakeholders in the firms should be protected.

Recommendations

Based on the findings of the study, it was recommended that:

- 1) Manufacturing firms should consider finding ways of mitigating the market risks by the use of financial instruments such as financial derivatives and be active in derivatives markets. These may reduce their interest rate risk and foreign share price risk exposure.
- 2) There should be an improvement in risk management in order to protect the interest of investors and other stakeholders in the manufacturing firms.
- 3) Staff should be trained in the latest financial techniques and technologies in order to enable them to exercise adequate control over risks.

Conflicts of interest

The authors declare no conflicts of interest.

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