
Effect of Enterprise Resource Planning Implementation on Financial Performance of Commercial Banks in Nigeria

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Abstract

This study focused on the effect of enterprise resource planning implementation on financial performance of commercial banks in Nigeria. The main problem this study intends to identify and deal with is lack of integration in an organization. The causes of this integration is the lack of enterprise resource planning implementation (ERPI) due to its high cost of acquisition and the use of conventional accounting software which lacks the capability of better audit features, open systems which promotes interaction between clients and customers and wider database capacity. This study adopted an ex-post fact research design and a cross section panel data from 2008 – 2017 was collected from both primary and secondary sources. The collected data was analyzed using the ordinary least square technique with the aid of STATA 13. The results revealed that enterprise resource planning implementation has a significant effect on financial performance proxy by gross profit margin, return on assets and return on investment. Conclusively, ERP may integrate with the bank's daily operation only after a long-term use and the financial benefits of ERP may show. This indicates that the effect of ERP implementation on financial performance improvement have a time-lagged effect. Based on this, it is recommended that banks should set rational implementation goal before ERP implementation and put more emphasis on managing the implementation process. All banks in Nigeria should implement ERP so as to improve their efficiency and improve their financial performance.

Keywords: Contingency theory, Customer Relation Management, Enterprise Resource Planning, Information System Success Theory, Integration

1.0 Introduction

1.1 Background to the study

Globalization has made business more challenging by expanding markets, increasing customer expectations and competition, made additional pressure on the firms to change rapidly. As such, an integrated system is required by the business leaders, in a way that can run the whole business processes to maintain their competitive advantages and fulfil the global requirements (Dey, Clegg, & Bennett, 2010 as cited in Parto, Sofian & Saat, 2016).

During the past two decades, globalization expansion has made the firms worldwide to get involved in new forms of competition and to begin a dynamic business environment. In this case, the Information Systems (IS) are powerful, universal drivers of business performance and sustainable organizational growth. For keeping such competitive pressures and environmental uncertainties under control, the firms try to engage in continual improvement, speed up the product improvement cycle, ensure production flexibility and manage logistics channels. To gain these objectives, organizations are progressively implementing the ERP systems (Parto, Sofian & Saat, 2016).

Complexity of modern businesses forces operational data to be utilized more efficiently than ever before. Business concepts often require extensive supply chain information from both supplier and customer side. Most companies rely heavily on information systems in operations and normal functioning is possible only if the systems provide support.

The manual information processing was slow and data analysis possibilities limited and as a result has brought about the need for diversification into areas for effective business development and as such new analysis dimensions and more powerful operational procedures are needed to fulfill business change requirements. The new information systems are offered as means to achieve these goals. This study is focused on Enterprise Resource Planning Software System which is of different types and has been adopted by both the banking industry and manufacturing industries. Some of this software includes flexcube, oracle financials, Microsoft Dynamics Ax, Microsoft Dynamics Nav and some version of Sage like Sage Evolution and Sage X3.

Information and material flows were streamlined and process steps reduced in order to shorten lead times, improve quality and increase throughput. In a highly competitive global business environment, firms seek to improve or maintain their competitiveness by using information systems to improve customer service, shorten cycle times, and reduce cost. ERP software systems provide many benefits to companies so they can meet changing expectations by providing accurate, timely, and integrated information to improve decision making (Trott & Hoecht, 2004).

1.2 Statement of the problem

The use of enterprise resource planning (ERP) has become increasingly more common in a lot of today's businesses. It is adopted and implemented by many firms in attempts of improving financial performance. The concept of financial performance can be measures as financial gains or profit of the organization, operational improvements for the organization or intangible gains for the organization. The main problem this study intends to identify and deal with is lack of integration in an organization. The main causes of this integration is the lack of enterprise resource planning implementation (ERPI) due to its high cost of acquisition and the use of conventional accounting software which lacks the capability of better audit features, open systems which promotes interaction between clients and customers and wider database capacity. If the problem of lack of integration is not solved this would lead to lack of customer satisfaction, lack of employee satisfaction and will affect the general or overall efficiency of the organization.

1.3 Objectives of the study

The main objective of the study is to determine the effect of enterprise resource planning implementation on financial performance of quoted commercial banks in Nigeria.

The specific objectives are as follows:

- 1) To determine the extent to which enterprise resource planning implementation affects return on asset.
- 2) To determine the extent to which enterprise resource planning implementation affects return on investment.
- 3) To determine the extent to which enterprise resource planning implementation affects profit margin.

1.4 Research questions

The research questions of the study are as follows:

- 1) To what extent does enterprise resource planning implementation affects return on asset?
- 2) To what extent does enterprise resource planning implementation affects return on investment?
- 3) To what extent does enterprise resource planning implementation affects profit margin?

1.5 Research hypotheses

In order to achieve the above stated objectives and provide answer to the research questions, the following null research hypotheses were formulated.

- 1) Enterprise resource planning implementation has no significant effect on return on asset.
- 2) Enterprise resource planning implementation has no significant effect on return on investment.
- 3) Enterprise resource planning implementation has no significant effect on profit margin.

2.0 Review of related literature

2.1 Conceptual framework

Accounting software or Accounting packages are sometimes used interchangeable. Accounting software are application software used for recording and processing accounting transactions within the functional areas of general, payroll, accounts receivable, accounts payable, trial balance, statements of comprehensive income, statement of financial position and others (Nwadighoha, Tapang & Ujah, 2016) as cited in Tapang and Jones (2018). Stated differently, they are computer based programs that assist book - keepers and accountants in recording, processing and reporting of the firms' financial transactions. Accounting software more or less functions as an accounting information system (Tapang & Jones, 2018).

2.1.1 Concept of enterprise resource planning Systems

The ERP system is a process of managing business techniques through an integrated system, usually in form of software. The literature has emphasized the importance of ERP system, particularly on the role in ERP as software to integrate and control all management levels in an organization through an integrated system (Hwang & Min 2013). ERP system also has the ability of linking up both top, middle and lower level management (Aremu & Shahzad, 2015), thereby, coordinating all management levels along with their departments (such as: human resource, finance department, quality control, logistics and marketing) through an integrated system (Aremu & Shahzad, 2015). Several past studies on the ERP system have established that it saves operational time, minimizes operational cost, and improves quality of product and services (Abu-Hussein, Hyassat, Sweis, Alawneh & Al-Debei, 2016).

However, studies have identified that factors such as lack of education amongst users, inadequate training of users, technological change, user's interest, communication process problem, financial capability, top management support and organizational culture are affecting the adoption of ERP system business organizations (Bazhair & Sandhu, 2015). Past studies have also yet to establish aspects like users' interest on the usage of ERP system, perceived easiness or simplicity of use, the benefit of its utility and expertise in training the users to be familiar with the ERP system (Aremu & Shahzad, 201; Antero, 2015). Furthermore, they have failed to demonstrate ERP system link to other areas of organizations, the likes of financial performance, organization structural, organization culture, information access and top management support (Bazhair & Sandhu 2015; Asamoah, Andoh-Baidoo & Agyei-Owusu 2015). Hence, it is suggested that ERP systems adoption is very important in

middle size organization because it employs an integrated database system which enhances the competitive advantage of most organizations in the global market (Hwang & Min 2013).

Implementing an ERP system often constitutes a company's largest IS investment and in many cases the largest corporate project (Summer, 2000). This is more so in SMEs of developing countries where many of the operational, control and managerial systems have yet to be automated and where legacy systems are not as entrenched as in the businesses in the developed countries. It is then for this reason that many researchers have concluded by stating that, in developing countries, ERP systems are often implemented not to replace legacy systems but as part of an organization's effort to modernize and differentiate itself (Reimers, 2003). It is therefore for many organizations' to justify the enormous investments in ERP, they need to constantly ask whether such systems can provide them with the desired modernization and other sustainable advantages. As such, ERP as a strategic implementation clearly focuses the attention on strategic issues. One of the primary benefits of deploying a Full-Function ERP solution is the consolidation of often-dispersed data. The consolidation of data resulting from ERP use creates many organizational benefits that include: No need to synchronize changes between systems; Consolidates applications and brings more control to cross-functional processes for finance, human resources, and marketing; Provides a real-time, enterprise-wide view of the business for faster and more effective decision-making; Helps build a common vision throughout the enterprise; Consolidates multiple permissions and security procedures into a single framework, which reduces the risk of losing or exposing sensitive data.

Enterprise resource planning (ERP) is an enterprise-wide information system designed to coordinate all the resources, information, and activities needed to complete business processes such as order fulfillment or billing.

According to Loundon (2009), ERP is a packaged business software system that lets an organization automate and integrate the majority of its business processes, share common data and practices across the enterprise and produce and access information in a real-time environment. Enterprise Resource Planning Software System can be simply defined as the customized ERP systems that are built around client specific transactions. Businesses wanting to implement customized ERP software solutions need to approach a good ERP Software Company with their business requirements.

Enterprise resource planning (ERP) is the generic term used for management software that include modules such as production, finance, marketing and human resources and that allow companies to plan their goods and services (Stevenson, 2007).

Enterprise Resource Planning software is an enterprise-wide information system that facilitates the flow of information and coordinates all resources and activities within the business organization. According to Loundon (2009), ERP is a packaged business software system that lets an organization automate and integrate the majority of its business processes, share common data and practices across the enterprise and produce and access information in a real-time environment. The various functions typically supported by the system include manufacturing, inventory, shipping, logistics, distribution, invoicing, and accounting. Some solutions now embed customer relationship management functionality. A wide variety of business activities that includes sales, marketing, billing, production, inventory management, human resource management, and quality control depend on these systems. The ERP system assists in managing the connections to outside stakeholders as well as enhancing performance management. It uses a centralized database and usually relies on a common computing platform. It provides the user with a unified, consistent, and uniform environment.

According to Hossein (2004), Enterprise resource planning (ERP) systems integrate internal and external management information across an entire organization, embracing finance/accounting, customer relationship management, etc. ERP systems automate this activity with an integrated software application.

2.1.2 Benefits of enterprise resource planning

A key benefit of ERP is that all the enterprise data are collected immediately during the initial transaction, stored and processed centrally and updated in real time. This ensures that the employees can share information and the managers can acquire more comprehensive, accurate and timely information to support their decision-making. Therefore, this improves the decision-making quality and the firm's capability to take advantage of market opportunity. Information transferring costs and opportunity costs due to poor decision-making are reduced and the profitability is improved

Second, ERP realizes the standardization and automation of business process and tracks down the employees' responsibility electronically. This facilitates the governance of the firm, reduces human errors and the monitoring costs, increases the efficiency and makes the management process more transparent. Further, ERP can be integrated with the firm's e-business and supply chain management systems. The integration with other systems automates the purchase and order management process, reduces the order cycle time, the transaction costs and the inventory holding costs, quickens the response time to customer demand and improves customer satisfaction. Taken together, ERP systems can reduce the firm's costs and boost the profitability (Liu, Miao & Li, nd).

2.1.3 Types of ERP systems used in the banking industry

The under-listed are the top ten (10) enterprise resource planning system used in the banking industry for different purposes.

- 1) **SAP:** it is the market leader for Financial Accounting, ERP and CRM solutions. SAP is used mainly by top-tier banks, which effectively means only those institutions that can afford the cost of implementing such a high profile software system.
- 2) **Oracle EBS:** is one of the most widely used ERP systems in the banking industry. Oracle EBS and SAP dominate the market share with their highly process oriented and secure application flows.
- 3) **Corniche:** is specifically designed for the management of private banks, offshore banks, and other financial institutions involved in loans and payments. It provides multiple currency accounting, a back-office interface, merchant services, card services, payment interfaces and online banking facilities.
- 4) **EBANQ:** is an out-of-the-box mobile-ready e-banking application for small to medium sized banks and other financial institutions. EBANQ's design is quite user friendly, both for administrators as well as end users.
- 5) **Moneyman:** is a cash management software for the small and medium business, either through brokers/agents or direct. It's considered highly efficient for Church Development Funds.

- 6) **CoBIS Microfinance Software:** manages micro-banking & SACCO operations. It helps manage savings, loans, term deposits, and shares.
- 7) **Cashbook:** calls itself a multi-site, multi-currency, multi-lingual solution. It is a helpful application that assists finance departments to perform daily tasks, thus reducing operational time and increasing productivity. It is also an essential tool for many companies who are looking to implement an effective Corporate Governance policy.
- 8) **LeaseWave Suite:** is an end-to-end browser-based lease and loan management system. Its main aim is to support the entire lifecycle of leases, loans and assets. The LeaseWave Suite comprises of both front-end and back-end functionality and assists in streamlined integration and interaction between all potential parties in the leasing process. This includes vendors, lessees, brokers and funding sources.
- 9) **TEMENOS T24:** is a 24-hour real-time banking application that provides multiple application server support to a number of users.
- 10) **Zeb.control:** is a product range that provides the technical support for managing and processes a variety of tasks, which include financial controlling, risk measurement and monitoring, accounting and value management.

2.1.4 ERP advantages and disadvantages

According to Monk and Wagner (2009), ERP has the following advantages and disadvantages.

Advantages

- Allows easier global integration (barriers of currency exchange rates, language, and culture can be bridged automatically)
- Updates only need to be done once to be implemented company-wide
- Provides real-time information, reducing the possibility of redundancy errors
- May create a more efficient work environment for employees^[9]
- Vendors have past knowledge and expertise on how to best build and implement a system
- User interface is completely customizable allowing end users to dictate the operational structure of the product

Disadvantages

- Locked into relationship by contract and manageability with vendor - a contract can hold a company to the vendor until it expires and it can be unprofitable to switch vendors if switching costs are too high
- Inflexibility - vendor packages may not fit a company's business model well and customization can be expensive
- Return on Investment may take too long to be profitable
- Implementations have a risk of project failure.

2.1.5 Enterprise resource planning and financial performance

Financial theory suggests that managers should make investment decisions that maximize the value of the firm. Innovative IT investments increase firm value (Santos, Peffers, & Mauer, 1993). Companies that focus on benefiting customers produce sustained superior financial performance by engendering strategic focus, investment in people, and creative capability. After successful ERP implementation companies can reduce the staff and ultimately reduce

the operating cost of staff salaries (Springett, 2004). Wayhan and Werner (2000) concluded that workforce reductions significantly improved subsequent financial performance, particularly in the short term. In comparing successful ERP adaptors and non-successful ERP adaptors, Velcu (2005) concluded that successful ERP adopters have significant higher efficiency benefits in terms of Asset Turnover and Capital Turnover than the less successful ERP adopters.

Performance is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage. There are two kinds of performance, financial performance and non-financial performance. Financial performance emphasizes on variables related directly to financial reports (Hansen et al., 2005).

Financial performance may be defined as measuring the results of a firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets, value added and profits. According to Holmberg (2000), financial performance is the degree to which a firm is able to achieve strong return on asset and profitability.

Financial performance determines specific measurements that could measure the success of accompany in generating profits. It is calculated by using financial ratios. The ratios are the results of a comparison between numbers of one financial figure and other financial figures. There are several categories of ratios that can be used in measurement of financial performance: profitability, liquidity, solvency, turn-over, efficiency and effectiveness (Sucipto, 2003). Profitability ratios include the return on assets ratio which is a measure of the return on total investments of an enterprise. It is measured by dividing the profit after taxes plus interest by the total assets of an entity. Return on equity is another measure of financial performance. It measures the rate of return on the investment of the owners' common stock (Thompson & Strickland, 1996). It is calculated as below;

$$\frac{\text{Profits after taxes - Preferred stock dividends}}{\text{Total stockholders' equity - Par value of preferred stock}}$$

2.2 Theoretical Framework

2.2.1 Information System Success Theory

The information system success theory was developed by DeLone and McLean (1992). In their model, success of information systems is dependent on information system quality and the output quality of the information system. These dimensions influence the use level and user response to the information system. As a result, the user attitude and organizational performance are influenced. To determine whether the system made attains its goals and objectives, there should be measurements to measure whether the system has reached the target created to provide value to information system management and information system investment (DeLone et.al, 1992 as cited in Anyota, 2015).

2.2.2 Agency Theory

Agency theory is a theory that examines the relationship between principal and agent (Jensen and Meckling, 1976). It describes the relationship of cooperation based on managerial behavior, agency costs, and capital structure. Jensen (1983) as cited in Bassegy and Tapang (2012; 2017) and also in Bessong and Tapang (2012) divided agency theory into two major parts; the positivist agency theory and the principal-agency theory. The positivist agency

theory focuses on the relationship between owners and managers generally in public organizations; while the principal- agency theory can be used more widely in the relationship of principal and agent, such as the relationship between employers and employees, sellers and buyers. To the principal, the primary goal is to maximize profits through cooperation undertaken, whereas to the agent the main concern is to maximize compensation obtained. An important proposition of agency theory is that through information systems, the exchange of information, can curb the agent opportunism and provide the principal with better control. There are two ways that an agent can show opportunistic behavior that can be detrimental from the perspective of the implementer. The first, moral hazard, refers to lack of effort on the part of the agent. The second one, adverse selection, refers to the misrepresentation of ability by the agent (Eisenhardt, 1989).

2.2.3 Resource-Based View Theory (RBV)

According to Hwang and Min (2013), for an organization to gain a competitive advantage against competitors, it needs to create a value by using resources that are available, valuable, non-substitutable, rare and inimitable. Thus, a firm's Resource-Based View (RBV) predicts that certain types of resources owned and controlled by enterprise have the potential and promise to generate competitive advantage, better organizational culture, technology infrastructures and top management support which eventually lead to superior organizational performance (Kellermanns, et al. 2016).

2.2.4 Contingency theory (CT)

Contingency theory (CT) is a theory of organizational management, which focuses on elaborate employees training and use of technology for the development and improvement of the organization [Li 2015]. CT was developed from behavioral theories, which focus on how environmental elements influence the behaviors of an organization in the late 1960s (Otley, 2016). According to Li (2015), CT describes good leadership (among managers) in the organization as to disseminate information within and outside the organization. CT further explains how managers need to focus on the change and adoption of technologies outside the organization (Li 2015). This includes organizational structure which is an example of the internal factor determined by the contingencies of the external environment and can reflect degree of environmental uncertainty and technological change (Otley, 2016).

Similarly, researchers of management information systems generally assume that organizational performance is contingent on a number of variables such as strategy, adoption of technology, technological change or innovation, environmental change, organizational structure, size, task, and individual characteristics to influence the performance of organizations (Otley 2016). Moreover, a recent study has demonstrated that when the fit between the stated variables is good, better performance is expected (Li, 2015).

2.3 Empirical review

Poston and Grabski (2001) identified the impact of ERP system on financial performance of the business. They selected data from different data bases of firms that publicly disclosed ERP adoption from 1980 to 1997 in PR Newswire press releases in Lexis-Nexus and in the Wall Street journal. They found no significant change in cost or administrative and selling expenses in the 3-year pre and post implementation period of ERP system. They argued that ERP system effect positively on firm's performance in two ways: it reduces the cost by improving efficiency of business processes in a computerized way and it enhanced decision making ability by providing accurate information in time.

Hunton, Lippincott, and Reck (2003) compared the financial performance of 63 ERP adopters and 60 Non-Adopters. They compared the results of ROA, ROS, ROI and ATO in different periods of ERP pre-implementation (t-3 to t-1) and Post implementation (t+1 to t+3) for 3 years' time. The study found that return on assets (ROA), return on investment (ROI), and asset turnover were significantly better over a 3-year period for adopters, as compared to non-adopters.

Velcu (2005) compared the quality of ERP system with business values in less successful ERP users and successful ERP users. The findings revealed that the quality of an ERP System does not change the business value of the firm.

Nikolaou and Bhattacharya (2006) investigated the impact of Post-ERP implementation changes on organizational long-run financial performance. They found that ERP adopting firms who were enhancing their existing ERP systems had better financial performance compared to firms not enhancing or upgrading their existing ERP systems.

Singla (2008) investigated the impact of ERP system in small and mid-size organizations and compared the performance of ERP adopters and non-adopters. A case study method was employed and two public sector companies where ERP system had been successfully implemented selected for analysis. The research revealed that ERP adopters' performance is higher compared to non-adopters of ERP system.

Karimi (2010) conducted an investigation of the business value of enterprise resource planning systems by firms in Kenya. He studied thirty three organizations in Kenya that were using ERP systems and highlighted that, ERP systems emerged as the core of successful information management, the enterprise backbone of the organizations and it speeds up communication of information throughout the organization.

Nyagah (2006) conducted a study on the challenges of ERP implementation, Nzomo (2013) conducted a research on the impact of accounting information system on an organization's efficiency, Leah (2013) conducted a study on the impact of ERP implementation on the role of accountants.

Nangithia and Mwatua (2010) defined (ERP) system as a large - scale information system that integrates all business functions into one unified function and that ERP systems have revolutionized the way organization operate their business by providing online, real time information, integration of company business and operation efficiency

Elyas and Salome (2012) researched on the effect of ERP cycle time on supply performance of oil and concluded that ERP systems contribute to supply chain management particularly in technical areas such as cycle time, standardization, transparency and globalization. They further concluded that ERP integrates both internal and external flows used by the organization and drives the flow of information between all internal business functions while managing connections to outside stakeholders. They further concluded that for firms to update staff payments within shortest time possible, enhance faster transaction between suppliers and the firm, easily retrace complaints of irregular products and improve cash management there was a need to implement the ERP system.

Njihia and Mwirigi (2014) researched on the effects of ERP systems on a firm's performance and surveyed commercial banks in Kenya. They found that financial resource availability,

organizational complexities, employee’s perceptions, regulatory requirements, and having top management support all affects the effective implementation of an ERP system which will in turn affect the firm’s performance.

3.1 Research Methods

This study adopted an ex-post fact research design. The population of the study consisted of all the twenty one (21) commercial banks in Nigeria (CBN, 2018). A sample of 10 commercial banks was purposively selected based on their licensed of International Authorization. Panel data ranging from 2008 – 2017 were collected from both primary and secondary sources. Primary data were collected through questionnaire within Nigerian commercial banks which has implemented ERP system. A seven - point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly Agree) was used. There was no existing database about ERP implemented commercial banks. This means that the target population of ERP implemented commercial banks in Nigeria was unknown. Therefore, to find out which banks in Nigeria are implementing ERP, various sources (World Wide Web, web sites of the top ten international ERP vendor companies, web sites of the top IS vendor companies, web sites of governmental organizations in charge of IT, web sites of non-governmental organizations in charge of IT, and published reports and articles related to ERP implementation) were used.

The simple regression models was adapted for the study and stated as follows:

$$\begin{aligned} \text{ROA} &= f(\text{ERPI}) \dots\dots\dots 1 \\ \text{ROI} &= f(\text{ERPI}) \dots\dots\dots 2 \\ \text{PM} &= f(\text{ERPI}) \dots\dots\dots 3 \end{aligned}$$

The above functions were econometrically stated thus:

$$\begin{aligned} \text{ROA} &= \beta_0 + \beta_1\text{ERPI} + e_i \dots\dots\dots 4 \\ \text{ROI} &= \beta_0 + \beta_1\text{ERPI} + e_i \dots\dots\dots 5 \\ \text{PM} &= \beta_0 + \beta_1\text{ERPI} + e_i \dots\dots\dots 6 \end{aligned}$$

Where:

- ROA = Return on Assets
- ROI = Return on Investment
- PM = Profit Margin
- ERP = Enterprise Resource Planning Implementation
- β_0 = Unknown Constant to be estimated
- $\beta_1 - \beta_3$ = Unknown Coefficients to be estimated
- e_i = Error

4.0 Data presentation

Table 1: Cross section Panel data from 2008 – 2017

YEAR	BANKS	GPM	ROA	ROI	ERPI
2008	Access Bank	81.5	0.42	2.55	7
2009	Access Bank	70.69	1.85	21.43	6.71
2010	Access Bank	63.99	1.52	9.22	7.38
2011	Access Bank	54.5	0.63	2.61	7.69
2012	Access Bank	67.14	1.38	6.31	5.44
2013	Access Bank	63.61	0.94	8.01	5.03
2014	Access Bank	60.64	2.57	18.63	4.97
2015	Access Bank	53.25	2.04	15.45	4.84
2016	Access Bank	56.53	2.05	15.52	6.96
2017	Access Bank	50.71	2.54	17.91	6.84
2008	Diamond Bank	68.95	1.75	11.35	4.85

2009	Diamond Bank	64.38	2.21	13.1	4.94
2010	Diamond Bank	65.35	2.05	10.98	4.84
2011	Diamond Bank	53.96	-1.26	-7.7	6.83
2012	Diamond Bank	75.38	0.22	1.25	4.84
2013	Diamond Bank	85	-1.95	-16.57	4.95
2014	Diamond Bank	79.5	1.88	20.36	6.45
2015	Diamond Bank	73.1	1.88	20.58	5.8
2016	Diamond Bank	68	1.32	12.19	6.59
2017	Diamond Bank	69.31	0.32	2.64	8.54
2008	Fidelity Bank	58.57	2.66	12.54	7.88
2009	Fidelity Bank	54.42	2.16	15.66	7.9
2010	Fidelity Bank	73.69	2.49	9.73	7.27
2011	Fidelity Bank	64.88	0.28	1.11	7.02
2012	Fidelity Bank	66.26	1.27	4.49	8.54
2013	Fidelity Bank	61.68	0.35	1.77	7.26
2014	Fidelity Bank	46.6	1.99	11.27	7.26
2015	Fidelity Bank	35.72	0.71	4.72	7.89
2016	Fidelity Bank	46.81	1.16	7.97	7.16
2017	Fidelity Bank	50.24	1.13	7.58	7.65
2008	First Bank Holding	75.36	2.82	27.04	7.13
2009	First Bank Holding	70.67	2.26	24.68	7
2010	First Bank Holding	72.95	2.39	10.27	7.83
2011	First Bank Holding	59.34	0.23	1.57	6.08
2012	First Bank Holding	69.79	1.45	9.81	7.08
2013	First Bank Holding	82.73	0.65	5.06	7.92
2014	First Bank Holding	78.39	2.37	17.24	8.25
2015	First Bank Holding	71.11	1.82	14.97	6.66
2016	First Bank Holding	67.26	1.91	15.84	8.14
2017	First Bank Holding	66.89	0.36	2.62	8.01
2008	First City Monumental Bank	49.79	2.66	10.74	7.74
2009	First City Monumental Bank	65.43	2.26	19.13	7.8
2010	First City Monumental Bank	69.39	3.23	11.31	7.4
2011	First City Monumental Bank	58.89	0.12	0.44	6.7
2012	First City Monumental Bank	50.27	1.47	5.89	7.81
2013	First City Monumental Bank	28.19	-1.54	-7.87	5.42
2014	First City Monumental Bank	49.8	1.66	11.45	5.62
2015	First City Monumental Bank	55.23	1.59	11.13	6.97
2016	First City Monumental Bank	61.56	1.89	13.8	6.49
2017	First City Monumental Bank	51.74	0.41	2.93	6.73
2008	Guaranty Trust Bank	62.77	2.69	20.38	6.34
2009	Guaranty Trust Bank	58.55	2.71	26.4	7.87
2010	Guaranty Trust Bank	68.83	3.11	16.43	8.37
2011	Guaranty Trust Bank	65.61	2.68	14.88	7.74
2012	Guaranty Trust Bank	73.14	3.33	18.19	5.35
2013	Guaranty Trust Bank	77.88	3.09	20.89	6.77
2014	Guaranty Trust Bank	76.74	5	30.9	7.03
2015	Guaranty Trust Bank	73.87	4.28	27.51	6.51
2016	Guaranty Trust Bank	70.98	4.63	26.37	5.58

2017	Guaranty Trust Bank	69.77	3.94	24.04	7.97
2008	Skye Bank	57.57	1.13	7.67	8.47
2009	Skye Bank	64.09	1.28	19.51	7.5
2010	Skye Bank	62.86	2	16.7	7.46
2011	Skye Bank	48.54	-0.02	-0.14	7.52
2012	Skye Bank	64.22	1.48	9.37	5.51
2013	Skye Bank	60.24	0.29	2.64	7.66
2014	Skye Bank	44.05	1.18	11.83	7.94
2015	Skye Bank	58.58	1.43	13.31	7
2016	Skye Bank	58.67	0.69	7.37	6.91
2017	Skye Bank	39.81	-3.4	-39.17	6.56
2008	Union Bank Of Nig				7.81
2009	Union Bank Of Nig	92.47	2.32	12.83	7.83
2010	Union Bank Of Nig	67.12	2.68	21.44	8.16
2011	Union Bank Of Nig	41.77	-20.23	122.8	7.7
2012	Union Bank Of Nig	57.71	9.54	-91.95	7.92
2013	Union Bank Of Nig	44.98	-7.83	-41.41	7.45
2014	Union Bank Of Nig	72.39	0.71	3.79	7.39
2015	Union Bank Of Nig	70.89	0.61	3.05	6.53
2016	Union Bank Of Nig	68.08	2.63	11.95	7.65
2017	Union Bank Of Nig	61.26	1.33	5.69	7.82
2008	United Bank For Africa	53.28	1.31	23.8	8.45
2009	United Bank For Africa	61.14	2.1	12.78	7.21
2010	United Bank For Africa	64.49	2.76	21.1	7.77
2011	United Bank For Africa	66.46	0.17	1.27	7.84
2012	United Bank For Africa	60.11	0.04	0.33	7.6
2013	United Bank For Africa	60.01	-0.49	-5.74	7
2014	United Bank For Africa	61.08	2.47	26.75	7.6
2015	United Bank For Africa	55.59	1.76	19.83	7.71
2016	United Bank For Africa	53.96	1.73	18.05	7.86
2017	United Bank For Africa	58.96	2.17	17.93	7.85
2008	Zenith Bank	72.46	1.88	11.55	8.21
2009	Zenith Bank	70.08	1.93	16.13	6.62
2010	Zenith Bank	61.59	2.91	15	7.85
2011	Zenith Bank	56.62	1.24	6.1	7.06
2012	Zenith Bank	71.93	2.44	10.36	7.38
2013	Zenith Bank	78.61	2.52	12.44	7.88
2014	Zenith Bank	70.83	4.7	21.9	8.14
2015	Zenith Bank	72.78	3.62	18.87	7.86
2016	Zenith Bank	65.89	2.65	18	7.53
2017	Zenith Bank	64.5	2.64	17.78	6.88

Source: Annual Reports of Selected Banks 2008 – 2017 and www.africanfinancial.com

4.1 Findings

Based on an analysis of 10 sample commercial banks that have implemented ERP between 2008 and 2017, this study examines the effect of ERP implementation on financial performance of commercial banks in Nigeria. The results revealed that enterprise resource planning implementation has a significant effect on financial performance proxy by gross profit margin,

return on assets and return on investment. This finding is in line with the work of Poston and Grabski (2001), Poston et al. (2001), Singla (2008), Velcu (2005), Cotteleer and Bendoly (2006); Gattiker and Goodhue (2005); Kallunki et al. (2011); Madapus (2008); Arun Madapusi and D'Souza (2012) that ERP system implementation positively impact financial performance.

5.0 Conclusion/Recommendations

ERP implementation is accompanied with some integration problems, such as the integration with legacy systems, the integration with internal business process and external partners. These problems may hamper the bank's daily operation and lead to an increase in costs and a decline in financial performance. ERP may integrate with the bank's daily operation only after a long-term use and the financial benefits of ERP may show. This indicates that the effect of ERP implementation on financial performance improvement have a time-lagged effect. The study recommended that banks should set rational implementation goal before ERP implementation and put more emphasis on managing the implementation process banks in Nigeria should implement ERP so as to improve their efficiency and improve their financial performance.

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