
Financial Risk Management and Public Sector Investment in Rivers State

Nweye, Adaeze Joan
Department of Accountancy,
Faculty of Management Sciences
Rivers State University, Nkpolu-Oroworukwo,
Port Harcourt
adaezenweye22@yahoo.co.uk

Abstract

The study investigates the relationship between financial risk management and public sector investment in Rivers State. The study adopted a cross-sectional correlation survey. The population is five (5) ministries in Rivers State. A sample size of 312 respondents was determined from the population using Taro Yemen's formula. The study made a combined use of both primary and secondary sources. It adopts questionnaire and personal oral interview as the main research instrument for data collection. 312 copies of the questionnaire were administered, out of which 303 copies were retrieved and used for the analysis. Spearman's rank order correlation coefficient was used to test three null hypotheses using Statistical Package for Social Science (SPSS) version 20. The findings revealed that there is a positive and strong relationship ($\rho=0.700$) between financial and risk management and public infrastructure; there is a positive and very strong relationship ($\rho=0.821$) between financial and risk management and public investment efficiency. Based on these findings we conclude that effective financial risk management is a good tool for increasing public sector investment in a country. The study therefore recommends that; public sector should regularly ensure that its financial risk management is effective to public investment. Treasury management tools such as financial and risk management and cash and liquidity management should be adopted in order to promote public infrastructure and public investment efficiency.

Key words: *Public sector investment, financial risk management, public infrastructure, public investment efficiency.*

Introduction

The economic environment in which most firms operate is highly volatile and uncertain. This has resulted due to internationalization of business environments. Companies have benefitted from internationalization in many ways as the most countries have become more open due to reductions in trading barriers (Moeller, 2007). These benefits to companies include the possibility to broaden their customer base and to better optimize the cost structure of their operations (Hutson and Stevenson, 2010). As a result, companies face a broad spectrum of complex risks threatening their businesses, information and people. Often, many of these events can be traced back to failed business practices, whether they are complex environmental impact programs or simply managing behavioral changes as part of implementing new standard operating practices.

This leads companies to be exposed to a wide variety risks such as exchange rate risk and commodity price risk which again have a great impact to companies' value. To protect themselves against the exposures to these risks many companies have established risk

management programs (Kasanen et al., 1996). In addition risk management is gaining more attention due to several incidences like the bankruptcy of Enron. Furthermore, the importance of risk management is difficult to be understated. Companies can gain huge competitive advantage by conducting efficient risk management processes and practices and even companies' survival might depend on how or if they are involved in risk management. Despite the increasing exposure to risk events, many companies view risk management as primarily a finance or health, safety and environmental (HSE) problem. And, consequently, most companies tend to treat risk as a "cost center" and undervalue or under invest in integrated risk management practices.

In practice the process of assessing overall risk can be difficult, and balancing resources used to mitigate between risks with a high probability of occurrence but lower loss versus a risk with high loss but lower probability of occurrence can often be mishandled. Risk management (RM) is a new paradigm for managing business risks , which is highly strategic in nature and is an array of components (Psica, 2008), put together through due process within an organization that work together to manage risk over time efficiently and effectively (Moeller, 2007) and is purposefully broad in its definition (Moeller, 2007). Therefore, this study seeks to examine the relationship between financial risk management and public sector investment in Rivers State.

Literature Review

Financial Risks Management

According to Tapiero (2004), financial risk management refers to the practice of creating economic value in a firm by using financial instruments to manage exposure to risk, particularly credit risk and market risk. Similar to general risk management, financial risk management requires identifying its sources, measuring it, and plans to address them (Conti and Mauri, 2008). Financial risk is often defined as the unexpected variability or volatility of returns and thus includes credit risks, liquidity risks and market risks (Holton, 2004). Therefore, financial risk management practices are those activities and procedures that are employed by managers in an effort of safeguarding an organization from credit risks, liquidity risks and market risks. Financial risk management practices fall into three major categories; credit risk practices, liquidity risk management practice as and market risks (Kithinji, 2010).

Ter-Minassian, Parente & Martinic-Mentez (1995), describe financial risk management within the public sector to include various activities: formulation of fiscal policy, budget execution management of financial operations, accounting rules and controls. Maintaining a record of historical and comparative data, auditing and evaluating the financial performance and results of government policies and programmes.

Budget formulation: The budget formulation involves the allocation of resources before the submission to the legislature for review the final approval. According to Appah (2007) the budget formulation involves the articulation of the fiscal monetary political economic social and welfare objectives of the government.

Financial Risk Management and Public Sector Investment: It has argued that the primary focus of financial risks management were formulation of fiscal policy, management of financial operations budget preparation, budget execution, accounting rules and control maintain a record of historical and comparative data and auditing and evaluating the financial performance and results of government policies and programmes (Ter-Minassian, Parente

and Martinez-Mendez 1995). Financial risk management promotes public sector investment. This is because it advocates for proper budget, execution which accounts for public investment in public infrastructure and public investment productivity.

Public Sector Investment

Public investment is measured as general government gross fixed capital formation (GFCF) and comprises the total net value of general government acquisitions of fixed asset during the accounting period, plus variations in the valuation of non-produced assets (e.g, subsoil assets). The general government comprises central and sub-national governments, but excludes other public entities, such as state-owned enterprises (SOEs) and public-private partnership (PPP) arrangements (Kamp, 2006; Gupta, 2014 & IMF, 2015). The accumulation of public investment is known as 'public capital stock'. The public capital stock is the accumulated value of public investment over time, adjusted for depreciation (which varies by income group and over time), and is the principal input into the production of public infrastructure (Kamp, 2006; Gupta, 2014 & IMF, 2015).

Gupta, (2014) asserts that public investment performance refers to both the efficiency and productivity of public investment.

Likewise, in this study, public sector investment was measured by public infrastructure and public investment efficiency. These were furthered discussed below.

Public Infrastructure

Public infrastructure is the network of physical assets created by public investment. These fixed assets include both economic infrastructure (e.g. highways, airports, roads, railways, water and sewer systems, public electric and gas utilities, pipeline, and telecommunications) and social infrastructure (e.g. public schools, hospital, and prisons). The volume of infrastructure is measured using indicators of both access to and quality of the key infrastructure assets, including roads, electricity, water, education, and health care institutions (Kamp, 2006; IMF, 2015).

Likewise,

Public Investment Efficiency

According to International Monetary Fund, (2015), efficiency of public investment is the relationship between the value of the public capital stock and the measured coverage and quality of infrastructure assets. As described in Section 11 and Annex 11 of International Monetary Fund, (2015) blue print, the level of efficiency in a given country is calculated as the distance from an efficiency frontier, which is defined by the countries with the highest coverage and quality of infrastructure (output) for a given level of public capital stock (input).

Financial Risk Management and Public Sector Investment

It has argued that the primary focus of financial risk management were formulation of fiscal policy; management of financial operations, budget preparation, budget execution, accounting rules and control maintain a record of historical and comparative data and auditing and evaluating the financial performance and results of government policies and programme (Ter-Minassian, Parente & Martinez-Mendez, 1995). Meaning that, on a normal setting, financial risk management promotes public sector investment.

A good financial risk management engenders increase on the network of physical assets of a nation. According to International Monetary Fund (2015), network of physical assets created by public investment is enhanced by a well financial risk management. In the light of the above, the following hypotheses were developed:

H₀₁: There is no significant relationship between financial risk management and public infrastructure.

H₀₂: There is no significant relationship between financial risk management and public investment efficiency.

Methodology

The study adopted a cross-sectional correlation survey. The population is five (5) ministries in Rivers State. A sample size of 312 respondents was determined from the population using Taro Yemen's formula. The study made a combined use of both primary and secondary sources. It adopts questionnaire and personal oral interview as the main research instrument for data collection. 312 copies of the questionnaire were administered, out of which 303 copies were retrieved and used for the analysis. Spearman's rank order correlation coefficient was used to test three null hypotheses using Statistical Package for Social Science (SPSS) version 20.

Considering the nature of the study, which involves the test of association between the major variables in the study, Spearman's Rank Order Correlation Coefficient was applied for the bivariate correlation relationship analysis. However, in carrying out this analysis, and respective results interpretation, we guided ourselves with Dana (2001) decision scale frame as described below and the SPSS interpretation.

- a. $\pm .00 - .19$ (very weak association)
- b. $\pm .20 - .39$ (weak association)
- c. $\pm .40 - .59$ (moderate association)
- d. $\pm .60 - .79$ (strong association)
- e. $\pm .80 - .99$ (very strong association)
- f. ± 1 (perfect association)

Results and Discussions

Table 1: Spearman Rank Correlation on the Influence of Financial and Risk Management on Public Infrastructure

Variables	N	RH ₀ (<i>p</i>)	Result
FRM _x VS PI _y	303	0.700**	Strong Relationship

H₀₁

Source: Survey Data 2017, and SPSS Version 20.0

** = correlation is significant at 0.05 (2 – tailed)

Table 1: Shows that there was a positive and strong relationship between financial and risk management and public infrastructure in Rivers State $R_{ho} (P)=0.700$). This depicts that financial and risk management influences public infrastructure of Ministries in Rivers State

Keys:

- Rho = Spearman's Rank Correlation Coefficient
 ** = Correlation is significant at 0.05 (2 – tailed)
 TM_x = Treasury Management
 PSI_y = Public Sector Investment
 FRM_x = Financial and Risk Management
 CLM_x = Cash and Liquidity Management
 PI_y = Public Infrastructure
 PIE_y = Public Investment Efficiency
 GBz = Government Borrowing

Table 2: Spearman Rank Correlation on the Effect of Financial and Risk Management on Public Investment Efficiency

Variables	N	RHo (p)	Result
FRM _x VS PIE _y	303	0.821**	Very Strong Relationship

H02

Source: Survey Data 2017, and SPSS Version 20.0

** = correlation is significant at 0.05 (2 – tailed)

Table 2 shows that there was a positive and very strong relationship between financial and risk management and public investment efficiency in Rivers State ($R_{ho}(P) = 0.821$). This implies that financial and risk management affects public investment efficiency of Ministries in Rivers State.

Test of Hypotheses

Data cannot convey any significant meaning unless they are subjected to statistical test. Hence, the two (2) hypotheses were subjected to statistical test using the data that were collected and analyzed as shown in the tables above.

Hypothesis 1: There is no significant relationship between financial and risk management and public infrastructure.

Table 3: Showing the relationship between financial and risk management and public infrastructure

Correlations

		FRM	PIE
FR M	Correlation Coefficient	1.000	.700
	Sig. (2-tailed)	.	.188
	N	5	5
Spearman's rho	Correlation Coefficient	.700	1.000
	Sig. (2-tailed)	.188	.
	N	5	5

Source: Survey Data 2017, and SPSS Version 20.0

** = correlation is significant at 0.05 (2 – tailed)

Table 3: Shows that there is a significant relationship between financial and risk management and public infrastructure of Ministries in Rivers State ($R_{ho}(P) = 0.700$).

Hypothesis 2: There is no significant relationship between financial and risk management and public investment efficiency.

Table 4: Showing the Relationship between Financial and Risk Management and Public Investment Efficiency.

Correlations

		FRM	PIE
Spearman's rho	FR M	1.000	.821
	Correlation Coefficient		
	Sig. (2-tailed)	.	.089
PIE	FR M	.821	1.000
	Correlation Coefficient		
	Sig. (2-tailed)	.089	.
N		5	5

Source: Survey Data 2017, and SPSS Version 20.0

** = correlation is significant at 0.05 (2 – tailed)

Table 4: Shows that there is a significant relationship between financial and risk management and public investment efficiency of Ministries in Rivers State ($R_{ho(P)} = 0.821$).

Discussion of Findings

Based on the analysis, the following findings were discovered.

The Relationship between Financial and Risk Management and Public Infrastructure

The result shows there is a positive and strong relationship ($R_{ho(P)} = 0.700$) between financial and risk management and public infrastructure. This indicates that financial and risk management influences public infrastructure of Ministries in Rivers State. When put in statistical test, the result shows that there is a significant relationship between financial and risk management and public infrastructure. This depicts that if Ministries in Rivers State adopts financial and risk management as a treasury management tool, it tends to enhance public infrastructure. This result was supported by the view of Renice (2005) as he asserts that sound management of financial assets and liabilities is required to accomplish government set goals and objectives. He further said that government set goals and objectives can only be accomplished where there is effective treasury management.

The Relationship between Financial and Risk Management and Public Investment Efficiency

The outcome of the result shows that there is a positive and very strong relationship ($R_{ho(P)} = 0.821$) between financial and risk management and public investment efficiency. This illustrates that financial and risk management affects public investment efficiency of Ministries in Rivers State. When put in statistical test, the result shows that there is a significant relationship between financial and risk management and public investment efficiency. This simply implies that when Ministries in Rivers State engages financial and risk management as a treasury management tool, it seeks to achieve public investment efficiency. This finding was supported by the literature review of this study that a good financial risk management engenders increase on the network of physical assets of a nation. According to International Monetary Fund (2015), network of physical assets created by public investment is enhanced by a well financial risk management.

Conclusion and Recommendations

Based on the analysis of this study, it was found that there was a significant relationship between financial and risk management and public infrastructure in Rivers State, there was a significant relationship between financial and risk management and public investment efficiency in Rivers State.

From the foregoing, the study concludes that effective financial risk management is a good tool for increasing public sector investment in a country. This is because it plays a key role in the safeguarding and stewardship of government's financial asset and the management of government's financial liabilities. Again, treasury is responsible for implementing various financial decisions made by management and the board. In addition, CITMN (2012) posited that treasury management is the management of an organization's cash flows, its borrowings and its investments, the management of the associated risks and the pursuit of the optimum performance consistent with those risks. Yes, government borrowing is good as it helps to implement the budget but it deters the economy as borrowing leads to reckless spending.

Following the findings and conclusions thereof, the study thus recommends that;

1. The public sector should regularly ensure that its treasury management is effective so public investment.
2. Treasury management tools such as financial & risk management and cash & liquidity management should be adopted in order to promote public infrastructure and public investment efficiency.
3. Government should avoid reckless spending on public funds; it should make adequate use of money borrowed and invest at the appropriate quarters.

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