NDIC QUARTERLY

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The banking sector witnessed a number of developments during the third and fourth quarters of 2010. Some of these developments included the Central Bank of Nigeria (CBN) report on depositors claim of N107m from 'Wonder' banks, restrictions imposed on deposit money banks (DMBs) on their investments in state government bonds, extension of the implementation of prudential guidelines, the passage of Asset Management Corporation (AMCON) bill into law and the planned contribution of N1.5 trillion by DMBs and the CBN to bolster the operations of AMCON. Other developments were the establishment of N300bn Power and Aviation Intervention Fund and the unveiling of implementation roadmap for International Financial Reporting Standards (IFRS) by the Federal Government. During the same period, the former Managing Director/CEO of Oceanic Bank PLC was jailed for 18 months for various financial malpractices including fraud committed in the bank. On a positive, Unity Bank PLC and Wema Bank PLC were able to complete the recapitalization of their banks. At the international scene, the Basel Committee has issued new rules to guide banking business internationally whilst Iceland struck new deal over failed banks. Details of these developments and many others are contained in this report.

The condition and performance of the insured banks showed significant improvements as indicated by the increases recorded in the industry Total Assets, Quality of Assets, and Capital Adequacy and all the profitability indicators during the periods under review.

By M. M. Ibrahim(Research Department) and H. I. Ahmad (Bank Examination Department)
30-65

This survey was conducted to determine the risk management practices in deposit money banks in Nigeria. The specific objectives of the survey were to establish the baseline scenario of risk management practices in the banks, post-consolidation, determine the level of awareness and ascertain the level of compliance with the guidelines on risk management framework for banks issued jointly by the CBN and NDIC in 2005. To carry out the survey, a structured questionnaire that drew largely from the Risk Management Self assessment Template of the Office of the Superintendent of Financial Institutions (OSFI) of Canada, complemented with on-site examination approach was administered on the Chief Risk Officers or Compliance Officer of each of the 24 banks. Findings of the survey revealed a modest level of development of risk management in the deposit money banks. However, there was a heightened level of awareness on the need to have, in place, a sound risk management framework in the institutions in line with the CBN guidelines on risk management.

Empirical Modeling Of The Impact Of Financial Innovation On The Demand For Money In Nigeria

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66-88

The demand for money is very crucial in the conduct and determination of the effectiveness of monetary policy. This study attempts to analyse whether financial innovations that occurred in Nigeria after the Structural Adjustment Programme has affected the demand for money in Nigeria using the Engle and Granger Two-Step Cointegration technique. The study revealed that demand for money conforms to the theory that interest rate has an inverse relationship with the demand for real cash balances, implying that the financial innovations introduced into the financial system have not significantly affected the demand for money in Nigeria.

REVIEW OF DEVELOPMENTS IN BANKING AND FINANCE IN THE THIRD AND FOURTH QUARTERS OF 2010

BY

RESEARCH, POLICY & INTERNATIONAL RELATIONS DEPARTMENT

1.0   INTRODUCTION

The banking sector witnessed a number of developments during the third and fourth quarters of 2010. Some of these developments included the Central Bank of Nigeria (CBN) report on depositors claim of N107 billion from 'Wonder' banks, restrictions imposed on deposit money banks on their investments in state government bonds, extension of the implementation of prudential guidelines, the passage of Asset Management Corporation (AMCON) bill into law and the planned contribution of N1.5 trillion by DMBs and the CBN to bolster the operations of AMCON. Other developments were the establishment of N300bn Power and Aviation Intervention Fund and the unveiling of implementation roadmap for International Financial Reporting Standards (IFRS) by the Federal Government. During the same period, the former Managing Director/CEO of Oceanic Bank PLC was jailed for 18 months for various financial malpractices including fraud committed in the bank. On a positive note , Unity Bank PLC and Wema Bank PLC were able to complete the recapitalization of their banks. At the international scene, the Basel Committee has issued new rules to guide banking business internationally whilst Iceland struck new deal over failed banks. Details of these developments and many others are contained in this section of the report.

2.0   DEPOSITORS CLAIMED N107BN FROM 'WONDER BANKS'

During the period under review, a total of 560,882 claims amounting to N106.9 billion was submitted by members of the public against 440 illegal companies/'wonder banks'. According to the Central Bank of Nigeria (CBN), out of the N106.9 billion claims made by the public, 36 illegal fund managers accounted for N104 billion, or 97.3 per cent. One particular wonder 'bank' accounted for 48 per cent of these claims. Meanwhile,   the Inter-Agency Committee, which was set up to stem the menace of 'wonder banks' was to verify the claims. The inter-agency committee comprises Central Bank of Nigeria (CBN), Nigeria Deposit Insurance Corporation (NDIC), Securities and Exchange Commission (SEC), Economic and Financial Crimes Commission (EFCC), Corporate Affairs Commission (CAC) and the Nigerian Police Force.

3.0   RESTRICTION OF BANKS' STAKE IN STATE GOVERNMENT BONDS

During the period the under review, the CBN restricted the stakes a bank could take in bonds issued by state governments. The restrictions were contained in the guidelines for granting liquid asset to state government bonds. According to the CBN, banks shall not invest more than ten per cent of shareholders' funds in bonds issued by a single state government. It also stated that in order to be eligible for liquidity ratio determination of a bank, the value of state government bonds in the bank's portfolio shall not exceed 50 per cent of the value of the bank's investment in Federal Government Securities. The monetary authority also stated that for the purpose of computing the capital adequacy ratios of banks and discount houses, state government bonds with liquid asset status shall be assigned a weight of 20 per cent or as may be prescribed by the CBN from time to time. These guidelines were issued to confer liquidity status on state government bonds, promote investments in the securities, encourage the regular issuance of the bonds by state governments, stimulate primary and

secondary market activities and also facilitate the development of the Nigerian Capital Market.

4.0   AMCON BILL SIGNED BY THE PRESIDENT

President Goodluck Jonathan on Monday, July 19, 2010 signed the Asset Management Corporation of Nigeria, (AMCON) Bill into law. The Act provided the legal backing for the establishment of an asset management company in the financial services industry. While signing the bill, President Jonathan stated that the establishment of AMCON was a reflection of the Government's commitment to safeguard the interests of depositors, creditors, and other stakeholders in the Nigerian financial system and in doing so rejuvenate the domestic economy. According to the President, AMCON will help to stimulate the recovery of the financial system and ultimately the wider economy by providing liquidity to the banks by buying their non-performing loans, recapitalizing the intervened banks, increasing access to refinancing opportunities for borrowers, increasing confidence in banks' balance sheets and therefore Nigeria's credit and risk ratings, encourage a return of confidence to the capital market and preventing continued job losses in the banking industry. He commended the Ministry of Finance, Ministry of Justice and the Central Bank of Nigeria for the collaboration that was put into the preparation and finalization of the landmark Bill and he expressed the hope that the signing into law of the Bill will be an important turning point for the return to strong economic growth and financial system stability. He also commended the National Assembly for ensuring the smooth passage of the Bill.

5.0   AMCON BOARD CONSTITUTED BY THE FEDERAL GOVERNMENT

The Federal Government during the period under review constituted the Board of the Assets Management Corporation of Nigeria (AMCON). The 10-member Board was to be chaired by Mr. Aliyu Belgore, while Mr. Mustapha Chike Obi was to serve as the Managing Director. Other members of the Board wetre Mr. Howett Adegboyega, Muhammed Abbass Jega and Mofoluko Benedicta, who were to serve as Executive Directors while Ms Eniya Ambakaderemor was nominated to serve as a Non- Executive Director. The   institutional representatives on the Board included, the Permanent Secretary of the Federal Ministry of Finance, the Managing Director of the Nigeria Deposit Insurance Corporation, the Deputy Governor, Financial System Stability, Central Bank of Nigeria and the Director - General, Securities and Exchange Commission (SEC).

6.0   N1.5TRILLION FUND TO BE CONTRIBUTED BY BANKS AND CBN TO ASSIST AMCON

Deposit money banks and the Central Bank of Nigeria (CBN) had unanimously agreed to contribute N1.5 trillion (about $10 billion) over the next 10 years to fund the newly established Asset Management Corporation of Nigeria (AMCON) set up to buy bad debts in the banking industry. Under the initiative, which was approved at the Bankers' Committee meeting, the banking watchdog will provide N500 billion to the fund in support of AMCON, while banks will commit 0.3 per cent of the value of their individual balance sheets to the AMCON for the next 10 years. This would enable the institution meet any shortfalls in its activities. The money was expected to be pooled into a Sinking Fund and invested in Zero Coupon Bonds. The accumulation of funds would allow AMCON meet its obligation to the ailing banks. This initiative, was to become effective from December 31, 2010. Meanwhile, as part of its contribution to the overall

pool of what the banks have decided to task themselves financially, the NDIC during the meeting made a commitment to explore ways to reduce the premium which the banking industry currently pays to it.

7.0 IMPLEMENTATION OF PRUDENTIAL GUIDELINES EXTENDED BY THE CBN

The Central Bank of Nigeria (CBN) during the period under review extended by two months the implementation date for the new Prudential Guidelines for Banks. The guidelines which were first issued in May, 2011 was re-issued and the effective date for implementation moved from May 1 to July 1, 2010. A circular addressed to all deposit money banks referenced: BSD/DIR/GEN/NPG/02/126 and dated July 8, 2010, stated that banks were required to be guided by the regulations and ensure strict adherence. The guidelines addressed various aspects of banks' operations, such as risk management, corporate governance, know your customer (KYC), anti-money laundering, counter financing of terrorism, loan loss provisioning, peculiarities of different loan types and financing different sectors of the economy, among others. The CBN stated that the guidelines became necessary to correct the extremely fragile financial system that was tipped into crisis by the global financial meltdown and which manifested in macro-economic instability, major failures in corporate governance, lack of investor and consumer sophistication, inadequate disclosure and transparency, uneven supervision and enforcement and critical gaps in prudential guidelines.

8.0 2010 APPROPRIATION ACT AMENDMENT PASSED BY THE SENATE

The Senate during the period under review passed the 2010 Appropriation Act (Amendment) of N4.427tn, with about N466.6bn difference from the one earlier

passed. It also passed the 2010 Supplementary Appropriation of N644.75bn, which provided N6.6bn for the nation's 50th anniversary. Of the N4.427tn, N183.57bn was for statutory transfers, while N542.381bn was for debt servicing; N2.137tn for recurrent expenditure and N1.563tn was for capital expenditure.

9.0 BANKS DIRECTED TO OBTAIN REPORTS FROM CREDIT BUREAUX BEFORE GRANTING LOANS

The Central Bank of Nigeria (CBN) during the period under review directed that henceforth, all banks and other financial institutions operating in the country should ensure that they obtain credit report from, at least, two credit bureaus before granting loans to any of their customers. The directive was contained in a circular with reference number BSD/DIR/GEN/04/014. The apex bank explained that the move was part of efforts aimed at providing a platform for financial institutions to strengthen their credit appraisal procedures with a view to enhancing credit quality and responsible credit behavior in the nation's financial system. Other measures aimed at strengthening banks' credit appraisal procedures include: putting in place a data exchange agreement with at least two credit bureaux and obtaining quarterly credit report from at least two credit bureaux for all previous loans granted. These measures were put in place to enable the lending institutions determine the level of borrowers' current exposure to the financial system.

10.0 N300 BILLION POWER AND AVIATION INTERVENTION FUND ESTABLISHED

In support of current initiatives especially in the power and aviation sectors, the Central Bank of Nigeria during the period under review announced the establishment of N300 Billion Power and Aviation Intervention Fund. This amount was part of the initial N500 Billion intervention fund announced earlier

in April 2010 in a bid to catalyze financing of the real sector of the Nigerian economy. The purpose of the fund was to help sustain private sector investment in the two sectors. The guideline for the disbursement of the fund was also released. Accordingly, the Bank of Industry (BoI) had been appointed as the managing agent vested with the responsibility for the day-to-day administration of the fund, while the African Finance Corporation (AFC) would serve as the Technical Adviser. Also, all Deposit Money Banks (DMBs) and Development Finance Institutions (excluding BoI) had been enlisted to participate in the scheme. Companies wishing to participate in the scheme must be duly registered and must have been involved in electricity power supply value chain, including power generation, transmission, distribution and associated services. Also, eligible projects could be promoted by private or public or a combination of both, and these must be structured either as a profit oriented business concern or a public service on the condition that contracted cash flows or financing support would exist to ensure repayment of principal and interest in addition to long term viability. With respect to aviation projects, any airline duly incorporated under the Company and Allied Matters Act (CAMA) 1990 and operating in Nigeria would be eligible to apply for the facility.

The funds shall be administered at an all inclusive interest rate and charges of 7.0% (BoI 1.0% as management fee and participating banks, 6.0%) payable on a quarterly basis. Specifically, the fund was meant for refinancing existing loans, refinancing existing leases and working capital for both power and aviation sectors while the long term segment of the fund was exclusively applicable to new power projects only. The security to be offered by the participating banks to BoI would be in the form of a bank guarantee backed by a payment order for the participating banks' accounts to be debited by the CBN by any amount due in case of default based on the on-lending agreement signed by BoI and each participating bank for approved projects.

11.0 IMPLEMENTATION ROADMAP FOR IFRS UNVEILED

During the period under review, the Federal government announced its decision to adopt the International Financial Reporting Standard (IFRS). The roadmap for its implementation was also launched. According to the Minister of Commerce and Industry, the Federal Executive Council (FEC) had approved the adoption of the accounting model with effect from January 1, 2012. When the new regime becomes operational, reporting entities in Nigeria would adopt globally accepted, high quality accounting standards by fully converging Nigerian National Accounting Standards with International Financial Reporting Standards (IFRS). The approval was seen as a milestone for Nigeria as it became the second African country after South Africa to openly adopt the IFRS accounting standard.

The roadmap for implementation, which would be in three phases, mandated publicly listed and significant public interest entities to prepare their financial statements using applicable IFRS by January 1, 2012 while other public interest entities were under obligation to adopt IFRS for statutory purposes by January 1, 2013. The third phase however, required Small and Medium–Sized Entities (SMEs) to compulsorily adopt IFRS accounting standard by January 1, 2014. By this, SMEs in the country will statutorily be asked to issue IFRS-based financial statements for the year ended December 31, 2014. However, entities that failed to meet the IFRS for SME's criteria by then would be required to report using the Small and Medium-Sized Entities Guidelines on Accounting (SMEGA) Level 3 issued by the United Nations Conference on Trade and Development (UNCTAD).

In order to enhance the knowledge of the new accounting model, the Minister directed the Nigerian Accounting Standards Board (NASB) to immediately create

a centre of excellence to cater for regulators, auditors and other professional accountant in the understanding of the IFRS. Unveiling of the roadmap was a further demonstration of commitment of the Federal Government to enthrone transparency in the conduct of business in both the public and private sectors.

12.0 DEPOSIT MONEY BANKS GIVEN DECEMBER DEADLINE ON EXTERNAL AUDITORS

The Central Bank of Nigeria (CBN) during the period under review gave all deposit money banks up to December 31, 2010 to replace external auditors that had been appointed for more than 10 years, including years spent with constituent legacy banks. This directive was in compliance with paragraph 8.2.3 of the CBN Code of Corporate Governance for Banks which stipulates that the tenure of the auditors in a given bank shall be for a maximum period of 10 years after which, the audit firm shall not be reappointed in the bank until after a period of another 10 years. Banks came under the pressure of the CBN to change their external auditors, especially those classified as sit-tight auditors late last year after its (CBN) joint examination on the banks, in conjunction with the Nigerian Deposit Insurance Corporation (NDIC) revealed that some of the auditors had compromised their positions.

13.0 REVISED BANKING MODEL APPROVED BY THE CBN

As part of the blue-print for reforming the Nigerian financial system which includes the enhancement of the quality of banks, financial system stability and evolution of healthy financial sector, the CBN during the period under review issued new rules and guidelines for the envisaged new licensing regime. The new guidelines repealed the universal banking regime and required banks to divest from all non-banking business. The new guidelines further directed that Special banks/institutions such as the Primary Mortgage Institutions, Microfinance Banks, Non-Interest Banks, Development Banks and Discount Houses shall continue to perform their specialized roles within the framework of existing guidelines while all the existing universal banks are required to prepare and submit to the CBN their plans in compliance with the new banking regime not later than 90 days from October 4, 2010.

It will be recalled that the CBN had in March 2010 as part of the on-going reform agenda circulated a draft exposure detailing its intent to modify the current banking model/arrangement and defining a new banking license regime, going forward. Comments from key industry operators/stakeholders were received, considered and served as inputs towards

the finalization of the exposure draft document.

14.0 MONETARY POLICY RATES RAISED BY THE CBN

In a proactive step to check anticipated inflationary pressure arising from fiscal injections from electioneering spending, implementation of a new salary structure, as well as the Assets Management Corporation of Nigeria's (AMCON's) purchase of non-performing loans among others, the Central Bank of Nigeria (CBN) during the period raised the benchmark interest rate, the Monetary Policy Rate (MPR), by 25 basis points to 6.25 percent.

The MPR has since late 2009 been retained at 6 percent, a strategy the monetary authority adopted to reduce banks' lending rates and boost credit to the economy. CBN also adjusted the asymmetric corridor to 200 basis points above and 300 basis points below the MPR for its Standing Lending Facility and Standing Deposit Facility, respectively. This effectively increases interest payable on standing deposits with the CBN by 200 basis points, and is intended to lure banks to keep more funds with the apex bank and borrow less from it. The CBN again announced that it had resumed the active utilization of Open Market Operations to strategically manage liquidity going forward.

15.0 OPERATING LICENCES OF 103 MICROFINANCE BANKS (MFBS)

REVOKED

The Central Bank of Nigeria (CBN) during the period under review revoked the operating licences of 224 MFBs that were found to be 'terminally distressed' and 'technically insolvent pursuant   to   S.12   of   BOFIA   1991   (as   amended). The unsoundness of the MFBs were attributable to: high level of non-performing loans, resulting in high portfolio at risk (PAR); gross under-capitalisation in relation to the level of operations; poor corporate governance and incompetent boards; high level of non-performing insider-related credits; and other forms of insider abuse and , heavy investments in the capital

market. Other factors, which the apex bank attributed to the present state of the banks included the diminution in the value of the investment after the meltdown, poor asset-liability management owing to portfolio mismatch, heavy investments in fixed assets beyond the maximum limit prescribed, high expenditure on staff and other overheads, weak management evidenced by poor asset quality, poor credit administration, inadequate controls, high rate of fraud and labour turnover, failure to meet matured obligations to customers. The CBN assured the banking public that necessary steps had been taken to protect depositors of the affected banks. Meanwhile the Corporation as the official liquidator of the failed institutions has commenced, immediately, the closing exercise as well as the deposit payouts of the affected MFBs.

16.0 N50 ANNIVERSARY NOTE LAUNCHED

President Goodluck Jonathan during the period under review launched the N50 (Fifty Naira) commemorative note and non-circulating coin as part of activities to celebrate the country's 50th Independence Anniversary, just as the Central Bank of Nigeria (CBN) announced plans to redesign the country's banknotes series to reduce cost and enhance security.

17.0 NIGERIA APPOINTS BARCLAYS CAPITAL TO RUN EUROBOND

The Federal Government has appointed Barclays Capital, the investment banking arm of Barclays Bank as adviser to its debut sale of a $500 million Eurobond. The proceeds from the proposed debt issue were intended to help bridge the huge infrastructure deficit in the country. Eurobonds are bonds issued in a currency other than the issuer's, as well as outside the issuer's home country.

18.0 FORMER BANK CHIEF EXECUTIVE OFFICER JAILED

During the period under review, a Nigerian High Court found Mrs. Cecilia Ibru, the former Managing Director of Oceanic Bank Plc guilty on a three counts charge of giving loans beyond her credit limits, giving wrong accounts and giving out loans of N20bn without due process and

subsequently jailed her for 18 months. Mrs. Ibru was to forfeit assets worth N191.4bn. The assets forfeited by Mrs. Ibru, included 94 choice properties around the world(USA, Dubai and Nigeria) and shares in 100 Companies, 80 of which are listed on the Nigeria Stock Exchange, while 20 of them are non-listed, all valued at the sum of N191.4bn. However, CBN will undertake a valuation of the assets especially foreign properties being aware that values crash during recession. According to the order of the Court, the assets were to be forfeited to the Assets Management Corporation of Nigeria (AMCON) which was set up to assist the recapitalization of the CBN intervened Banks.

This judgment was a vindication of the report of the CBN/NDIC examiners that found serious infractions against her which led to her removal as the Managing Director of the bank by the Governor of the Central Bank of Nigeria on August 14, 2009. It would be recalled that the actions of the CBN in removing the Managing Directors of the eight affected banks had drawn criticisms and allegations of regional, religious and even personal agenda all aimed at eroding the integrity of the banking reforms. This decision by a Court of competent jurisdiction, and the magnitude of the recovery made has put a lie to all those claims.

19.0   RECAPITALIZATION OF UNITY BANK PLC AND WEMA BANK PLC

 the period under review, the Central Bank of Nigeria (CBN) gave an update on the alization of Wema Bank Plc and Unity Bank Plc and noted that Unity Bank Plc had successfully N17.34 billion through a Rights Issue, thereby meeting the regulatory capital requirement and imum capital adequacy ratio of N25 billion and 10%, respectively.

Similarly, CBN disclosed that Wema Bank Plc, on its part, had applied to CBN seeking a banking licence to operate as a regional bank with a regulatory capital requirement of N10billion (Ten Billion Naira). The bank had also been able to raise N7.5 billion fresh capital through a Special Placement Offer. In addition, Wema Bank Plc had made additional recoveries of N4 billion (Four Billion Naira Only). The apex bank, however, added that the all additional capital raised shall

be subjected to capital verification.

20.0 CLASS A BUREAU DE CHANGE LICENCES WITHDRAWN BY THE CBN

The Central Bank of Nigeria during the period under review withdrew the licences of all existing Class 'A' Bureau De Change (BDCs) with effect from November 8, 2010. The withdrawal was part of measures to stem the gross abuses of the enhanced Class 'A' BDC in line with the CBN's avowed commitment to eradicate money laundering. The Class 'A' BDCs, whose licences had been withdrawn were, however, free to apply for Class 'B' licence with the attendant privileges by fulfilling the stipulated licensing requirements. The CBN also undertook to refund within 30 days all mandatory caution deposits previously lodged with the Bank.

It would be recalled that the CBN had on February 26, 2009 restructured BDCs into categories A and B in order to further liberalise the foreign exchange market and enhance its allocative efficiency. The main objective was to facilitate end-user access to foreign exchange supply from official sources in order to boost economic growth by promoting productive efficiency of small and medium scale enterprises. The latest appraisal of the policy initiative, however, revealed gross abuses of the enhanced official funding of the Class A category of the BDCs and the negation of the expected benefits to the economy.

21.0 N75BN INTERVENTION FUND FOR SMALL-AND MEDIUM-SCALE ENTERPRISES

During the period under review, the Minister of Finance disclosed that the Federal Government had set aside the sum of N75bn as a special intervention fund for the development of small and medium-scale enterprises (SMEs). According to the Honourable Minister, the fund which was currently with the Bank of Industry (BOI), would help the sector to become a major contributor to the Nigeria's Gross Domestic Product.

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22.0 DEVELOPMENTS IN THE INTERNATIONAL SCENE

(i)   Caps Imposed On Banker bonuses In EU Countries.

The European Parliament during the period under reviewimposed limits on bonuses payable to bankers within the Union.The limits showed that the EU was leading the way on one of the most contentious reforms proposed to prevent a repetition of the financial crisis, which brought the global economy to its knees. Financial experts agreed that a high-risk, short-term bonus culture, combined with a lack of capital, were at the heart of the global financial crisis in 2008. The banking industry, for its part, has warned that the restrictions could hurt Europe's competitiveness to the benefit of rival financial centres from Wall Street to Hong Kong. The new EU rules will mean a far lower proportion of cash in the bonus, with much less payable up-front. Remaining sums would be "contingent" on subsequent company performance as well as directly linked to salaries. From January 2011, 60 per cent of bonuses should be variable and for future payment only, with at least 40 per cent of such revenue locked away for three years, according to the legislative text. Cash payments are capped at up to 30 per cent of the total bonus.

(ii) Iceland Struck New Deal Over Failed Bank

Iceland in December 2010 struck a fresh deal with Britain and the Netherlands to repay nearly €4 billion lost in the failed Icesave Online Bank after two years of diplomatic wrangling. The agreement would involve full reimbursement to the UK and Dutch governments but on less onerous terms than a previous deal rejected by Icelandic voters in a March referendum. George Osborne, UK Chancellor of the Exchequer, said the agreement signaled a thaw in "glacial" relations between London and Reykjavik since Iceland's banking sector

collapsed in 2008, causing billions of pounds of losses to UK and Dutch depositors. A resolution is considered crucial for Iceland because the dispute has disrupted its economic rescue program with the International Monetary Fund (IMF) and threatened its bid to join the European Union. More than 90 percent of Icelandic voters rejected the earlier plan, angry that taxpayers were being asked to pay for bankers' and regulators' mistakes. The new agreement would need to be approved by the Icelandic parliament and the President of Iceland, Olafur Ragnar Grimsson, whose veto of the previous agreement in January triggered the referendum. It would be recalled that more than 300,000 British and Dutch savers lured by high interest rates placed money with Icesave. They were compensated by their governments on the basis that Reykjavik would eventually repay the money.

(iii) New Banking Rules Issued by Basel Committee

Top central bankers and bank regulators from 27 countries during the period under review met in Basel, Switzerland and agreed on far-reaching new rules for the global banking industry to avert future financial disasters. If ratified by the heads of government of the G20 group of nations at their summit in November 2010, the rules, known as Basel III, will require banks to bolster the amount of low-risk assets they hold in reserve as a cushion against market shocks.

Most big international banks in the United States had already comply with the new rules, but some European banks will need to raise more money either by holding on to profits that they may have otherwise distributed to shareholders, or by selling new stock. The agreement after ratification was due to come into effect from 2013 and would be phased over several years. Generally, the new rules will play a major role in creating a more resilient global banking system. The agreement represents a significant step forward in reducing the incidence and severity of future financial crises.

Specifically, the rules may have the effect of limiting lending, at least in the short term, as most banks - particularly those in Europe - have too little capital for the loans they had already made. The new rules could dampen bank profits and strain weaker institutions. In addition, the rules could engender a more stable global banking system that is less prone to excessive risk-taking. Finally when it becomes operational the rule would help ensure that banks have a greater ability to absorb losses in future crises without taxpayer help.

(iv) Review of European Union Austerity Drive

Amidst the negative reactions and clamour for better conditions across the European Union, member countries continued in their drive towards meeting the budget deficit target of 3% of Gross Domestic Product (GDP) by 2013. Though being one of the convergence criteria of the European Union, little heed was paid to it before now, with the budget deficit positions of most nations going far beyond this. However, the European Commission in September 2010 proposed tough new sanctions for countries which fail to comply with the European Union's rules on reining in deficits and cutting public debt, in an attempt to prevent a repeat of the Greek sovereign debt crisis.

As a result, tough economic measures and austerity plans have been drafted to reduce Government spending, increase income and eliminate income gaps and leakages. The spending cuts will be dependent on the disparity between the current deficit position and the target as set by the European Union.

(v) Ireland Requests Billions In Euro Loans From EU

During the period under review, Ireland formally requested substantial financial assistance from the European Union and International Monetary Fund to bolster its struggling banking sector. The European Union Finance ministers said they would "welcome the request," according to a statement issued soon after the announcement of the request believing providing assistance to Ireland was warranted to safeguard financial ability in the EU and in the euro zone.

The European Central Bank's governing council likewise embraced the request, saying in a statement that a loan deal will contribute to ensuring the stability of the Irish banking system and permit it to perform its role in the functioning of the economy. The IMF also expressed its readiness to join this effort. In addition to EU and IMF assistance, the United Kingdom and Sweden had agreed to consider giving their own loans to Ireland.

FINANCIAL CONDITION AND PERFORMANCE OF INSURED BANKS IN THE THIRD AND FOURTH QUARTERS OF 2010

BY

RESEARCH, POLICY & ITERNATIONAL RELATIONS AND INSURANCE & SURVEILLANCE DEPARTMENTS

1.0 INTRODUCTION

A major development in the third quarter of 2010 was the official launch of the roadmap for the adoption of the International Financial Reporting standards in Nigeria by the Federal Ministry of Commerce. This action signifies that a lot of changes will be expected in the current nature and content of reporting once the phased transition which takes off from January 2012 begins. The fourth quarter saw the full take off of Asset Management Corporation of Nigeria (AMCON). The purchase of N2.16 billion toxic assets and margin loans from the banking industry by this Corporation led to an improved performance in this quarter.

In the third quarter ended September 2010, Total Assets stood at N15.18 trillion while in the subsequent quarter ended December 31, 2010 a minimal increase of 0.26% was recorded thus Total Assets stood at N15.52trillion. The industry's total Loans and Advances declined by 8.65% from N6.59trillion in the third quarter to N6.01 trillion in the fourth quarter. The industry total Non-Performing Credits significantly reduced from N3.25trillion in the third quarter to N1.07 billion in the fourth quarter sequel to the purchase of toxic assets by AMCON. This therefore impacted positively on the industry's Asset Quality as the ratio of

Non-Performing Credits to Total Credits followed suit and showed a significant improvement of 20.54 percentage points from 35.58% in the third quarter to 15.04% in the fourth quarter. The industry experienced a significant improvement of 541.33% in profitability during the period under review wherein the fourth quarter recorded a Profit-Before-Tax of N607.34 billion as against the position of N94.70billion of the third quarter. Capital to Risk-Weighted Asset Ratio increased by 4.12 percentage points from 0.20% in the third quarter to stand at 4.32% in the fourth quarter. The industry average Liquidity Ratio increased by 5.19 percentage points from 46.58% to 51.77% in the third and fourth quarters respectively.

Apart from this introduction, the rest of this paper comprises three sections. Section 2 presents the Structure of Assets and Liabilities; Section 3 assesses the financial condition of insured banks while Section 4 forms the concluding part.

2.0 STRUCTURE OF ASSETS AND LIABILITIES

The Total Assets of the industry increased from N15.08 trillion in the third quarter to stand at N15.52trillion in the Fourth quarter. The structure of industry total assets and liabilities at the end of the third and fourth quarters of 2010 are presented in Table 1 and Charts 1(A) and 1 (B) below.

TABLE 1

STRUCTURE OF BANKS' ASSETS AND LIABILITIES AS AT THE ENDS OF SEPTEMBER AND DECEMBER 2010

Assets (%)	3rd Quarter 2010	4th Quarter 2010	Liabilities (%)	3rd Quarter 2010	4th Quarter 2010
Cash and Due from Other Banks	13.46	12.86	Deposits	70.14	69.82
Inter-bank Placements	6.30	7.48	Inter-bank Takings	5.28	5.80

Government Securities	6.51	7.34	CBN Overdraft	0.22	0.03
Other Short-term Funds	2.22	1.99	Due to Other Banks	0.34	0.27
Loans and Advances	43.46	38.72	Other Borrowed Funds	0.00	0.00
Investments	16.65	21.76	Other Liabilities	14.16	14.43
Other Assets	7.01	5.49	Long-term Loans	7.06	6.88
Fixed Assets	4.48	4.36	Shareholders' Funds (Unadjusted)	1.61	1.61
			Reserves	1.20	1.16
Total	**100.00**	**100.00**	**Total**	**100.01**	**100.00**

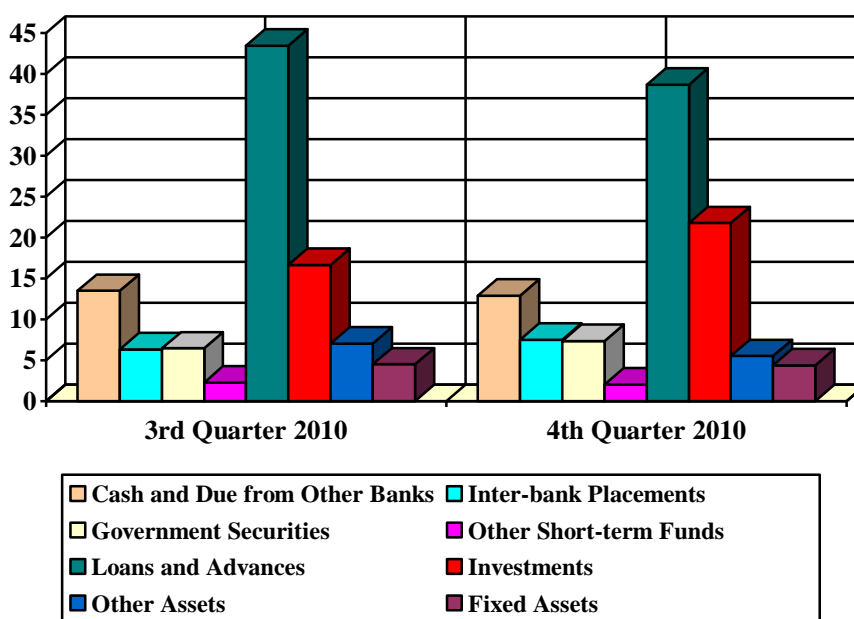Source: Banks' Returns

NOTE:

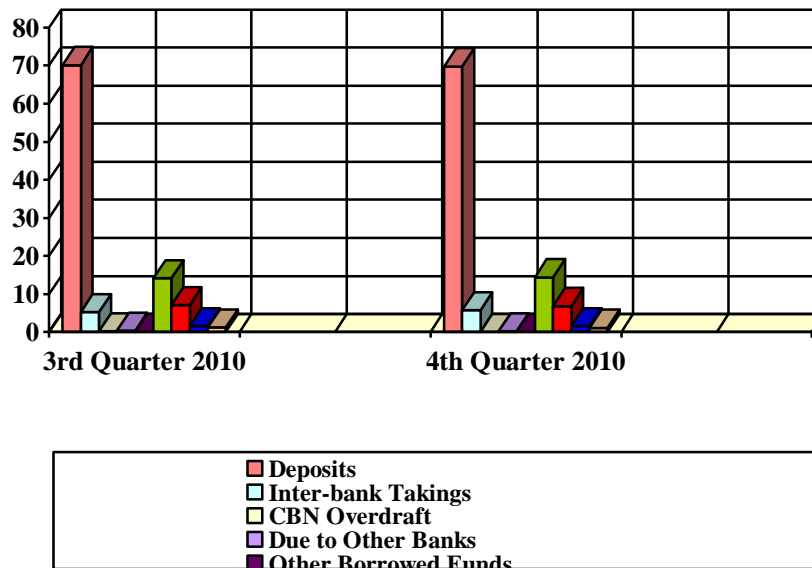TOTAL ASSETS

(N'Trillion)

3rd Quarter = 15.18

4th Quarter = 15.22

CHART 1A: STRUCTURE OF BANKS' ASSETS FOR THE 3rd AND 4thQUARTERS OF 2010

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CHART 1B: STRUCTURE OF BANKS' LIABILITIES
FOR THE 3rd AND 4th QUARTERS OF 2010

Legend:
- Deposits
- Inter-bank Takings
- CBN Overdraft
- Due to Other Banks
- Other Borrowed Funds

The largest proportion of total assets during the two quarters under review was **Loans and Advances** with this component accounting for 43.46% and 38.72% in the third and fourth quarters respectively. The relative contribution of Total Investments of 16.65% and 21.76% in the third and fourth quarters respectively made it the fourth largest contribution while **Cash and Advances** which reduced from 13.46% to 12.86% between the two quarters came in as a close third. For the other components of the industry total assets, apart from **Interbank Placements** which increased between the third and fourth quarters from 6.30% to 7.48%, all others declined with Other Assets falling from 7.01% to 5.49%, Fixed Assets marginally from 4.48% to 4.36%, and **Other Short Term Funds** from 2.22% to 1.99%.

On the liabilities side of the balance sheet, **Deposits** had the largest proportion accounting for 70.14% in the third quarter and increased marginally by 0.32 percentage points to 69.82%, while **Other Liabilities** however showed a 0.27 percentage point increment between the two quarters with 14.16% in the third

quarter and 14.43% in the fourth quarter. **Long Term Loans** accounted for 7.06% in the third quarter, declining marginally to 6.88% in the fourth quarter, and **Interbank Takings** increased from 5.28% to 5.80% between the two quarters. **Reserves** however showed a decline from 1.2% of the total liabilities in the third quarter to 1.16% in the fourth quarter.

3.0 ASSESSMENT OF THE FINANCIAL CONDITION OF INSURED BANKS

3.1 Asset Quality

The industry's total Loans and Advances experienced an 8.65% increase between the third and fourth quarters from N6.59trillion to N7.16 billion. The quality of these assets improved significantly as the industry ratio of Non Performing Credits to Total Credits improved by 20.54 percentage points from 35.58% in the third quarter to 15.04% in the fourth quarter. This was also the case for non-performing credits to shareholders' fund which recorded a significant decline from 873.9% to 250.85% between the two quarters due to decrease in total non-performing credits within the period under review. Table 2 and Chart 2 present the indicators of insured banks' Asset Quality for the third and fourth quarters of 2010.

TABLE 2

INDICATORS OF INSURED BANKS' ASSET QUALITY FOR THE 3RD AND 4TH QUARTERS OF 2010

Asset Quality Indicators (%)	Industry	
	3rd Quarter 2010	4th Quarter 2010
Non-performing Credit to Total Credit	35.58	15.04
Provision for Non-performing Loans to Total Non-performing Credit	86.36	91.11
Non-performing Credit to Shareholders' Funds	873.90	250.85

Source: Banks Returns

CHART 2: INSURED BANKS, ASSET QUALITY FOR THE3rd AND 4thQUARTERS OF 2010

□ Non-performing Credit to Total Credit
■ Provision for Non-performing Loans to Total Non-performing Credit
■ Non-performing Credit to Shareholders' Funds
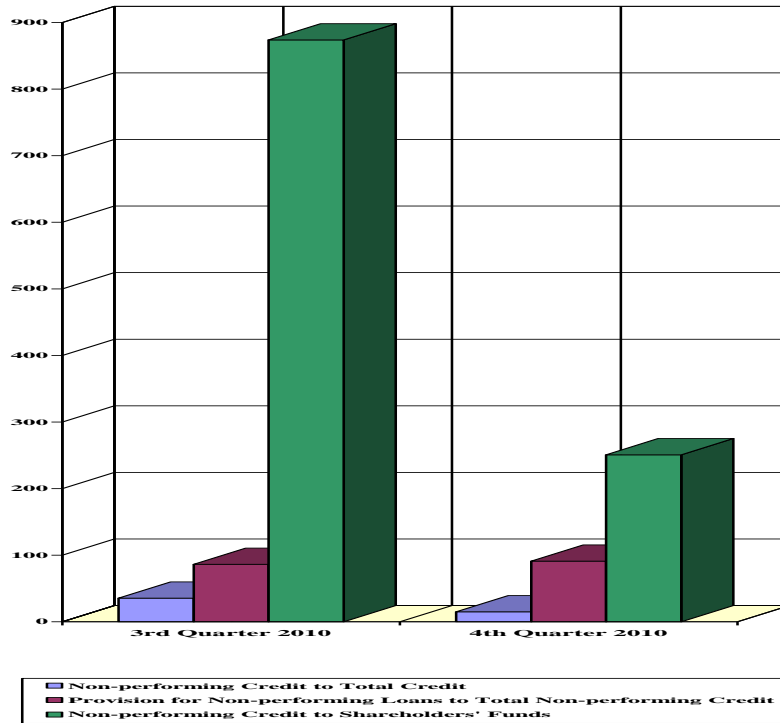
3.2   Earnings and Profitability

The industry recorded an improvement of 541.33% in profitability between the third and fourth quarters of 2010 with **Profit-Before-Tax** of N94.70billion and N607.34 billion respectively. These were composed of **Interest Income** of N288.05billion and N1, 440.39 billion, **Non-Interest Income** of N107.38billion and N462.76 billion, and **Operating Expenses** of N252.84billion and N932.53 billion in the third and fourth quarters respectively. Also N51.70 billion worth of recoveries were made as against the N15.04 billion of the previous quarter. It is worthy of note that though there was considerable increase in Operating expenses between the two quarters, the significant improvements in both

Interest incomes and Non-Interest incomes created a positive overall effect on profitability.

TABLE 3

INSURED BANKS' EARNINGS AND PROFITABILITY INDICATORS FOR THE 3RD AND 4TH QUARTERS OF 2010

Earnings/Profitability Indicator	Industry	
	3rd Quarter 2010	4th Quarter 2010
Return on Assets (%)	0.62	3.91
Return on Equity (%)	25.61	162.98
Net Interest Margin	1.53	6.43
Yield on Earning Assets (%)	2.34	11.24
Profit Before Tax (N' billion)	94.70	607.34
Interest Income (N' billion)	288.04	1, 440.93
Operating Expenses (N' billion)	252.84	932.53
Non-Interest Income (N' billion)	107.38	462.76

Source: Banks Returns

As shown in Table 3, can be seen from the above, Return on Assets (ROA) also increased significantly by 3.29 percentage points between the third and fourth quarters of 2010, with Return on Equity (ROE) and Yield on Earning Asset (YEA) also following the same upward trend with 137.37 and 8.90 percentage points respectively. The above data in Table 3 is represented in Chart 3 below.

CHART 3: INSURED BANKS' EARNINGS AND PROFITABILITY FOR THE 3rd AND 4th QUARTERS OF 2010

Legend:
- ☐ Return on Assets (%)
- ☐ Return on Equity (%)
- ☐ Net Interest Margin
- ☐ Yield on Earning Assets (%)
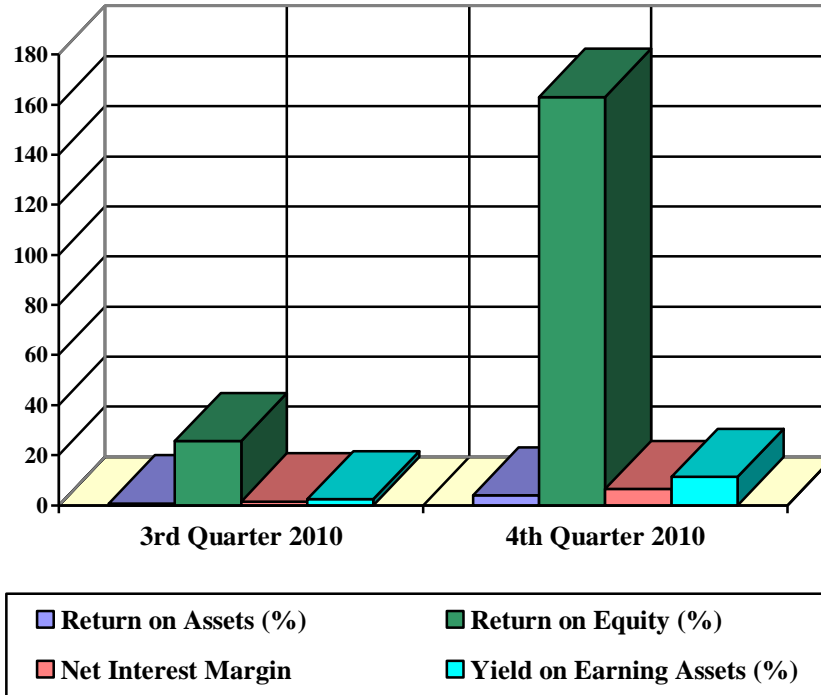
3.3   Liquidity Profile

The industry Average Liquidity Ratio increased by 5.19 percentage points from 46.58% to 51.77% between the third and fourth quarters, both remaining above the required 25% minimum requirement. The Net Credit to Deposit Ratio also declined by 0.24 percentage points from 59.47% to 59.23%, while Interbank Takings to Deposits Ratio however increased by 0.78 percentage points from 7.53% to 8.31%. However, the number of banks that could not meet up to the required Liquidity Ratio of 25% remained at 3 within the same period. This is as shown in the table below.

TABLE 4

INDICATORS OF INSURED BANKS' LIQUIDTY PROFILE FOR THE 3rd AND 4th QUARTERS OF 2010

Liquidity	Period	
	3rd Quarter 2010	**4th Quarter 2010**
Average Liquidity Ratio (%)	46.58	51.77
Net Loans to Deposit Ratio (%)	59.47	59.23
Inter-bank taking to Deposit Ratio (%)	7.53	8.31
No of Banks with Liquidity Ratio of the prescribed 25%	3	3

Source: Banks Returns

3.4   Capital Adequacy

All the indicators in this category experienced improvements between the two periods under review. The industry recorded Capital Adequacy Ratios of 0.20% and 4.32% in the third and fourth quarters respectively all of which fell below the required minimum of 10%. These and other Capital Adequacy indicators are as depicted below.

TABLE 5

INDICATORS OF INSURED BANKS' CAPITAL ADEQUACY POSITION FOR THE 3RD AND 4TH QUARTERS OF 2010

Capital Adequacy Indicators	Period	
	3rd Quarter 2010	**4th Quarter 2010**
Capital to Risk weighted Average Ratio (%)	0.20	4.32
Capital to Total Asset Ratio (%)	2.44	2.91
Adjusted Capital to Loan Ratio (%)	1.83	2.25

Source: Banks Returns

**CHART 4: INSURED BANKS' CAPITAL ADEQUACY FOR THE
3RD AND 4TH QUARTERS 0F 2010**

Legend
☐ Capital to Risk weighted Average Ratio (%)
☐ Capital to Total Asset Ratio (%)
☐ Adjusted Capital to Loan Ratio (%)
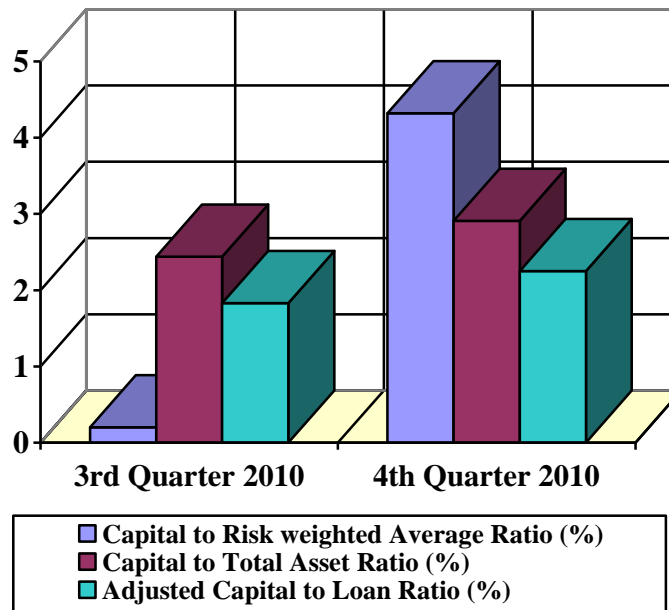
4   CONCLUSION

In summary from the above it can be seen that the condition and performance of the insured banks showed significant improvements in most indices between the third and fourth quarters of 2010. This was as indicated by the increases recorded in the industry Total Assets, Quality of Assets, and Capital Adequacy and all the profitability indicators between the periods under review.

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SURVEY OF RISK MANAGEMENT PRACTICES IN THE NIGERIAN BANKING INDUSTRY

By

M. M. IBRAHIM and H. I. AHMAD[*]

1.0   INTRODUCTION

Banks in the process of financial intermediation are involved in the allocation of scarce savings and the management of risk. In the process they are confronted with various types of financial and non- financial risks viz. credit, interest rate, foreign exchange rate, liquidity, equity price, commodity price, legal, regulatory, reputational, operational etc. These risks are highly interdependent and events that affect one area of risk can have ramifications for a range of other risk categories. For this reason considerable importance is attached to the improved ability of top management of banks to identify, measure, monitor, and control the overall level of risks undertaken

The process by which the banks identify, measure, monitor and control risk to an acceptable level is termed risk management, while the mechanisms established by an institution to perform this function refers to the risk management system Martinson (1995). Risk management (RM) is used to describe the application of financial/business analysis and diverse financial instruments leading to the control and, typically, the reduction of selected types of risks. The term also entails the identification of the key risks, deciding where risk exposure should be increased or reduced, and finding methods for monitoring and managing the institution's risk profile.

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[*] Messrs Ibrahim and Ahmad are Deputy Director and Assistant Director in the Research and Bank Examination Departments of the Corporation respectively

The adequacy or otherwise of an institution's risk management system including its internal control processes is one of the major preoccupation of banking /financial sector supervisors and regulators, the world over, in evaluating an institution's management process. Supervisory interest in promoting better risk management is motivated more by macro considerations of the safety and soundness of the banking system that is crucial to economic growth and to the stability of financial markets. For this reason, supervisory initiatives have evolved over the years to complement market discipline in reinforcing the institution's own internal processes in promoting the safety and soundness of the banking system internationally.

In Nigeria, a key objective of the Central Bank of Nigeria (CBN) and the Nigeria Deposit Insurance Corporation (NDIC) as supervisors, in the medium term, is to transit to the risk-based supervisory approach (RBS). In addition, best practice, as spelt out under the Basel Core principles for effective banking supervision, requires that supervisors satisfy themselves that financial institutions have in place a comprehensive risk management process to identify, measure, monitor and control all material risks. To satisfy these objectives, the two institutions jointly developed a framework for RBS and the generic guidelines for the development of risk management for Nigerian banks in August 2006. That was released to the industry through a CBN circular of September 2007.

The need to ascertain the readiness of the banking industry on the requirements of the RBS, through the institution of an appropriate risk management framework and to determine the extent of compliance with the CBN circular on RM, informed the decision to conduct a preliminary survey of risk management practices. The survey sought answers to questions on the existence or otherwise of Risk Management Framework (RMF) in Nigerian banks. If it exists, what is the level or extent of its development in the banks?

To what extent are the Boards and Senior Management of Banks aware of the need for a sound RMF? What are the areas that require further attention by all stakeholders?

1.1 Objectives of the Survey

The specific objectives were:

- To determine the baseline scenario of risk management practices in the Nigerian banking industry, post-consolidation

- To determine the level of awareness of the importance of employing systematic methods of identifying, analyzing, managing and controlling or mitigating risks.

- To ascertain the level of compliance with the guidelines on developing a risk management framework for banks issued jointly by the CBN and NDIC in 2005.

1.2 Methodology of the Survey

To undertake the survey, a structured questionnaire that drew largely from the Risk Management Self Assessment Template of the Office of the Superintendent of Financial Institutions (OSFI) of Canada, complemented by approaches from other jurisdictions, as well as the Corporation's in-house experience were used. This approach became necessary due to the inherent limitations of questionnaires generally and low level of professional detachment in the industry. It also allowed us to obtain a reasonable picture of the existence or otherwise of any claim on risk management through a series of logical questions independent of the opinions of the respondent institutions. A structured questionnaire for the banks was administered on the Chief Risk Officers or Compliance Officers of each of the 24 banks in operation as at the end of December 2007.

The questionnaire raised questions on the risk profile of the banks and the processes involved in their management as well as other issues that included the following:

i.   Existence of clearly defined risk management guidelines
ii.   Spectrum /types of risk categories
iii.   Types of risk management structures in place
iv.   Risk management systems employed by banks
v.   Nature of independent review of risk management activities
vi.   How banking institutions manage risk across industries, sectors and subsidiary/units, particularly in times of stress.

In terms of data analysis of the survey, a non-parametric descriptive statistical approach was employed.

1.3   Limitations of the Survey

The survey was not an in depth examination or evaluation of the risk management systems in banks rather, it was based on the expertise, experience and knowledge of the respondents. This is in conformity with the survey methods distilled from the empirical literature. Hence, no attempt was made to give a graphic account of what goes on within the actual bank setting.

The survey was conducted in two stages with the first between May and June 2008 and the second between July and August 2008. However due to slow response of the banks, the exercise could only be concluded in September 2008. The responses to the questionnaires were analyzed using non parametric descriptive statistics, with graphics used to present a picture of the non qualitative responses.

1.4   Organization of the Paper

The report is structured into five sections with this introduction as Section One. Section Two reviews concept of risk management and relevant empirical surveys from the literature. Actual analysis of the survey is continued in Section Three and the Summary of findings is presented in Section Four. Section Five concludes the paper.

2.0   CONCEPT OF RISK MANAGEMENT AND EMPIRICAL SURVEYS

2.1   Concept of Risk Management

A risk management framework encompasses the scope of risks to be managed, the process/systems and procedures to manage the risk and the roles and responsibilities of individuals involved in risk management. The framework should be comprehensive enough to capture all risks a bank is exposed to and have flexibility to accommodate any change in business activities. An effective risk management framework includes:

a)   Clearly defined risk management policies and procedures covering risk identification, measurement, monitoring, reporting and control.

b)   A well constituted organizational structure defining clearly roles and responsibilities of individuals involved in risk taking as well as managing it.

c)   An effective management information system that ensures flow of information from operational level to top management and to address any exceptions observed.   There should be an explicit procedure regarding measures to be taken to address such deviations.

d)   A mechanism to ensure an ongoing review of systems, policies and procedures for risk management and procedure to adopt changes.

In practice, banking business presents various combinations and concentrations of different types of risks depending on the nature and scope of the activities of

the institutions. Risk management systems can therefore vary considerably in sophistication, depending on the size and complexity of the banking organization and the level of risk that it takes. For smaller institutions engaged solely in traditional banking activities and whose senior managers are actively involved in the details of day to day operations, relatively basic risk management systems may be adequate. In such institutions, these systems may consist only of written policies addressing material areas of operations such as lending or investment, basic internal control systems, and a limited set of management and board reports.

However, large multinational organizations will require far more elaborate and formal risk management systems in order to address their broader and typically more complex range of financial activities and to provide senior managers and directors with the information they need to monitor and direct the day to day activities. In addition to the typical market and credit risks banking organizations encounter, risk management systems should also encompass the their trust and fiduciary activities, including investment advisory, mutual funds, and securities lending activities.

2.2   Empirical Surveys on Risk Management

Empirical survey on risk management usually take the form of administered instruments on various aspects of risk management practices to respondent institutions' chief risk officers, auditors, executives or Risk reviewers. The survey generally provides useful insights into institutional practices and their relative strengths and weaknesses. The results also form the basis for periodic reviews and enhancements of risk management processes. The frequencies of the surveys could range from a one-off exercise to more frequent intervals depending on the purpose.

In this regard, many organizations both within and outside Nigeria have in recent years engaged in empirical surveys in the financial services sector. For example the Office of the Comptroller of the Currency (OCC) in the USA engages in an annual survey of credit underwriting practices on the largest U.S. national banks and covers the 12-month period ending March 31. The survey identifies trends in lending standards and credit risk for the most common types of commercial and retail credit products offered by national banks. The 2006 survey, which was the twelfth in the series, included results from the 73 largest national banks. Although mergers and acquisitions had altered the survey population, the survey had covered substantially the same group of banks for the preceding ten years. All companies/banks in the 2006 survey had total assets of $3 trillion as of year-end 2005, which represented over 90 percent of all outstanding loans in the national banking system.

The OCC examiners in-charge of the surveyed banks were asked a series of questions concerning overall credit trends for 18 types of commercial and retail credit products. For purposes of the survey, the OCC grouped commercial credit into 11 categories of loans while retail credit consists of 7 categories of loans. The result of the survey indicates a third consecutive year of easing underwriting standards, as banks continue to stretch for volume and yield. While the current performance of commercial and retail portfolios remains sound, examiners note that credit risk has increased and is expected to continue to increase over the next 12 months.

The Federal Reserve similarly collects information from commercial banks before every other Federal Open Market Committee (FOMC) meeting on the standards and terms on, and demand for, loans to businesses and households in its Senior Loan Officer Survey on Bank Lending Practices. The Senior Loan Officer Survey poses a broad range of questions to loan officers at 60 large domestic banks and 24 US branches of foreign banks. On the topic of banks' tolerance for risk,

the survey asks about changes in risk premiums on business loans, and about changes in business loan standards.

Although these surveys are not frequent enough to use for monitoring a quickly unfolding financial crisis, the core set of questions have been asked on each survey since 1990, and the responses to those questions, expressed as the net percentage of respondents tightening standards or terms, have proven to be a useful measure of financial conditions and a correlate of economic activity. In addition, the responses to specific/targeted questions during periods of financial stress have helped the Federal Reserve gauge the degree of difficulties and their implications. Finally, although the surveys are typically conducted quarterly, the Federal Reserve has authority to conduct up to six surveys a year, and has done special surveys when warranted by financial conditions.

Also 'The Financial Insights' in its 2006 survey of Asian banks senior executives responsible for coordinating their change management programmes for risk management, unveils the extent of the groundwork that has been laid for Basel 11. Besides addressing the Pillar 1 initiatives, respondents further shed light on IT investments and vendor selection criteria. Using the survey findings as a guide and supplementing with industry knowledge and experience, the survey proposed key prescriptions for banks keen to get their risk management implementation up to speed and suggestions for vendors' intent on capturing that risk spending. The results were expected to provide a useful benchmarking tool, best practices information and hopefully a call to action for banks and the vendor community serving them.

Similarly, in its effort to make banking supervision more risk-focused effective, in 2004, the Hong-Kong Monetary Authority (HKMA) conducted a Risk and Challenges study with a view to identifying the risks that would have a material impact on banking supervision in the medium term. The study identified a

number of areas where the HKMA believed risks might be rising and where a reprioritization of supervisory resources and focuses was deemed necessary. The results of the study enabled the HKMA to reorganize its Banking Supervision Department by assigning specific responsibilities to individual divisions within the department to manage one or more of the risks identified in the study. The HKMA believed such a functional "ownership" structure would improve accountability, help minimize any possible overlaps or gaps in tackling these risk factors and facilitate the accumulation of a strong knowledge base on the identified risks. As for the institutional supervisory function, the HKMA adopted a "clustering approach" whereby institutions with similar risk characteristics are grouped together and supervised by the same supervision division. This arrangement it was believed will help to build up the HKMA's supervisory knowledge base in the longer run, thereby improving the effectiveness and efficiency of its supervisory process.

In the same vein, The Hindu Business Line of India of September 04, 2003 reported the results of an Indian Bankers Association (IBA)-CRISIL (a Rating agency) survey on Integrated Risk Management (IRM) in Indian banks. The report indicated that most Indian banks have internal rating models for large corporate but not for all types of borrowing entities. However, there were varying degrees of preparedness in the area of risk management among different banks. Foreign banks generally led in the area of IRM as almost all of those surveyed had such policies, compared to a minority of public sector banks and just over half of private banks. As reported by the paper, Operational risk is a developing area and a majority of banks have a long way to go. When it comes to measuring and managing market risk, adoption was very limited in India. Finally, the report concluded that integrated risk management frameworks were far more common in foreign banks than Indian ones.

In order to determine the needs of the local banking sector with regard to risk management in Kenya, the Central Bank of Kenya also conducted a survey in September 2004 that was supposed to provide a status position on the extent to which risk management was practiced in the financial institutions operating in that country. The survey revealed that there was a high level of awareness in banking institutions on the importance of employing systematic methods of identifying, analyzing and controlling or mitigating risks. Nevertheless the survey brought out a number of gaps that demonstrated the need for enhancing risk management in the financial institutions. These included inadequate risk management policies and procedures (particularly for non-credit risks), absence of functions and personnel dedicated to risk management in many of the institutions, absolute reliance on Central Bank of Kenya prudential returns to monitor risks against the development of own risk management reports. Furthermore, besides contingency planning, the other risk management tools were not commonly applied. Significantly not all institutions utilized independent review of their risk management functions, while a number of institutions did not set aside specific budgetary allocations to fund risk management activities.

In Nigeria, the Credit Risk Managers Association (CRIMA) conducted a survey on Risk Management Practices in Nigerian Banks during the last quarter of 2004 to understand the 'pre-consolidation' industry wide risk management practices. The survey also served to prepare practitioners on what to expect, post consolidation. Most banks were not operating under a well-structured risk management framework pre-consolidation era. This means that during the post-consolidation era such structures and systems would have to be built up almost from the scratch.

CRIMA's survey had the specific objectives of, identifying the pre-merger status of risk management practices across the banking industry, benchmark each banks' practices against the industry and to facilitate standards setting for post

merger risk management. A questionnaire was administered on 78 banks and the issues raised therein were based on some best practice benchmarks in risk management. Of the 78 questionnaires administered, 36 banks responded i.e. 46%. This overall response rate represented 42% of the total number of operating banks then (86). The survey's pattern of responses confirmed a high level of awareness about risk management by Nigerian banks but highlighted the need for high level priority for enhancement in a number of areas to enable banks substantially upgrade their standards. The report concluded that the current state of risk management needed significant improvement and it was expected that the consolidated banks would rise to the occasion.

3.0   ANALYSIS OF THE SURVEY

A total of 24 questionnaires were distributed to all the universal banks in the system and 21 banks representing a response rate of 87.5 % was achieved. It is expected that many inferences drawn from this response rate would adequately depict the entire industry. In terms of the validity of the questionnaires and their information content for analysis, no one questionnaire was completely invalidated. However, there were responses of some banks to certain questions that were found not to be valid for analysis. This was due to the omission of the respondent banks to respond to a question or that the pre-requisite question to an answer was skipped.   A detailed analysis of the responses is presented as below:

3.1   Risk Governance Structure/Profile

This section seeks to establish the existence of a formal risk management framework in the banks, in compliance with the CBN guidelines on risk management. The issues raised, ranged from whether the structure was centralized or otherwise to whether it was integrated or non-integrated and whether it incorporated on internal capital adequacy assessment (ICAAP) or not. Also, attempts were made in the subsequent questions under this sub-section to

establish the comprehensiveness of the framework in term of scope and coverage of the key elements of risk management process as contained in the CBN guidelines.

With regards to the existence of a formal risk management framework in the industry, 21 responses were received and analyzed. 19 responses or 90% of the respondent banks claimed to have a formalized framework in place. This indicates an awareness of the need for the existence of a sound framework for managing risk, particularly given the size and complexity of the banks in the industry, post-consolidation. Only two banks indicated the absence of a formal framework, as they were still in the process of formalizing their framework. This also points to the fact that majority of the banks have complied with the CBN guidelines on risk management, which is major precondition for both the take-off of Risk Based Supervision (RBS) and the implementation of Basle capital accord.

Banks were also asked to indicate whether the risk management framework they claimed to have was approved by their board of directors, documented and put to use. On this, 19 responses were valid for analysis out of which 18 or 94.73% of the banks respondent stated that they have a documented framework that were approved by Board, while 17 or 89.42% of the banks indicated that their framework were in operation. This confirms the formalized nature of the respective banks risk structure alluded to in the earlier question. These responses are displayed in Chart 1.

Chart 1

Profile of Risk Management Framework in Nigerian Banks

%

96
94
92
90
88
86

A   B   C

A   Approved by Board
B   Documented
C   In operation/use
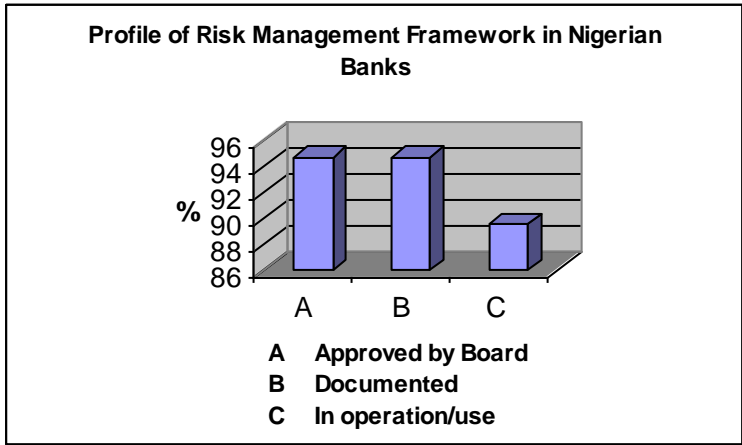
Responses to the question on structure of the risk management framework in place were varied. The responses are depicted graphically in Chart 2. The responses indicate a variation in practices with the relative preference for a centralized risk management structure within the industry.

Chart 2

Structure of Risk Magt Framework in Nigerian Banks

%

50
40
30
20
10
0

A   B   C

A   Centralized
B   Semi Centralized
C   Decentralized
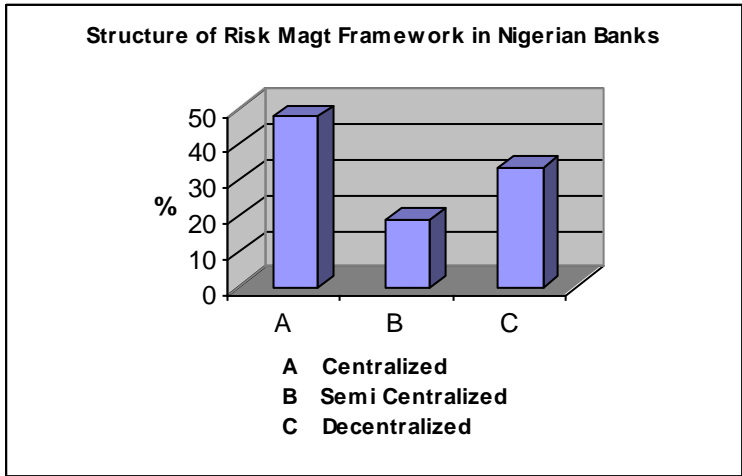
In terms of the level of integration of their respective RMF, 17 or 80.95% of the 21 respondent banks indicated an integrated Risk Management Framework, while only 4 or 19.04% of the banks indicated having non-integrated systems, with the risk elements being managed along functional lines (risk elements in silos). Chart 3 is a graphical representation of these responses. This indicates a tilt towards the dominance of Enterprise-Wide Risk Management System in the Nigeria banking industry, in line with best practice.

Chart 3

Structure of Risk Magt. Framework in Nigerian Banks

A   Integrated
B   Non-Integrated
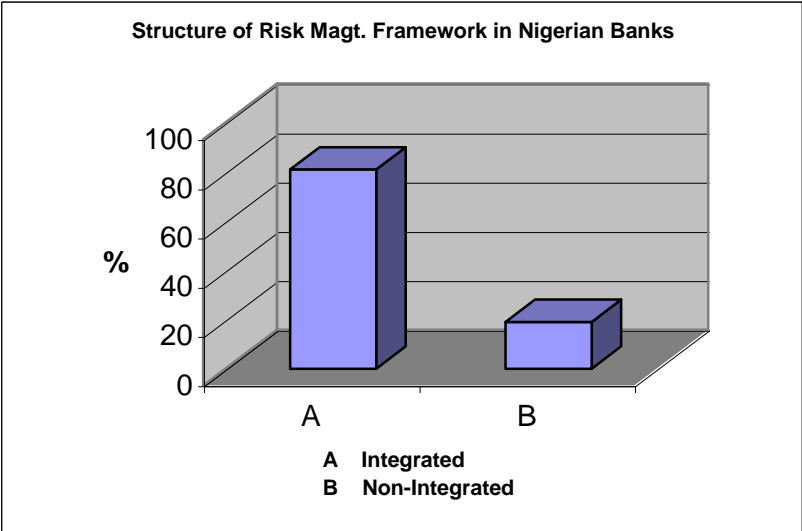
To ascertain the robustness of the banks' respective Risk Management Frameworks, and their readiness for an Internal Capital Adequacy Assessment Process (ICAAP) that shapes their operational strategies, banks were asked to indicate if an ICAAP was part of their Risk Management Framework. Only 8 or 38.09% of the 21 respondent banks indicated the existence of ICAAP processes in their Risk Management Framework. However, our review of the responses indicated that only 1 bank clearly articulated the key features of its ICAAP. Such features included:

1.   An appropriate identification and measurement of risk
2.   Aggregating all risks and measuring overall level of capital required to absorb unexpected losses at target debt rating confidence level

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3.   Applying stress tests and determining stress capital buffer

4.   Determine planning buffer from business plans

5.   Set target capital ratio for risk, stress and planning needs

6.   Ensure capital levels maintained in excess of target ratio.

Another respondent bank claimed the use of risk weighted asset calculation to determine its capital requirement in line with Basle II. It also uses Value at Risk presumably for market risk. The lack of appreciation of robust ICAAP procedures poses a challenge to supervisors. Under the supervisory review process of Basle II, they have a responsibility to ensure the existence of an ICAAP process in banks and be in position to review the process on regular basis.

Banks were also asked to indicate how ICAAP relates capital to the aggregate level of risk they carry in their businesses. Of the 15 banks that responded to this question, only 5 or 33.33% indicated how their respective ICAAP aggregates all risk elements in assessing their respective Capital adequacy.

To further confirm the existence of the five key elements of a sound Risk Management Framework within the banking industry. Banks were asked to select any or a combination of the key elements of Risk Management Process that were embedded in their systems. All the 21 respondent banks confirmed the presence of all the broad elements in their systems. The key elements of the Risk Management Process were also found to apply to all the risk categories.

Banks were asked to indicate whether their Risk Management Framework covers procedures such as Assessment/Identification, Origination, Administration, Analysis, Measurement, Control & Monitoring and Review/Audit. Out of the 21 banks that responded to the question, 10 or 47.61% of the banks claimed to have all the listed procedures embedded in their Risk Management Framework (RMF). The remaining 11 or 52.38% of the banks had exceptions that range

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from the absence of measurement and review mechanism, administration, analysis in respect of market, operational, liquidity and interest rate risk in the banking book elements. However, out of the 11 banks with such exceptions in their scope of coverage on the procedures, 4 or 36.36% of the banks have met all the procedures with respect to credit risk element, while the 7 or 63% of the banks admitted having gaps with respect to origination, administration analysis as well as measurement of credit risk.

Overall assessment of the organizational structure and risk profile within the 21 respondent banks indicate variations in the levels of centralization and integration of the RMFs. The trend points to more centralization and integration of processes in line with best practices. Also there is a clear lack of appreciation of the need for an Internal Capital Adequacy Assessment Process (ICAAP) to form a basis for determining their respective Economic Capital requirement level. However banks in the industry generally have a formal RMF in place depicting a clear awareness of the need for its existence.

3.2   Board Oversight

This section seeks to establish the depth of involvement and understanding of the Enterprise Risk Management Framework (ERMF) of the respective respondent banks by their board of directors in driving the strategic direction of their respective institutions.   In other words, it sought to establish how proactive the boards of directors of the banks were in their oversight. To achieve this objective, banks were asked series of questions to elicit information on their respective Board oversight.

Banks were asked to indicate whether their respective boards of directors had defined their risk appetite and tolerance level within their ERMF. Out of the 21 respondent banks, 15 or 71.42% of the banks indicated that their boards of

directors have defined the appetite and tolerance levels for each of the significant risks within the ERMF.

To certify that the board had clearly defined the strategic direction of the banks in terms of risk appetite/tolerance levels, banks were asked to state their respective enterprise-wide definition of the key risk elements they were exposed to. Of the 21 banks that responded to our questionnaire, 16 or 76.19% of the banks have given an enterprise wide definition of the listed risk elements. Only 5 or 23.80% of the banks could not provide any definition of the listed risk elements, even though one of the banks claimed that its board had defined the bank's overall strategic direction on each of the listed risk elements, thus confirming the clear understanding of the risk appetite and tolerance levels of the banks.

Banks were also asked to indicate whether their respective boards had provided senior management with guidance and direction regarding the principles underlying their respective risk management framework. Out of the 21 banks that responded only one (1) bank answered on the negative, that is, its board of directors failed in providing the needed guide to the senior management. The survey also revealed that a significant number of banks 18 or 85.71% of the banks out of 21 that responded have the active involvement of their boards in the risk management function of the banks.

To further confirm the active involvement of board in the risk management of their institutions, banks were asked to state the frequency of the board's review of the Firm-Wide Risk Management Framework. An analysis of the responses indicated that in 13 or 68.42% out of 19 respondent banks, quarterly review of the Firm Wide Risk Management Framework was the norm. A graphical picture of the responses to this question is displayed in Chart 4.

Chart 4

Frequency of Board Review of Risk Magt. Framework

A Monthly
B Quarterly
C Semi-Annually
D Annually
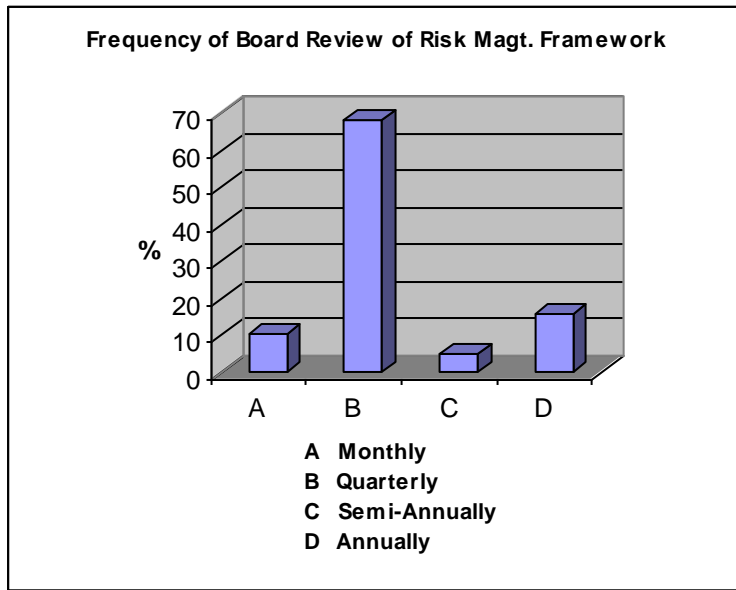
Banks were asked to indicate if they benchmark with best practice when reviewing EWRMF; 18 or 85.71% out of 21 responding banks indicated that their boards' benchmarks industry best practices in Risk Management, while 3 or 14.28% of the banks indicated otherwise. However, the entire 21 respondent banks confirmed the establishment of an appropriate management structure by their respective boards that separate reporting lines between control functions, business lines and support functions.

Also, banks were asked to list five ways by which the boards of their respective banks ensure the entrenchment of a good risk culture and philosophy in their institutions. Of the 21 respondent banks, 19 banks representing 90.47% responded to the question. Out of the 19 banks that responded to the question, 15 or 78.94% of the banks clearly stated the ways/approaches deployed in promoting risk culture/philosophy within their Risk Management Framework. An analysis of the approaches against the 2004 KPMG's synthesis of best practices in risk management indicates that a severe limitation exist in integrating risk management culture and philosophy into their respective risk management frameworks.

3.3   Board Risk Management Committee (BRMC)

In line with best practice, banks are expected to have BRMC. In that wise, banks were asked whether such committee exists in their institutions. An analysis of the responses confirmed the existence of BRMC in all the 21 respondent banks and that the frequency of their meeting was largely on quarterly basis. The summary of responses to this question is shown in Chart 5.

Chart 5

Frequency of Board Risk Magt. Committee Meetings

A Monthly
B Quarterly
C Bi-Annually
D Annually
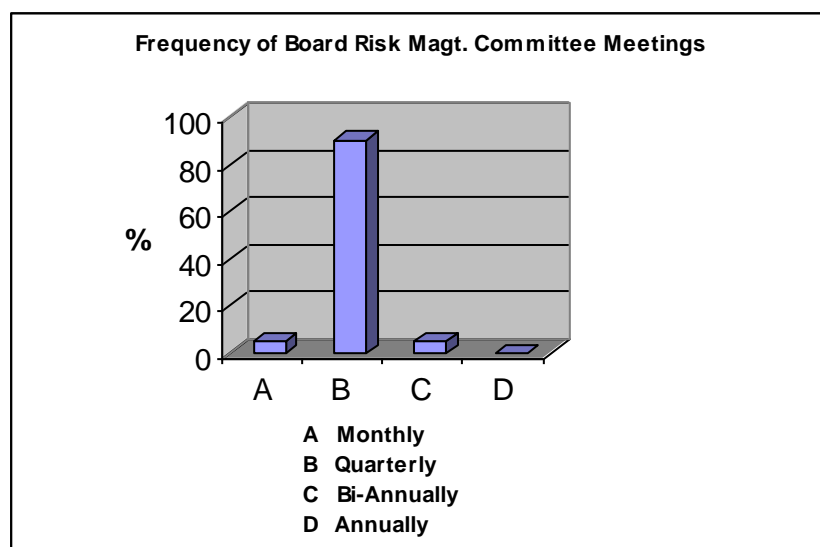
Furthermore, all the respondent banks indicated that the BRMCs in their banks broadly carry out the following functions:

1.   Approve Risk Management Framework – review and recommend risk management policies, procedures and profile.

2.   Advise the bank's risk philosophy, appetite and tolerance

3.   Monitor and supervise the bank's plans and progress in meeting regulatory risk-based supervision requirements and Basle II compliance.

4.   Review and recommend the bank's risk-reward profile and evaluate the risks in the bank's strategic plan.

On the composition and independence of the BRMC, all the 21 respondent banks indicated that the BRMC in their banks comprised both executive and non-executive directors and that the chairmanship was by one of the non-executive directors.

3.4   Senior Management Oversight

In line with best practice in Enterprise Risk Management (ERM), senior management of banks share responsibility for the active implementation of policies formulated by the board of directors of banks.   As such, banks were asked to state how actively involved their respective senior managements were in the implementation of ERM as well as translating it into specific internal policies, processes and procedures.   An analysis of the responses indicate that all the 21 respondent banks confirmed the active involvement of the senior management in the implementation of their ERMF as well as in translating it into specific internal policies, processes and procedures.

3.4.1 Management Risk Committee

This section seeks to decipher the relevant structures put in place by senior management to assist it in the onerous task of carrying out its responsibilities on risk management policies.   Accordingly, banks were asked to indicate if their senior managements have established Risk Management Committees and their responsibilities.   An analysis of the responses indicates that out of the 21 respondent banks, 17 or 80% of the respondent banks had Senior Management Risk Management Committees at operational level with the following functions being similar across the banks in the industry:

i   Evaluation of key risks and control issues and institute counter-measures
ii   Communicate major risk mitigation measures to process owners for implementation
iii   Monitor implementation of corrective action

iv   Advise, Alert and Assure executive management on risk issues in the bank

On the composition of the Senior Management Risk Management Committee, all the 17 respondent banks that indicated the existence of the committee had their committees composed of Heads of department and business lines. Also, banks were asked to indicate whether their Senior Management Risk Management Committees have any reporting relationship with BRMC. An analysis of the responses indicates that 15 banks or 71.42% of the banks confirmed the existence of such a relationship, which clearly strengthens the effectiveness of both committees.

Banks were asked to indicate the existence of a specific department that coordinates their Risk Management Framework Unit. The responses revealed that a department that coordinates the Risk Management Function exists in virtually all the responding banks. There appeared to be similarity in the functions of the department in all the banks and it included:

  i.   Central oversight for risk management in the banks
  ii.   Provide periodic risk management reports to EXCO and Board
  iii.   Develop processes and procedures for implementing ERM framework
  iv.   Identifies, manages, controls and report risks
  v.   Determine risk boundary, tolerance and appetite for business lines

3.5   Risk Communication

This sub-section seeks to assess the existence of a clear line of communication on risk policies within the banking institutions. Banks were asked to state whether the board and senior management of their institutions ensure clear line of communication of risk policies throughout the banks. 21 banks responded to this question and out of which 20 banks or 95.23% of the banks confirmed the

existence of a clear line of communication of risk policies, appetite and tolerance levels in their institutions.

On the channels of communication used by the banks, 20 or 95.23% out of the 21 respondent banks indicated that their boards and senior management have clearly communicated risk policies, appetite and tolerance levels throughout their banks using the following common channels:

Management	Best Practice
1. Management Meetings	1. Interests
2. Internal Memo	2. Appointing risk managers
3. Intranet	3. Regular meeting of Risk Management Committee
4. Circulars	4. Using Risk Management Committee to communicate objectives
5. Training	5. Production of regular risk reports
6.Policies,processes & procedures	6. Presentation to Senior Management & Board
7. Strategic session	7. Open discussion of mistakes
	8. Using common business risk language
	9. Communicating risk management performance
	10. Using teams and committees

A review of the responses indicates that most of the channels listed were in line with the best practice. But benchmarking the responses against the best practices issued by KPMG indicates that the channels being used by the banks

were quite limited as they only met two(2) out of the 10 channels of communication so identified.

3.6   Risk Assessment/Identification

This sub-section seeks to determine the existence and effectiveness of banks' risk assessment procedures in their Risk Management Framework. Questions that were believed to elicit the necessary information leading to the confirmation of the existence of such procedures were asked. 20 or 95.23% of the banks out of the 21 respondent banks confirmed the existence of an appropriate technique for assessing risks in their institutions.

To corroborate the existence of the risk assessment procedures, banks were asked to indicate, from an array of applicable assessment techniques, that which apply to their respective Risk Management Framework. This was with a view to identifying the commonest practices within the industry. Our analysis of the 21 responses indicated that simulation and stress testing, Value at Risk, Scenario Analysis and Control Self Assessment Templates, though used by respondent banks were found to be less popular than other techniques.

Banks were also asked to indicate whether they use risk-mapping techniques in assessing their risk. Out of 21 respondent banks only 8 or 38.09% of the banks confirmed the use of risk mapping technique in assessing their risks. To further elucidate on banks' approach to the risk mapping processes, they were asked to describe the approach they were using. Our analysis of the responses indicated that Broad Multi-disciplinary Framework and segmented approach were the 2 dominant approaches used by banks in risk mapping. The responses are depicted in Chart 6.

Chart 6

Risk Mapping Approaches Used by Nigerian Banks

A Multi-disciplinary
B Segmented
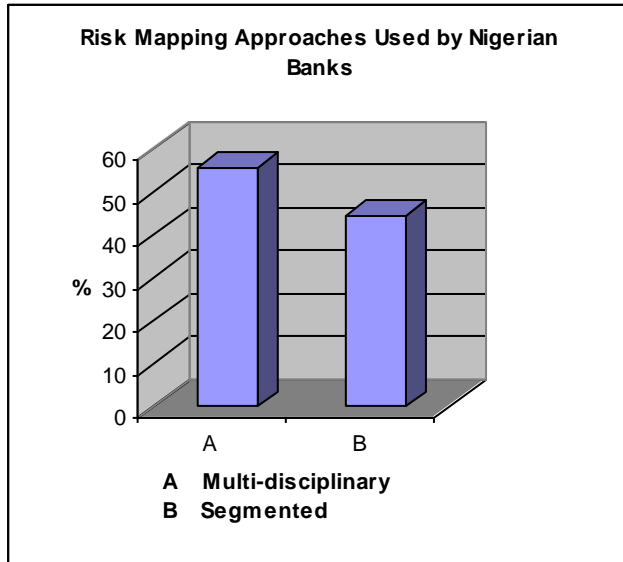
Banks were asked to indicate if they do the risk mapping by risk type and also to indicate the mapping structure they were using. Out of the 20 respondent banks, 8 or 40.00% of the banks indicated that they do map their various business units, organizational function/process flows by risk types and have attempted to show the mapping structure they were using.

An analysis of the responses depicts poor understanding of the risk mapping processes by 3 or 37.50% out of the 8 respondent banks whilst another 3 banks demonstrated a clear grasp of the mapping process as their framework encompasses both control processes and business lines . The risk mapping process entails mapping of risks along specified business processes/lines with a view to assigning capital charges. A review of the responses from the banks shows that 3 banks.

Banks were also asked to indicate who was responsible for mapping policies and whether the policies were subjected to independent review.   Under this question, only 8 or 38.09% out of 21 responses were valid for analysis. Analysis of the responses shows that either the Board or senior management or

both were found to be responsible for the risk mapping policy in the 6 or 75% out of the 8 respondent banks. However, it was only in one (1) respondent bank that risk management department was found to be responsible for the mapping policy. Six (6) or 75% out of the 8 respondent banks confirmed that their mapping process was subject to independent review. Also, an analysis of the responses as to who carries out the independent review of the mapping process indicated a variation. For example, 2 banks indicated the responsibility as ranging from that of internal/external auditors as well as the risk management of the foreign technical partners and consultants. This essentially confirms the extent of rigor and independent assessment of the process to maintain its credibility.

3.7   Risk Measurement

This sub-section seeks to establish relevant measurement and quantification tools and approaches within the Risk Management Framework being used by banks for the individual risk elements. Quantification and measurement approaches are critical elements of a sound Risk Management Framework, as the saying goes "if you cannot measure you cannot manage". As such, banks were asked questions to ascertain the existence of measurement and quantification tool in their Risk Management Framework. Of the 21 respondent banks, 11 banks or 53.38% of the banks claimed to have established practices for the quantification of risk exposures. Further analysis revealed that the established practices covered the 5 major risk areas, namely credit risk, market risk, operational risk, liquidity risk and structured interest rate risk. 10 banks or 47.61% of the banks don't have.

Banks were also asked to list the quantification tools they were using for each of the key risk elements. Of the 11 banks that claimed to have the quantification

tools, 8 or 72.72% of the banks indicated having standard quantification tools against each of the listed risk elements while the remaining 3 or 27.27% of the banks merely listed the tools without reference to the risk elements they were used for. A summary of the tools used by the banks included:

1.   Credit risk – models, internal rating/obligor rating
2.   Market risk – model, simulation, stress testing
3.   Operational risk – model, simulation
4.   Liquidity risk – simulation, stress testing
5.   Structural interest rate risk – models, simulation, stress testing.

Banks were asked to indicate if the measurement tools were regularly validated and also to state the frequency of the validation. 19 banks responded to this question and out of which 14 or 73.68% of the banks indicated that their measurement tools were being validated regularly.   But on the validation frequency, an analysis of the responses indicated that annually, semi-annually and monthly frequencies were the most widely used among the respondent banks. Similarly, on the frequency of the utilization of the measurement process, an analysis of the responses indicated that depending on the relevant risk element, the risk measurement process was being undertaken in a frequency that ranged from daily to monthly, quarterly and annually.

In terms of the level of integration of risk management, banks were asked to indicate whether it was at the level of transaction, portfolio, bank wide or any combination of them that the banks measure their risks. An analysis of the responses indicated that risks in the banks were measured mostly at portfolio and transactional levels and/or a combination of both.   However, risk measurement of bank-wide integration appears to be less popular.

3.8   Risk Monitoring/Reporting

This sub-section seeks to ascertain the existence of an effective monitoring system within the bank's risk management framework.   Monitoring process is also one of the most important components of a sound risk management system.

Banks were asked to indicate whether they have formal methods of monitoring risk. An analysis of the responses indicated that 20 or 95.23% out of the 21 respondent banks had formal methods of risk monitoring. Also, further analysis of the responses revealed that the methods mostly used by the banks ranged from daily monitoring process, control, self assessment, regular report to board and management, key risk indicators and incidence reports.

A further analysis of the responses revealed that compliance and risk management departments/units were assigned the responsibility for monitoring/reporting various risk elements in majority of the banks, while some banks relied on internal audit and business line managers to do the monitoring. However, a combination of all the stated units was used for risk monitoring purposes by the banks.

Banks were asked to indicate whether there are in-built mechanisms for prompt corrective actions where exceptions are found. The responses indicate that 19 or 95% out of the 20 respondent banks had such mechanism in place. The only bank that had no in-built mechanism for prompt corrective action indicated that it would take only one (1) week for its management to resolve any observed deficiency.

To confirm the existence of the practices of generating historical loss reports for monitoring/reporting purposes, banks were asked to list the reports to the hierarchical levels from business units up to the board. Out of the 21

respondent banks, the responses of 11 or 66.66% of the banks were found to be valid for analysis. An analysis of the responses showed that the banks could not segregate specific reports into individual risk elements as required by the questions.   Rather a summary of the historical loss report generated by the banks included the following:

1.   Monthly non performing loss reports

2.   Operational loss report on quarterly basis

3.   Frauds and forgeries

4.   System downtime report

5.   Regulatory penalty

6.   Litigation cause

7.   Country risk report

With these reports being generated by the banks, it was obvious that the banks had a fairly elaborate monitoring/reporting process.

Banks were also asked to describe how the loss report generated for monitoring purposes were utilized in their various layers of management.   Of the 21 respondent banks, 12 or 57.14% of the banks listed various ways by which the reports were used to respond to exceptions by management and these included the following:

1.   The report facilitates the development and implementation of risk mitigation strategies in the banks.

2.   The report is a basis for immediate corrective action on identified risk.

3.   The report is a basis for redefining target markets, limits settings and recovery strategies

4.   Leads to the appraisal of risk appetite and tolerance levels.

5.   Leads to systems review and improvement and the assurance of control adequacy.

3.9   Internal Audit

This sub-section seeks to ascertain the distinctive practice of banks with respect to the existence of internal audit or risk management committees of the board that is whether the audit committee was subsumed into risk management committee or exists on its own. An analysis of the responses indicated that 20 or 95.23% of the 21 respondent banks had an independent audit committee aside from the risk management committee. Some of the responsibilities of audit committee include:

1.   Review the scope, planning and monitoring the activities of internal audit and ensuring that it has access to necessary resources and information to perform its role.
2.   Ensure that the financial services of the banks are subjected to independent review and external audit.
3.   Ensure compliance with legal and regulatory requirements.
4.   Ensure integrity of financial statements and principal regulatory reforms before submission to the board.

To establish the existence of a sound internal audit function that reinforces the risk management processes, banks were asked to state 5 roles played by the Internal Audit Department in implementing the Risk Management Framework. An analysis of the responses revealed that the roles and responsibilities of internal audits function included the following:

1.   Provision of reasonable assurance to management that operations of the bank are being carried out in accordance with the laid down processes and procedures and in conformity with best practice.
2.   Consistently undertake appropriate audit tests to ensure that risk mitigants are in place and being applied.

3. Report potential risks identified to both Board and Management committees.

4. Approve new or changes in procedures

5. Ensure adequate risk management measures

3.10 Human/Technical Resources Requirement

The effectiveness of a banks' Risk Management Framework depends not only on the quantitative tools and techniques available but equally on the skills competence and adequacy of human resources available to the institutions. Accordingly, banks were asked to indicate the adequacy or otherwise of human/technical resources available to implement the adopted approach to the Enterprise Risk Management Framework (ERMF). Out of the 21 respondent banks, 10 or 47.61% of the banks indicated that the existing human and technical resources to implement the ERMF in their institutions were inadequacy in terms of quality and quantity. For the remaining banks that claimed to have adequate staff to man the process, emphasis were on internal control and audit staff rather than the whole mix of the risk management process. The existence of competent personnel is critical to the effectiveness of any risk management system and where such is lacking, it compromises whatever quantification tools and techniques put in place.

3.11 Risk Data Requirements

This sub-section seeks to determine whether or not banks have a framework for gathering and storing historical loss data for their respective risk quantification approaches under each of the risk elements. In this regard, questions were raised to elicit information on the existence of data loss tracking system. This is

very relevant for the banks' level preparation for the implementation of the various Basle II approaches. Banks were therefore asked specific risk areas in which they commenced or already have in place a system for tracking relevant loss data for their risk assessment. An analysis of the responses showed that of the 20 respondent banks, 16 or 80% of the banks had a system of tracking relevant loss data with respect to credit risk while 15 or 75% of the banks claimed to have in place the same system for operational risk. Only 6 or 30% of the banks indicated having similar capacity with respect to market risk and interest rate risk.

Respondent Banks were asked to determine the sources of historical loss data used in the measurement of individual risk elements of the banks. An analysis of the responses showed that the sources ranged from single source for some banks to four sources for others. A summary of the various sources of data identified from the responses of the banks to included:

1.   Business offices losses and loss events reports
2.   Business environment and internal control factors
3.   Inspection and investigation reports
4.   Credit defaults
5.   Market and trading losses.

However, the result of these responses must be interpreted with caution as most of the banks that answered this question merely listed types of loss information report they had that were not necessary used in tracking individual historical losses.   This clearly reflects lack of understanding of loss data collection process required in a sound risk management framework.

Banks were also asked to give a description of the data collection process for each of the relevant risk elements they were exposed to. The idea was to have

a graphic flow chart of the system whether manual or computerized as well as centralized or decentralized and how they were aggregated across business/operations lines. An analysis of the responses indicated that out of 21 respondent banks, only 15 or 71.42% of the banks were found to be valid for analysis. Of the 15 banks, 6 or 28.57% of the banks failed to address the essence of the loss data collection process, as the details were not clearly stated. For the remaining 9 or 42.85% of the banks, their responses demonstrated a clear understanding of the loss data tracking process /collection system. The process ranged from the use of relevant risk software and loss data template developed and stored in application software to the manual recording/reporting of loss events by types of risk in a centralized nature.

In terms of responsibility for the collection of loss data, 18 or 85.71% of the 21 respondent banks indicated that their risk management departments/units were in charge.

Chart 7

Responsibilty for Loss Data Collection

A   ALCO
B   Risk Magt. Committee
C   Risk Magt. Dept./Unit
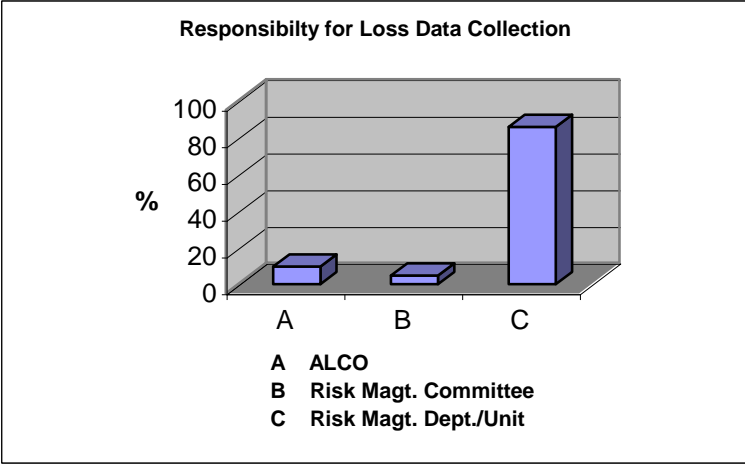
To determine the length of the historical loss data available within the risk management database of the respective banks and the commencement of the collection process, they were asked to indicate the length of the loss date under each of the risk elements. On this, only 10 or 47.61% of the responses out of 21 were found to be valid for analysis. An analysis of the responses indicated

that historical loss data collection particularly as it relates to operational risk commenced recently with mostly less than one-year data basis. Out of the 10 respondent banks however, only 5 or 23.80% of the banks claimed to have commenced collection of loss data for other risk elements, basically credit and market risks and all of them have less that 2-year data.

Also, to establish the integrity and completeness of the loss data generated for the respective risk elements of the banks they were asked to state how they ensure completeness and consistency of the data. A review of the responses revealed that only 10 or 66.66% out of 15 responses were valid for analysis. A summary of the responses showed that there was a clear convergence in the existence of:

1.   Automated computation in reporting system (standard template).
2.   Clear definition of performance logic on the applicable bank software that feeds data into the loss data system.
3.   Validating loss data against primary data and audit position
4.   Others include manual reviews of risk positions/recording and reporting of exceptions and losses
5.   Insurance management reports.

Banks were asked to list policies and procedures relating to loss data collection for each of the key risk elements. This was with the view to reinforcing the comprehensiveness of the banks risk management framework. On this issue, 9 or 42.84% of the responses out of the 21 banks were valid for analysis. An analysis of the responses shows that the policies and procedures were as contained in the overall banks risk management framework.

4.0   SUMMARY OF FINDINGS

4.1   Risk Structure/Profile

A substantial number of the operators in the industry have in place a formal risk management framework. This, therefore, suggests that there was increased awareness on the need for the institutions to have in place a framework that could manage the risks they were exposed to.

The survey revealed that there was the dominance of centralized risk management structure in the Nigerian banking industry. Furthermore, the structure was found to be integrated. This clearly shows that the banks have in place an Enterprise-Wide Risk Management System, which was in line with the best practice.

The surveys revealed that majority of the banks were yet to include ICAAP, in their risk management framework. ICAAP would have enhanced the robustness of their capital assessment processes. The non-inclusion of the ICAAP by the banks poses a challenge to the supervisory authorities, under Basle II, Pillar II, banks were to ensure that banks included ICAAP in their Risk Management Framework.

4.2   Board Oversight

The survey revealed that there was the general involvement and understanding of the board of directors of a number of banks in the industry. This was evident through the boards' definition of risk appetite and tolerance levels, provision of strategic direction and guidance to senior management, frequent review of the framework, establishment of management structure that separated reporting lines between control function, business lines and support functions as well as establishment of board risk management committee chaired by a non-executive director.

4.3   Senior Management Oversight

The senior management of the banks was found to be actively involved in the implementation of their bank's Enterprise-Wide Risk Management Framework. This was evident in their translation of the framework into specific internal policies, processes and procedures. Also, the existence of management risk committee in all the banks further confirmed the active involvement of the senior management in the implementation of the framework. Specific departments/units were found to be created by senior management to coordinate the risk management activities in the banks.

4.4   Risk Communication

The survey revealed that there existed clear line of communication of risk policies in the Nigerian banks. This was evident from the channels of communication used by the banks, most of which were in line with the best practice, but this assessment does not guarantee its operationalisation.

4.5   Risk Assessment/Identification

There exists an appropriate technique for assessing and identifying risk in banks in the Nigerian banking system. This was evident from the various assessment techniques found to be used by the banks. However, of the techniques used by the banks, the following were found to be less popular: Simulation and Stress Testing, Value at Risk, Scenario Analysis. Application of risk mapping as an assessment technique was also found to be less popular among the Nigerian banks;

4.6   Risk Measurement

The survey revealed that only about 50% of the banks had in place an established practice for the quantification of their risk exposures. This therefore means that a number of the banks undertook the measurement of their risks

not in a standard format. The risks were measured mostly at portfolio and transaction levels and/or their combination.

4.7   Risk monitoring/Reporting

The survey indicates the existence of a formal method for monitoring risk in many of Nigerian banks that ranged from the daily monitoring process, Control Self-Assessment, Regular Report to Board and Management, Key Risk Indicators and Incidence Reports.

Compliance and risk management departments/units had the responsibility for monitoring/reporting various risk exposures of the banks. The survey indicated the existence of an in-built mechanism for prompt corrective action where exceptions are found in some of the banks.

4.8   Internal Audit

The survey revealed that there existed an independent audit committee separate from the risk management committee in virtually all the banks in the system.

4.9   Human/Technical Resource Requirements

The survey revealed that there was inadequacy of human/technical resources to implement the Risk Management Framework in a number of banks in the system. In fact, even those banks that claimed to have the personnel, had concentration of such personnel in internal control and audit functions rather than a mixture of the risk management process;

4.10   Risk Data Requirement

Most banks claimed the existence of a system of tracking relevant loss data in their system. However, the system was mostly used by banks on credit and operational risk exposures rather than other risk elements; even then their

effectiveness could not be established from the responses. More over there was a general lack of proper understanding of the loss data collection process by the majority of the banks.

5.0   CONCLUSION

Based on the findings of the survey, it is clear that the development of risk management framework in the Nigerian banking system is still modest with divergences in its depth and complexity. Gaps clearly exist between claims and actual practices with respect to the level of compliance with CBN guidelines and the appropriate structures, tools and techniques, data requirements as well as the corporate governance frame work in the majority of the banks in the industry. However there is a heightened level of awareness on the need to have in place a sound risk management framework in the institutions in line with the CBN guidelines on risk management. This also points to the need to go beyond this survey and institute a comprehensive internal self assessment programme by each bank that would be subject to verification by onsite Examination.

6.0   REFERENCES

1.   Chew, Li-May (2006), " Basel 11 and Risk Management Survey of Asian Banks: Has a Risk Culture Taken Root? A publication of "Financial Insights", www.Financial-insights.com

2.   Chorafes, D.N. (1990), **Risk Management in Financial Institutions**, Butterwork, London, UK

3. Credit Risk Managers' Association (CRIMA) & Capital Vanguard Associates(2005) "How are Nigerian Banks Managing Risks"? of 'Credit Risk-Lenders DeskMate Vol 4 No.6

4. IMF/WorldBank **(2002) Financial Sector Assessment Program (FSAP) For Nigeria,** Being the Assessment of Implementation of the Basel Core Principles for Effective Banking Supervision.

5. **Martinson Michael (1995), Elements of Risk Management in Banks**, Being the guidelines of the Federal Reserve System to each Federal Reserve Bank in the USA for the rating of Risk Management at State Member Banks and Bank Holding Companies.

6. Nyaoma, Gerald A. (2005) "Risk Management in Banks", Being a Press Statement Issued on the Launch of the Risk Management Survey in Kenya.

7. Ryback William (2004) **"**Issues of Risk-based Supervision in Hongkong", BIS Papers No 28

8   The Hindu Business Line (2003**)** Thursday, September 04, Internet edition of Financial Daily from THE HINDU

EMPIRICAL MODELLING OF THE IMPACT OF FINANCIAL INNOVATION ON THE DEMAND FOR MONEY IN NIGERIA

By

Matthew, A. Oluwatoyin[*]

1.0 Introduction

The concept of financial innovation is not an entirely new phenomenon in economics but its pace over the last two decades of the twentieth century has thrown up new challenges to perhaps one of economics most hotly debated topics: the demand for money. The empirical study of the demand for money is one of the most popular subjects in applied econometrics (Melnick, 1995). The search for a stable demand for money has been a very contentious issue since the great intellectual debates between Keynesians and Monetarists of the 1960s and 1970s, as no demand for money model set forth by any of these two schools as well as their contemporaries has withstood the test of time. The instability of the demand for money in the 1970s and in the 1980s has been attributed primarily to changes in the performance of financial markets in the area of new financial products arising out of financial innovations.

The term financial innovation refers to anything which ensures greater access to information, quicker means of carrying out transactions and greater ease of liquidity with lower risk. It refers both to technological advances which facilitate access to information, trading and means of payment, and to the emergence of new financial instruments and services, new forms of organization and more developed and complete financial markets Solans (2003). It has both reduced transaction costs and eliminated exchange rate risks, and has also acted as a catalyst for a number of improvements in various areas that have helped to

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create a more efficient financial system in the euro area as a whole. However, its effect on the demand for money is what has aroused so much interest to it among economic scholars. With new financial products, contractionary monetary policy for instance, targeted at reducing excess liquidity may be undermined as economic agents can easily move money from less liquid holdings to more liquid packages being offered by financial intermediaries. Financial innovation has also raised serious challenges in the definition and measurement of money. Of particular interest has been its effect on the stability of the demand for money, in that if its impact on the demand for money is significantly large, then the effectiveness of monetary policy may be seriously threatened

The Nigerian financial sector has witnessed a number of notable developments since the deregulation era which started in 1896. These developments had led market operators to undertake several financial innovations in order to stay ahead of competitors. This study seeks to establish if financial innovation has had significant effects in altering the demand for money in Nigeria. Specifically, the study intends to examine the degree of the relationship between financial innovation and the money demand in the Nigerian economy and how this relationship affects the effectiveness of monetary policy in Nigeria.

In order to achieve these objectives, a model was specified and estimated using the co-integration technique method. Data for the analysis was taken from 1970-2006.

The paper has five sections including this introduction. Section Two presents a review of relevant literature, while Section Three discusses the theoretical framework and model specification of the study. Section Four focuses on model estimation and analysis of the regression result and the fifth section concludes the paper with relevant policy proposals.

2.0 Review of Relevant Literature

Over the last two decades, an enormous body of literature has documented the continuing instability of standard econometric money demand specifications and attributed the instability to innovation in the financial sector. The question of whether the demand for money function is stable is one of the most important recurring issues in the theory and application of macroeconomic policy. What is being sought in a stable demand function is a set of necessary conditions for money to exert a predictable influence on the economy so that the central bank's control of the money supply can be a useful instrument of monetary policy.

What then is the demand for money? The demand for money can be defined as the desire to hold money in liquid form rather than other forms of wealth such as stocks, bonds, ex cetera. It often stems from three main motives, which are: transactionary, precautionary and speculative. These motives are influenced by several factors including levels of income and wealth, rates of interest, expectations of economic agents and institutional features of an economy amongst others, Bannock et al (1998). The conventional money demand equation has been one of the most widely studied relationships in macroeconomics. It generally features real money balances being affected by contemporaneous levels of real income as a proxy for transactions, and a nominal interest rate that describes the opportunity cost of holding money. The major issues that have attracted the attention of researchers in this area are various.

First, there is the question of the constraint that is imposed on money balances, whether the appropriate constraint is a measure of wealth or income, or some combination of the two. The second issue in most literature has centered on the importance of interest rates and price changes as arguments (independent variables) in the demand function. The third issue is the question of the definition of money balances. Is a more stable demand function obtained

if money is defined inclusive or exclusive of time and/or savings deposits, and perhaps other assets that have value fixed in money terms?

Going by economic literature, the differences in the specification of the variables in the money demand function have produced important differences in implications or results. Baumol (1952) and Tobin (1956) separately considered the transactionary demand for money as a problem in capital theory and each obtained a demand function for cash balances which depended on costs and yields. Both Baumol and Tobin deduced from their models that there were economies of scale in holding transaction balances. That was confirmed by the calculated income or wealth elasticity which was less than unity. On the contrary, Friedman (1959) findings suggested that money was a "luxury" and that the relevant elasticity is in the neighborhood of **1.8.** Most economists seem to accept Friedman's empirical result in preference to those of Baumol (1952) and Tobin (1956), though there seems to be some debate over the specification of the variables in Friedman's -money demand function. Specifically, Friedman's use of per capita permanent income combines wealth, interest rates, population, and lagged income into a single variable which combines and masquerades their separate effects.

The demand for money specification received renewed attention in the 1990s with econometric advances in the area of cointegration. A large body of literature has emerged that investigates long-run properties of the conventional money demand equation for various countries. Evidence with regard to a long run money demand relationship in the United States, particularly with M_1 during the postwar period, is mixed. Miller (1991), Hafer and Jansen (1991), Friedman and Kuttner (1992), Stock and Watson (1993), and Norrbin and Reffett (1995a) as cited in Dutkowsky and Atesoglu (2001) find little support for cointegration for the conventional static money demand equation with M_1.

In 1973, Stephen M. Goldfeld examined the issues systematically, using quarterly postwar data up to 1973. Although Goldfeld's results differed in several important ways from those of the earlier literature, which were based mainly on annual data, his preferred specification became the standard formulation.

From his estimation, Goldfeld concluded that the quarterly demand function for money was most stable when:

(i) A narrow transactions definition of money was used;

(ii) A short-term market rate of interest like the Treasury bill or commercial paper rate was used and when the rate on savings deposits was included;

(iii) Measured income (real GNP) was used rather than permanent income or wealth; and

(iv) Lagged money was included to allow for incomplete adjustment in the short run.

One of the important stability tests that Goldfeld performed was to examine the ability of his equation to forecast outside the sample period. It showed no systematic tendency to drift off in such forecasts up to 1973, the year of his original study. Goldfeld (1973) thus discovered a single-equation econometric model expressing the demand for real M1 as a stable function of real GNP and nominal interest rates which did a remarkably good job of characterizing quarterly U.S. data during 1952-1972. This was confirmed both by the accuracy of its forecasts and by the inability of a Chow test to reject the hypothesis of parameter constancy across subsamples.

Starting in 1974, forecasts from this equation began to seriously over predict real money balances. These forecasts were out-of-sample dynamic simulations, which used actual interest rates and income but last period's predicted money balances as the lagged dependent variable. Three years later, again, Goldfeld (1976) found that by the same criteria of the accuracy of forecasts and the

results of Chow tests, the performance of his money demand equation deteriorates markedly when the sample period is extended to 1976. These simulations showed a cumulative drift from the first quarter of 1974 to the second quarter of 1976 of nearly 9 percent. In fact, money demand regressions continue to be plagued by instability when the sample runs through the present day, with their forecasts systematically over predicting actual real MI figures for the late 1970s and under predicting actual figures for the 1980s. The monetary equations in the Federal Reserve Board's FMP Model gave similar results. This evidence of systematic over-prediction of real money balances by the standard money demand function suggested that the demand for money had shifted down. This possibility was taken to mean that the demand for money had become "unstable" in the sense that it had become more difficult to predict ex ante.

Re-estimation of Goldfeld's specifications over the longer period confirmed that the failure was more pronounced in the business than in the household sector's equations. It is not surprising, therefore, that those institutional innovations, such as negotiable order of withdrawal (NOW) accounts, money market mutual funds, credit cards, savings deposits of business and state and local governments, and checking accounts at mutual savings banks, which have been credited with the instability were becoming more pronounced at thereabout the same time, (Garcia and Pak, 1979).

In Nigeria, a recurring debate that took place in the literature on the effectiveness of monetary policy to stabilize the Nigerian economy in terms of price stability and subsequently stimulating economic growth was on the nature and stability of the demand for money function. This debate started in the early 1970s amongst a group of scholars within the Lagos-Ibadan-Ife axis and was popularly called the **'TATOO'** debate, an acronym coined from the initials of the major debaters of those days. The famous TATOO debate of the 1970s involved

five different people; **T**omori (1972), **A**jayi (1976), **T**eriba (1974), **O**jo (1974) and **O**dama (1974).

It was **T**omori (1972) who first set out to examine the factors that influenced the demand for money in the Nigerian economy. He examined whether there was a stable or unstable demand for money function and examined what constituted a better definition of money in the Nigerian context. He adopted a very simple linear model expressing money as a function of nominal/real GDP. After applying the OLS technique, he made the following conclusions.

1) Income is a significant variable explaining changes in money demand
2) Income is a more important variable determining money demand that interest rate.
3) The narrow definition of money seems to perform better than the broad
4) The coefficient of interest rate is not significant
5) Real income tends to show more significant relationship than nominal income.

Ojo (1974) questioned the work of Tomori especially his statistical methodology. He was concerned mainly with establishing that in a developing country like Nigeria, characterized by an underdeveloped money market, and lack of financial assets, the choice facing an individual was more between money and financial asset. He consequently specified and estimated (using the OLS technique) two kinds of relationship between money and its determinants. First, he specified real money balance as a function of current nominal income and interest rate. Second, following the insignificance of interest rates, he specified the real money balance as a function of nominal and expected rate of inflation.

According to **O**dama (1974), Tomori's model was devoid of any policy use in view of the fact that the only instrument (discount rate) turned out to be statistically insignificant. He also criticized Tomori in two aspects;

1) The formulation of an alternative model and the relevance of such a model for policy actions.

2) A modification of the statistical result and conclusion thereof.

Teriba (1974) observed that Tomori's paper suffered several methodological pitfalls and interpretational defects. According to him, treasury bills and time deposit are the closest substitutes for demand for currency and that adjustment lag between actual and desired cash balances is very close to zero, while income elasticity of demand for currency is greater than unity. On demand for money deposit, he said the closest substitute is time deposit while savings is also a better substitute than treasury bills to demand deposit and the adjustment period is fairly fast while interest elasticity of demand for deposit is very low and income elasticity is also low.

Ajayi (1976) in addition to criticizing Tomori's paper (1972) provided answers to questions such as the stability of the demand function, adjustment mechanism and calculation of elasticity for policy decision making. Using the narrow definition of money (M_1), he found out that income is about 80.5% responsible for variation in money demand but when he used M_2, he found out that income had more impact on money demand which was like 85%. The rate of interest (on treasury bills) as an explanatory variable was statistically insignificant. He attributed this to the underdeveloped nature of the country's money market. The interest elasticity of money was very low so also the adjusting mechanism but the income elasticity was high. In his conclusion, he suggested the ineffectiveness of monetary policy in Nigeria.

As lively as the **'TATOO'** debate was, the issue is still inconclusive. Two broad events seem to have dimmed the relevance of the debate carried out in those days. The first is the array of new estimation techniques (co-integration) and several test procedures available to researchers since the debate fettered in the early 1980s. The second is the development in the financial sector since the mid-1980s which may suggest some instability in the demand for money function in Nigeria. The first event has led to the re-examination of the nature and stability of the demand for money function using error correction methods (Teriba, 1992 and Nwaobi, 2004) as cited in Busari (2005).

3.0 Theoretical Framework and Model Specification

3.1 Theoretical Framework

The conventional textbook formulation of the demand for money typically relates the demand for real money balances (m = M/P), to the interest rate, r, and some measure of economic activity such as real GNP (y = Y/P), where M = money holdings, P = the price level, and Y = gross national product. Thus,

$$m = f(r, y) \text{ --}$$

(1)

Several theories have been put forward to explain the equation above. Perhaps the most satisfying are those of the transactions view, in which the demand for money evolves from a lack of synchronization between receipts and payments and the existence of a transactions cost in exchanging money for interest-bearing assets (usually taken to be short term, Goldfeld, 1973) Of relevance to this study's model will be a select few. This will serve as a base for the model to be specified.

Keynes formulated his theory of demand in his well known book, 'the General Theory of Employment, Interest and Money' in 1936. According to him, the

demand for money arises out of its liquidity; liquidity refers to the convertibility of an asset into cash. He identified three motives for holding money. The first is the transaction motive. This arises out of money's medium of exchange role and arises out of the need for bridging the gap between periodic receipts and payments. Keynes recognized both the income motive for households and business motives for firms. Given the society's basic institutional and technical customs and practices which govern income receipt and the flow of expenditures, the transactions demand depends on personal income and business turnover. It thus varies in direct proportion to changes in money income. Symbolically it is written as:

$$L_t = k_t(Y)$$ **------------------------------------** (2)

   Where;

   L_t : Transactions demand for money

   k_t : The fraction of money income society desires to hold as transaction balances.

   Y: money income

The second is the precautionary motive which arises out of unforeseen circumstances or expectations regarding the uncertain future by economic agents. Keynes posited that households sometimes keep money for unexpected contingencies such as medical emergencies or events while firms held balances above transactionary balances based on expectations about the economy e.g. a boom or depression. Keynes held that the level of precautionary balances varied with income and not interest rate changes. Keynes usually lumped both motives together as they were both affected by the same institutional factors which he assumed given and fairly stable in the short run adding to the fact that they were both interest inelastic. Mathematically, it an be expressed as

$$L_1 = L_t + L_p = k_t(Y) + k_p(Y) = k(Y)$$ ------------------------------------- (3)

Where;

L_1 : Demand for active balances

L_p : Precautionary demand for money

k_p : The fraction of money income society desires to hold as precautionary balances.

Speculative motive is the third motive. This falls under the idle balances held by economic agents according to Keynes. He posited that people hold or hoard money above their active balances for the purpose of being able to earn some form of gains by speculating on bond prices. Since individuals knew that an inverse relationship exists between bond prices and interest rate, they held money for the opportunity to partake in such speculative activities so as to earn some form of interest. According to Keynes, there exist an inverse relationship between speculative demand for money and interest rates. Functionally, this is expressed as;

$$L_2 = f(i)$$ ---------------------------------- (4)

Where;

L_2 : Speculative demand for money

i : Interest rate

3.1 Model Specification

To successfully examine the impact of financial innovation on the demand for money in Nigeria, the following model will be used for our empirical test.

M=f(Y, RTD, PLR, DSAP, CPI, M_{t-1}, u)... (5)

Where;

M: a monetary aggregate (in the case of this study M_2).[1]

Y: Income as captured by Real Gross Domestic Product (RGDP) which seems to be most appropriate proxy variable for capturing the level of transaction[2].

RTD: Nominal rate of interest on time deposits (3months) kept in commercial banks. Interest rate measures the opportunity cost of holding money that is, the reward for parting with liquidity. It reflects the degree of substitutability between money and bonds or other forms of financial assets. This is appropriate for our use of M_2.

PLR: Nominal rate of interest on loans from commercial banks. **DSAP:** dummy variable to capture the financial innovations that have taken place since the sweeping reforms of the Structural Adjustment Programme (SAP) embarked upon by Nigeria in 1986 which led to changes in the financial system.[3] DSAP takes the value of 1 for post-SAP era and 0 otherwise.

CPI: Consumer Price level[4]

M_{t-1}: one period lag of M

t : Time period

u : Stochastic random term.

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[1] Miller (1991) finds that the natural logarithms of M2 and Income (proxied by real GNP) are cointegrated. However Trehan (1984) as cited in Miller (1991) Found that in West Germany, real M1 and M2 were not cointegrated rather M3 was more appropriate. However in Nigeria, as M2 is more in line with official monetary conduct, it has been adopted as my monetary aggregate. Anoruo (2002) as cited in Busari (2005).

[2] Although, some authors contend that wealth is a better measure of capturing the level of transactions. E.g. Laidler (1993), Meltzer (1963) and Brunner and Meltzer (1963) as cited in Goldfeld (1973). There appears to be a common ground in literature that income could still be used.

[3] Busari (2005) used a dummy variable to capture changes in the Nigerian financial sector since 1986 upwards. i.e. post SAP.

[4] Miller (1991) included price level in estimating the demand for money as he found it highly significant.

In a more explicit equation (5) can be expressed as

$$M_t = \beta_0 + \beta_1 Y_t + \beta_2 RTD_t + \beta_3 PLR_t + \beta_4 DSAP + \beta_5 CPI + \beta_6 1M_t + U_t \ldots\ldots\ldots\ldots (6)$$

Representing equation(6) in a log-linear form,

$$\log M_t = \beta_0 + \beta_1 \log Y_t + \beta_2 \log RTD_t + \beta_3 \log PLR_t + \beta_4 DSAP + \beta_5 \log CPI + \beta_6 \log M_{t-1} + U_t \ldots\ldots\ldots\ldots (7)$$

A model of demand for money should establish a stable relationship between demand for money and the factors influencing it. Theoretically, the demand for money is hypothesized to be an increasing function of some measure of income or wealth. The coefficient of real income (β_1) should be positive since real income demanded rises with the level or value of transactions. The coefficients β_2 and β_3 of the two rates PLR and RTD respectively are expected to be negative. This is because of the inverse relationship that exists between interest rates and real cash balances. B_5 is expected to be positive since higher inflation induces economic agents to hold more to meet transaction demands. Thus, $\delta M_t / \delta Y_t > 0$, $\delta M_t / \delta RTD_t < 0$, $\delta M_t / \delta PLR_t < 0$, $\delta M_t / \delta CPI > 0$.

 The estimation technique to be used in the above model is the cointegration technique which is an improvement on the classical Ordinary Least Squares technique. One reason for the choice of this technique is that, first, it is generally argued that most economic series are non-stationary i.e. have a strong trend over time. By non-stationarity, we mean that the variables do not have a mean which is constant over time and as such direct application of least squares technique could give spurious results. This causes the results of most OLS regressions to be statistically invalid and difficult to interpret in a theoretical context. (Melnick, 1995).

Cointegration, error-correction modeling involves four steps. First, determine the orders of integration for each of the variables under consideration; that is, difference each series successively until stationary series emerge. Second,

estimate cointegration regressions with ordinary least squares, using variables with the same order of integration. Third, test for stationary residuals of the cointegration regressions. Finally, construct the error-correction models. (Miller, 1991).

The purpose of the ECM is to switch to a short run model. The ECM indicates the speed of adjustment from short run equilibrium to the long run equilibrium state. The greater the co-efficient of the parameter, the higher the speed of adjustment of the model from the short run to the long run.

3.2   Sources of Data

The data used in this study are secondary in nature, sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, National Bureau of Statistics (NBS) Annual Abstract of Statistics (various issues) and the United Nations Development Programme (UNDP). It covers the period between 1970 and 2006; the choice of this period is due to the fact that the pre-SAP and post-SAP periods are accommodated.

Table 4.2 shows the unit root test of the residual obtained from the ordinary least square regression while Table 4.3 shows the error correction model.

4.0   Empirical Results
4.1 Unit Root Tests

Using the Augmented Dickey Fuller (ADF) test statistics, none of the variables used in this study were stationary in levels hence it is sufficient to conclude that there is the presence of unit root in the variables at the 5% and 10% levels of significance. Following from the results obtained, all the variables were differenced once and the ADF test was conducted on them. Table 4.1 shows the results obtained.

Table 4.1

Unit Root Test at First Difference

VARIABLE	ADF (UNTRENDED)	ADF (TRENDED)
DLOGM2	-3.200968*	-3.493219**
DLOGRTD	-3.373649*	-4.143771*
DLOGPLR	-5.134763*	-5.067919*
DLOGCPI	-3.184444*	-3.143145
DLOGRGDP	-3.678475*	-3.646344*

Note: ADF- Augmented Dickey Fuller

Note: *   Stationary at 5 percent

**   Stationary at 10 percent

 A close look at the Table 4.1 reveals that all variables are stationary at the 5% level of significance except M_2, which was significant at the 10% level of significance. Also, CPI was not stationary when a trend was applied to it in its first difference form. Thus, on the basis of the results in Table 4.1, the null hypothesis is rejected and it is safe to conclude that the variables are stationary. This implies that the variables are I (1) series, i.e. integrated of order 1.

4.2   Co-integration Test

Here, two steps were taken. First, an ordinary least squares regression was carried out using the variables in our model specified with the exclusion of DSAP. This thus converts the form of our model to:

$$Log\,M_t = \beta_0 + \beta_1 \log \frac{Y_t}{P_t} + \beta_2 \log RTD_t + \beta_3 \log RTB_t + \beta_5 \log CPI + \beta_6 \log M_{t-1} + U_t$$ ....
(8)

The residuals from the above regression were then saved and tested for stationarity (using the ADF method) to prove if the variables are cointegrated in the long run before an error correction model can be put forward. Given that the residuals from the co-integrating regression are stationary, then it is possible for cointegration to take place among our variables. The result of the unit root test of the residuals is presented in Table 4.2.

Table 4.2

Unit Root Test of Residuals

VARIABLE	ADF TRENDED	ADF UNTRENDED
RESIDUAL	-4.969136	-4.735470

From the result in Table 4.2, the residual was stationary at 5% level of significance. As a result of this, one can rightly say that there is a long run relationship between all the variables used in the demand for money function. Given this result, it is now possible to proceed to estimate an error correction model to reconcile the short-run behavior of the variables in the specified model with their long-run behavior. The critical ADF test statistic at levels for the residual is (-2.956124 and -2.615334) untrended and (-3.556749 and -3.21861) trended for 5% and 10% respectively.

4.3   Error Correction Presentation

This is the last stage in the cointegration process and involves estimating our previous equation however this time with our error correction factor as a dependent variable. This involves regressing the first difference of each variable in the cointegration equation onto lagged values of the first-differences of all of the variables plus the lagged value of the error-correction term.

The result obtained is presented below.

Table 4.3

Short run Error Correction Model

VARIABLE	COEFFICIENT	STD. ERROR	T.STAT	R-VALUE
C	0.118694	0.047476	2.500101	0.020801
DLOGCPI	0.301801	0.080615	3.743719	0.001210
DLOGRGDP(-3)	1.424761	0.316660	4.499345	0.000220
DLOGRTD	0.114115	0.0773840	1.474653	0.155102
DLOGRTD(-3)	-0.190934	0.086969	-2.195435	0.039532
DLOGPLR	-0.054130	0.085062	-0.598404	0.562712
DLOGM2(-1)	0.459597	0.187357	2.453051	0.023002
DLOGM2(-3)	-0.280104	0.113231	-2.473728	0.022002
DSAP	-0.034131	0.031105	-1.097300	0.284906
EC(-1)	-0.601865	0.252520	-2.383429	0.026703

R-SQUARED: 0.797900

ADJUSTED R-SQUARED: 0.711285

D-W STATISTIC: 2.190635

F-STATISTIC: 9.212085

A close inspection of the table above indicates that the error correction model has a high coefficient of determination. This can be seen from R-squared of 79 percent and the adjusted R-squared of about 71 percent. The R-squared shows the percentage of variation in the dependent variable that was accounted for by variations in the explanatory variables. The F-statistic value of 9.212085 shows that the overall model is statistically significant at 1% and 5% levels of

significance. This is because it is greater than the critical values of 2.57 and 3.79 at 1% and 5% respectively. This means that all the explanatory variables simultaneously explain the variations in the real demand for money. Also, all our variables are statistically significant at 95% confidence interval with the exception of DSAP, PLR and RTD. Furthermore, the DW statistic, which is a measure of auto correlation, shows that the error correction model is free from the problem of serial correlation due to its value (2.19). As a result of this, an error correction model estimated can be confidently relied upon for making inferences on role of financial innovation on the demand for money.

The EC, which is the error correcting term in the model, indicates the speed of adjustment from short run equilibrium to the long run equilibrium state. The greater the co-efficient of the parameter, the higher the speed of adjustment of the model from the short run to the long run. In the model, one would notice that the ECM (*EC* above) is statistically significant at 5%. This shows that there's a dynamic adjustment from short run to log run. The coefficient of the ECM is 0.60. This indicates that 60% of the errors in the short run are corrected in the long run.

As regards the behaviour of our explanatory variables with respect to the regressand, a positive relationship exists between the third lag (because of the non-stationarity of the variables in levels and they were not significant at 5% level in first difference) of RGDP and M_2 confirming economic theory (Keynes et al), as regards the relationship between income and the demand for cash balances. Secondly, interest rate also conformed with our apriori expectation in that, the sign of its coefficient is negative implying an inverse relationship between the demand for cash balances and the rate of interest. The third variable in our model CPI also aligns with theory in that it has a positive sign.

One of the variable used in this study to capture financial innovation in our model is the prime lending rate, its co-efficient in our model is negative (-0.054130) which confirms what theory says. However, it is not statistically significant. It was not dropped as this affected our Akaike information criterion; raising its value. This could be traced to the poor development of the money market where people are discouraged to borrow from banks due to the high lending rates and stringent conditions attached to borrowing among which is the provision of collateral securities. Another variable, DSAP, a dummy variable to capture the innovations that have occurred given the massive financial sector reforms that characterized the post-SAP era did not significantly influenced the demand for money. Thus, this leads to a conclusion that financial innovation has not had a noticeable impact on the demand for money in Nigeria under the period of our scope. Our result tallies with that of Busari (2005).

5.0 Conclusions and Recommendations

5.1 Main Findings and Their Implications

This study has looked at the demand for money and how it has been affected by financial innovations in the financial sector of Nigeria. Our main findings are as follows:

1) Lagged Interest on time deposits is negatively related to the demand for money.
2) Lagged Prime lending rate is negatively but not significantly related to the demand for money.
3) Real income is positively related to the demand for money.
4) Price level is positively related to the demand for money.
5) Structural Adjustment Programme has had no significant effect on the demand for money via financial innovation.

In view of the above findings, the following are possible implications arising;

1) The low interest elasticity of our demand for money is indicative of underdeveloped nature of the money market in Nigeria. The money market particularly the credit segment is still dominated by government (via the Central Bank) with the end result being that the market lacks the depth and flexibility that it might have had with the presence of a diversified participant base. This is also indicative of the ill developed nature of our financial system. Keynesian doctrine holds that for the smooth functioning of his liquidity preference theory the money market must be well developed.

2) Income level is a primary determinant of demand for money by economic agents in Nigeria.

3) The analysis also shows that for the atmosphere to be conducive for the effective use of monetary policies, financial innovations should be made to affect the demand for money significantly; there is still a place for monetary policy as a macroeconomic stabilization measure.

5.2   Recommendations

In view of the above findings, this study has shown that financial sector liberalization which was one of the goals of SAP though had led to some financial innovation which had benefitted banking customers, however, it has had no significant impact on the demand for money in Nigeria. In the light of these findings, this research project suggests the following:

1) A policy of attracting more participants (non-government) and private sector funds to the money market is necessary as this will deepen the market and make the market more dynamic and amenable to monetary policy. This will further reduce the present long time lags associated with monetary policy in Nigeria.

2) Although, from our results financial innovation have not affected the demand for money significantly, there is still a basis for monetary policy more so, in the light of the recent reforms of the Nigerian banking sector

which have led to consolidation of deposit money banks as well as the development of new financial products and services.

5.3 Conclusion

In conclusion, financial innovations can help to increase the efficiency of the financial system, but at the same time they complicate the environment in which monetary policy operates by affecting the demand for money function making it unstable. But no matter how unstable the demand for money function is, the Central Bank of Nigeria through the commercial banks needs to deepen the activities of the market in order to allow the industry play a leading role in the growth process of the economy.

BIBLIOGRAPHY

Ajayi, S.I., (1974**), "**Demand for Money in Nigeria Economy: Comments and Extension"**,** Nigerian Journal of Economic and Social Studies 16(1): 165-173.

Arrau, P. and J.D. Gregorio, (1993), "Financial Innovation and Money Demand: Application to Chile and Mexico", The Review of Economics and Statistics, Vol. 75, No. 3.

Bannock, G.R.E. and E. Davis, (1998). **The Penguin Dictionary of Economics.** The Economists Books. Profile Books. London.

Baumol, W.J. (1952), "The Transactions Demand for Cash: An Inventory Theoretic Approach" The Quarterly Journal of Economics, Vol. 66, No. 4.

Busari, T. D., (2005)., "On the Stability of Money Demand Function in Nigeria", Financial Economic Review, Central Bank of Nigeria, Vol. 10, No 3.

Dutkowsky, D.H. and H.S. Atesoglu, (2001),"The Demand for Money: A Structural Econometric Investigation", Southern Economic Journal, Vol. 68, No. 1.

Friedman, M., (1959),"The Demand for Money: Some Theoretical and Empirical Results", The Journal of Political Economy, Vol. 67, No. 4.

Garcia, Gillian G., and Simon J. Pak, (1979), "Some Clues in the Case of the Missing Money", American Economic Review, Papers and Proceedings 69.

Goldfeld, Stephen M., James Duesenberry and William Poole, (1973), "The Demand for Money Revisited", Brookings Papers on Economic Activity, Vol. 73, No. 3. pp. 577-646.
Goldfeld, Stephen M. (1976), "The Case of the Missing Money", Brookings Papers on Economic Activity, Vol.3.

Gujarati, D.N (1995). **Basic Econometrics,** Singapore: McGraw Hill.

Hafer, R.W.and S.E. Hein, (1984) "Financial Innovations and the Interest Elasticity of Money Demand: Some Historical Evidence: Note", Journal of Money, Credit and Banking, Vol. 16, No. 2.

Ireland, P.N**.** (1995),"Endogenous Financial Innovation and the Demand for Money", Journal of Money, Credit and Banking, Vol. 27, No. 1.

Izedonmi P.F. **A Manual for Academic or Professional Research** (2005).

Judd, J.P. Scadding, J.L. (1982),"The Search for a Stable Money Demand Function: A Survey of the Post-1973 Literature", Journal of Economic Literature, Vol. 20, No. 3.

Laidler, D.E.W. (1993). **The Demand for Money**, 4th Edition, New York: Harper Collins College Publishers.

Melnick, R. (1995),"Financial Services, Co-integration, and the Demand for Money in Israel", Journal of Money, Credit and Banking, Vol. 27, No. 1, February.

Meltzer, Allan. H. (1963).,"The Demand for Money: The Evidence from the Time Series" The Journal of Political Economy, Vol. 71, No. 3. pp. 219-   246, June.

Miller, R.L. and R.W. Pulsinelli, (1986). **Macroeconomics**, New York: Harper & Row Publishers Inc.

Miller, Stephen M. (1991),"Monetary Dynamics: An Application of Co-integration and Error-Correction Modeling**,** Journal of Money, Credit and Banking, Vol. 23, No. 2, May.

Miller, M. H. (1986),"Financial Innovation: the last Twenty Years and the
Next", Journal of Financial and Quantitative Analysis 21(4):459-471.

Odama, J.S. (1974),"The Demand for Money in the Nigerian Economy: A Comment**,** Nigerian Journal of Economic and Social Studies, 16(1): 175-178.

Ojo O. (1974), "The Demand for Money in the Nigerian Economy: Some Comments", Nigeria Journal of Economic and Social Studies 16(1): 149-152.

Paul, R.R. (2004). **Money Banking and International Trade,** Kaylani Publishers, New Delhi,

Simpson, Thomas D., and Richard D. Porter, (1980),"Some Issues Involving the Definition and Interpretation of Monetary Aggregates", in **Controlling the Monetary Aggregates III. Proceedings of a Conference Sponsored by the   Federal Reserve Bank of Boston.**

Solans, Eugenio Domingo, (2003),"Financial Innovation and Monetary Policy", Excerpts of Speech delivered at the 38th SEACEN Governors Conference and 22nd Meeting of the SEACEN Board of Governors on **Structural   Change and Growth Prospects in Asia − Challenges to Central Banking**, Manila (13 February 2003).

Teriba, A.O., (1974),"The Demand for Money in the Nigerian Economy. Some Methodological Issues and Further Evidence"**,** Nigeria Journal of Economic and Social Studies 16 (1): 153-163.

Tobin, J. (1956), "The Interest-Elasticity of Transactions Demand for Cash", The Review of Economics and Statistics, Vol. 38, No. 3.

Tomori, S. (1972), "The Demand for Money in the Nigerian economy", The Nigerian Journal of Economic and Social Studies 14(3) 337-345, November.