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FUNDED CONTRIBUTORY PENSION SCHEME, FINANCIAL DEEPENING AND ECONOMIC GROWTH: WHAT DOES THE EVIDENCE SAY SO FAR ABOUT THE NIGERIAN ECONOMY?

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Abstract

The fully funded defined contributory benefit pension system was introduced in Nigeria in July, 2004 to replace the old fiscally unsustainable defined benefit (Pay-As-You-Go) pension system. The new pension scheme, coming at the heels of earlier reforms in Nigeria's financial sector, could be deemed to serve as a further boost towards savings mobilisation, increased financial instruments acquisition and economic growth. After a survey of relevant literature was conducted, secondary data on relevant macroeconomic indices in the Nigerian economy were collected. The data were descriptively analysed. The results showed that TDS (total domestic savings) increased during the post-pension reform period and the increased TDS was not GDP growth induced. Some measures of financial deepening such as DCP/GDP (domestic credit to the private sector as a share of GDP), TBD/GDP (total bank deposits divided by GDP) and CIM (contract intensive money) did not improve appreciably during this period which hints at poor intermediation in Nigeria's banking sector. However, the DCP/GDP + SMC/GDP (the domestic credit to the private sector as a share of GDP plus stock market capitalisation as a share of GDP) measure showed a remarkable improvement during this period due largely to the performance of the SMC/GDP measure. This suggests that the Nigerian capital market achieved some measure of deepening during the post-pension reform period. It is therefore the recommendations of this paper that despite the increased TDS which may have been contributory pension funds derived, efforts must still be intensified to increase the participation rate of the scheme by including states' employees and the informal sector workers in the scheme. The poor performances of DCP/GDP, TBD/GDP and CIM measures must be reversed through a rigorous enforcement of banking regulations and the Nigerian judiciary must be truly reformed such that it can be enabled to enforce contract laws and protect private property rights. In order to further deepen the Nigerian capital market, PenCom must be made to relax the stringent portfolio diversification guidelines that the PFAs are required to comply with. This must be quickly followed by the internationalisation of the Nigerian capital market.

Keywords: Funded Contributory Pension Scheme, Total Domestic Savings, Financial Deepening Measures, Economic Growth, Nigeria.

1.0 INTRODUCTION

The Pension Reform Act (the Act) of June, 2004 was enacted to replace the old fiscally unsustainable Pay-As-You-Go (PAYG) defined benefit pension system with a fully funded defined contributory benefit system. Although the underlying reason responsible for the systemic change to the new scheme was for ensuring that the retirees under the new scheme are provided with the requisite liquidity to mitigate old-age poverty, another positive externality derivable from a contributory scheme is its potential to engender increased savings which can lead to financial deepening and capital market development, thereby fostering economic growth and economic development. This is important because ample empirical evidence has shown that financial depth in the developing economies of the world, especially in sub-Saharan Africa is very shallow (Ndebbio, 2000). Many of these countries have instituted reforms of their financial sectors.

In Nigeria, as part of the Structural Adjustment Programme (SAP), both the financial and the foreign sectors of the economy were deregulated. One of the purposes of deregulating the financial sector was to increase the real rate of interest sufficiently so that domestic savings can be mobilised. Also, an increased real rate of interest may encourage portfolio variant of capital inflow. It is therefore conceivable that the defined contributory pension scheme which was introduced at a later date could then serve as a shot in the arm towards the realisation of the goals of savings mobilisation, domestic financial instruments acquisition and portfolio investment inflow (financial deepening).

Since the inception of the funded contributory pension scheme, one wonders if the depth of Nigeria's financial system has appreciably improved. It is therefore the objective of this paper to globally survey if indeed there can be a nexus between funded defined contributory pension schemes, savings mobilisation and financial market deepening which may culminate into economic growth. Data collected in this regard on the Nigerian economy are descriptively analysed.

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Based on the findings from the analyses, it would be possible to discern if increased savings due to the new scheme has contributed to financial deepening and economic growth in Nigeria. The paper concludes by making recommendations.

2.0 LITERATURE REVIEW

The literature review section is divided into two sub-sections, namely: the theoretical framework sub-section and the history of pension systems in Nigeria sub-section.

2.1 Theoretical Framework

What is financial deepening? And how can a funded contributory pension system foster financial deepening and possibly economic growth? In the view of Ndebbio (2000), financial deepening means an increase in the supply of financial assets in the economy and therefore the sum of all the measures of financial assets gives us the approximate size of financial deepening. From this, it is suggested that the financial sector is the conduit through which financial deepening is manifested. The Department for International Development (DFID) (2004) defined the financial sector of an economy as the wholesale, retail, formal and informal institutions in an economy offering financial services to consumers, businesses and other financial institutions. It therefore broadly includes everything from banks, stock exchanges, insurers, credit unions, microfinance institutions and money lenders.

DFID (2004) further outlined the ways in which the financial sector can be adjudged to be developed or to have deepened and these include improvement in the efficiency and competitiveness of the sector, the range of financial services that are available may increase, the diversity of institutions which operate in the financial sector may increase, the amount of money that is intermediated through the financial sector may increase, the extent to which capital is allocated by private sector financial institutions to private sector enterprises responding to market signals (rather than government directed lending by state owned banks) may increase, the regulation and stability of the financial sector may improve and more of the population may gain access to financial services.

Through its contributory feature, the funded scheme has the inherent potential to boost savings. OECD (2005) has observed that institutional investors, in particular pension funds, mutual funds and insurance have enhanced their role as collectors of savings over the past few decades. It went on to conclude that this trend is likely to continue as retirement saving grows and the increased pension saving will augment the size of capital markets. The large pool of savings which constitutes pension funds must be channeled into portfolios for reasonable returns so that old-age liquidity of the retirees (former affiliates) and hence their old-age consumption (welfare) can be assured. This requires a high degree of financial intermediation in the financial sector. Such a come-together of the deficit and surplus spending units is likely to result in more deepening of the financial system (Goldsmith, 1969; Ghani, 1992; Greenwood and Jovanovic, 1990).

Put differently, there will be more investment in the economy through the financial system. While a plethora of literature exists to support the relationship between increased savings and financial deepening, some literature also exist which are less sanguine about this relationship. For instance, in a reaction to some observers' claim that the Chilean reforms in 1981 may have, among other things, increased savings and deepened the financial markets in that country, Rocanda (2000, p.30) submitted that while the second outcome may be generally accepted, some developments in the macro-economy like reforms in the banking system and privatisation may have given this outcome a shot in the arm. Furthermore, she also queried the crediting of the first outcome to the reforms carried out in the country's social security system by painting a slew of possible fiscal scenarios that the government may have conceivably pursued to achieve the same outcome.

Some observers have emphasised the role that institutions may play in the deepening of the financial markets. They have hinged their contributions mainly on three theories: the power theory of credit, the information theories of credit and legal origin theory. The power theory of credit posits that financial institutions would be more willing to extend credit if in case of default; they could easily enforce contracts by forcing repayment or seizing collateral. The amount of credit in a country would therefore depend to some extent on the existence of legislation that protects creditors' rights and on the quality of procedures that lead to repayment (McDonald and Schumacher, 2007; and Tressel and Detragiache, 2008).

Information theory of credit in its own case stresses the role of information disclosure. It submits that the amount of credit to firms and individuals would be larger if financial institutions could better predict the probability of repayment by their potential customers. It follows then that the more banks know about the credit history of prospective borrowers, the deeper credit markets would be. For this reason, public or private credit registries that collect and provide broad information to financial institutions on the repayment history of potential clients is crucial for deepening credit markets (Djankov et al, 2005 and McDonald and Schumacher, 2007).

As for legal origin theory, Beck et al (2002) have identified a political and adaptability channel through which legal origin affects credit markets. The political channel depends on the balance between state power and private property rights. For example, civil law that promotes institutions that favour state power over private property rights would tend to have adverse implications for the growth of credit markets. The adaptability channel recognises that legal traditions differ in their ability to evolve with changing conditions.

The argument has been that common law traditions evolve efficiently because judges respond case by case to changing conditions. The implication of this is that countries whose law is French must have on average substantially slower financial development than British common law countries (La Porta et al, 1998). Empirical evidence available tends to support this institutional approach. Djankov, McLiesh and Shleifer (2005) have found from data on 149 countries that after controlling for macroeconomic factors like GDP growth, inflation and fiscal imbalances, legal institutions have made a clear contribution to the development of financial markets. Similar findings were reported by Galindo, and Micco (2001) in cross-sectional regressions of Latin American countries. Singh et al (2009) using panel data for a sample of 40 SSA countries from 1992-2006, have essentially arrived at a similar conclusion with the foregoing contributors and have strongly stressed that the legal history of most SSA countries in the CFA Franc zone is responsible for the financial shallowness of the countries in this zone.

What are the measures of financial deepening? Kiyotaki and Moore (2005) in their models of financial deepening used the degree of trust in the economy and the ease of conversion of illiquid paper (after an initial acquisition) into a liquid paper as measures of financial depth. The latter they called "securitisation or financial intermediation" and according to them, if the level of trust is high, and the costs of converting to liquid paper are low, then a measure of financial deepening may be deemed to have been achieved. Khan (2002) in his study of inflation, financial deepening and economic growth utilised three measures of financial depth; namely, domestic credit to the private sector as a share of GDP, domestic credit to the private sector as a share of GDP plus stock market capitalisation as a share of GDP, stock market capitalisation as a share of GDP.

Ardic and Damar (2006) in their study of financial sector deepening and economic growth in Turkey captured financial depth as total bank deposits divided by GDP. De Jesus Emidio (2007) utilised the ratio of bank deposit liabilities to nominal GDP to capture information on the extent of financial intermediation and the savings level in the economy of Mozambique. McDonald and Schumacher (2007) in their study of financial deepening in sub-Saharan Africa saw financial depth as the ratio of GDP of bank credit to the private sector.

Hasan et al (2007) in their study of institutional development, financial deepening and economic growth in China, used two measures of financial deepening. One measure was based on banks alone; which was the ratio of total bank loans to GDP and the other was the non-bank sources; which was the ratio of equity and non-financial corporate debt (long-term and short-term corporate bonds) issuance to GDP. In essence, issuance of equity and corporate bonds represents the activities of the capital markets.

Rousseau and Wachtel (2008) in their study of the impact of financial deepening on economic growth used three measures of financial development, namely: the ratios to GDP of liquid liabilities (M3), liquid liabilities less narrow money (M3 less M1) and credit allocated to the private sector. Lastly, Singh et al (2009) in their study of financial deepening in CFA Franc Zone captured financial depth as credit to the private sector in terms of GDP.

Can financial deepening really lead to economic growth? There exists a burgeoning empirical evidence to support the position that increased financial deepening can indeed foster economic growth. About four decades ago, Goldsmith (1969), Shaw (1973) and McKinnon (1973) began to draw attention to the benefits of financial structure development and financial liberalisation. The main policy implication of the McKinnon-Shaw school is that government restrictions on the banking system such as interest rate ceilings, high reserve requirements and directed credit programme, hinder financial development and ultimately reduce growth.

The seminal empirical work that established the growth finance nexus was King and Levine (1993a) which extended the cross-country framework introduced in Barro (1991) by adding financial variables such as the ratios of liquid liabilities or claims on the private sector to gross domestic product (GDP) to the standard growth regression. They found a robust, positive and statistically significant relationship between initial financial conditions and subsequent growth in real per capita income for a cross-section of about 80 countries.

Similar conclusions have been reached by subsequent papers on endogenous growth theory in which services provided by financial intermediaries such as information collection and analysis, risk sharing and liquidity provision were explicitly modeled. These papers showed convincingly that long-run economic growth depends on financial deepening (see for instance, Greenwood and Jovanovic, 1990; Bencivenga and Smith, 1991; Roubini and Salai-i- Martin, 1992; and Greenwood and Smith, 1997).

Reasoning along the same line, Levine (2005) identified some functions traditionally performed by financial intermediaries such as diversification and management of risks (including liquidity risk), mobilisation and pooling of savings and concluded that to the extent that these functions may influence savings and investment decisions, they can also influence economic growth.

Lately, however, a growing body of literature seems to be circumspect about the foregoing. These studies have for instance, pointed out that most of these studies have used cross-country data sets from 1960-1989. Since legal structures, cultural and economic histories differ between countries; the possibility of omitted variable bias has often been raised when discussing the results of cross-country studies.

Although more recent studies such as Levine et al (2000) have used methods that are less prone to biases caused by simultaneity, omitted variables and unobserved country-specific effects, the debate has continued. In order to reduce unobserved heterogeneity at the cross-sectional level, Ardic and Damar (2006) used provincial level data to investigate the link between financial sector development and economic growth in Turkey during the period 1996 2001. The results of the study revealed a strongly negative relationship between financial deepening and growth in real GDP per capita in Turkish provinces. They ascribed the reason for this to the inefficient banking sector during this period when the Turkish banking sector channeled deposits into the Treasury.

Using a similar approach to side-step the problems of omitted variables and unobserved country-specific effects and arriving at different results, Hasan et al (2007) used panel data for the Chinese provinces to study the role of legal institutions, financial deepening and political pluralism on growth rates. Their regression results showed that the development of financial markets, legal environment, awareness of property rights and political pluralism are associated with stronger growth.

In trying to look into the debate on the direction of causality (simultaneity) between financial liberalisation and economic growth in Mozambique, de Jesus Emidio (2007) utilised the co-integration test and the Granger-causality test to determine the economic growth financial deepening relationship and the direction of causality between economic development and financial deepening, respectively. The co-integration test suggested that there is a long-run relationship between economic growth and financial deepening and weak exogeneity tests and Granger-causality tests indicated that economic development is causally dependent on financial deepening in Mozambique.

2.2 The Overview of Pension Systems in Nigeria

The history of Nigeria's pension system dates back to the year 1951 when the first pension scheme was inaugurated in the country. According to Balogun (2006), Nigeria's first ever legislative instrument on pension matters was the Pension Ordinance of 1951 which had a retroactive effect from 1st January, 1946. The law provided public servants with both pension and gratuity. The National Provident Fund (NPF) which was established in 1961, was the first legislation enacted to address pension matters of private organisations. Pensions Decrees 102 and 103 (for the military) of 1979 were enacted with retroactive effect from April, 1974 (Ahmad, 2006).

The police and other Government Agencies' Pension Scheme were enacted under Pension Act No. 75 of 1987. This was followed by the Local Government Pension Edict which culminated into the establishment of the Local Government Staff Pension Board of 1987. In 1993, the National Social Insurance Trust Fund (NSITF) scheme was established by decree No. 73 of 1993 to replace the defunct NPF scheme with effect from 1st July, 1994 to cater for employees in the private sector of the economy against loss of employment income in old age, invalidity or death.

Before 2004, most public organisations operated a Defined Benefit (Pay-As-You-Go) scheme and final entitlements were based on length of service and terminal emoluments. The defined benefit pension scheme in Nigeria was plagued by many problems among which were poor funding due to inadequate budgetary allocations [for instance shortage of budgetary releases relative to benefits resulted into unprecedented and unsustainable outstanding pension deficit estimated at over N2 trillion before 2004 (Balogun, 2006)], weak, inefficient and non-transparent administration. There was no authenticated list/data base on pensioners and about 14 documents were required to file for pension claims. Restrictive and sharp practices in the investment and management of pension funds exacerbated the problem of pension liabilities and over 300 parastatals' schemes were bankrupt before the defined benefit scheme was finally jettisoned and replaced with the funded contributory benefit scheme in July, 2004.

The new pension scheme was established for all employees of the Federal Public Service, Federal Capital Territory and the private sectors (including informal sector employees) in Nigeria. The major operators under the scheme are the National Pension Commission (PenCom), Pension Fund Administrators (PFAs), Closed Pension Fund Administrators (CPFAs) and Pension Fund Custodians (PFCs). Being a contributory scheme, employees are to contribute minimum of 7.5 percent of basic salary, housing and transport allowances and employers are to also contribute a matching fund. So the total minimum monthly contribution of a typical employee contributor under the scheme is 15 percent of basic salary, housing and transport allowances.

PenCom was established to regulate, supervise and ensure an effective administration of pension matters. In this regard, the commission is mandated under the Act to, inter alia, establish standard rules for the management of pension funds, approve, license and regulate PFAs, PFCs and CPFAs, manage national data bank on pension, impose sanctions or fines on erring employers, PFAs, PFCs and CPFAs and ensure that payment and remittance of contributions are made and beneficiaries of retirement savings accounts (RSAs) are paid as and when due. In order to avoid the illiquidity and unsustainability that plagued the erstwhile defined benefit (PAYG) system, the Act and subject to enforcement by PenCom, specifically spelt out the investment of pension assets.

According to Balogun (2006), Peterside (2006) and Dalang (2006), pension funds should be invested in ordinary shares of companies quoted on Securities and Exchange Commission (SEC), regulated securities exchange and money market investments which must be made on a money market electronic platform approved by the Central Bank of Nigeria (CBN) or the Money Market Association of Nigeria. To ensure that investments made by PFA are of the highest quality, the guidelines require that investment instruments and companies invested in must have at least “BBB” rating from at least two rating agencies. Banks whose instruments are being invested in must have a minimum “A” rating from at least two agencies and securities issued via Initial Public Offering (IPO) must be listed on a recognised Stock Exchange and must also have “AAA” ratings from at least two rating agencies.

As for money market and fixed income securities, PFAs are only allowed to invest in Federal and State Government Bonds, Nigerian Treasury Bills, corporate bonds and preference shares, as well as bank deposits. Capital market investments allowed are ordinary shares of listed companies with 3 out of 5 preceding years' profitability and dividend payment, units of open-ended unit trusts, units of closed unit trust Mortgage- backed Securities (MBS), Real Estate Investment Trusts (REITs) and asset backed securities.

In order to effectively manage investment risks across the various assets, [Balogun (2006); Peterside (2006); Dalang (2006)] all submitted that the Act stipulated and subject to PenCom supervision and enforcement, the following diversification guidelines i.e. the maximum investment in portfolios of pension fund assets; Federal Government Securities 100 per cent; State Government Securities 20.0 per cent; Corporate Bonds/Debt including Real Estate Investment Trusts and Mortgage-backed Securities 30.0 per cent; Money Market Instruments 25.0 per cent; Ordinary Shares 25.0 per cent and Open-ended and Closed Funds 5.0 per cent.

The PFAs are basically private limited liability companies licensed to manage pension funds under the Act. All investment decisions of pension funds are made by the PFAs. Some private organisations or public agencies run self-funded and well-managed pension schemes. Such organisations or agencies who wish to continue running such schemes are licensed under the Act to perform functions essentially similar to the PFAs. These organisations or agencies are called the CPFAs. PFCs are banks licensed to hold the pension fund assets on behalf of the PFAs. They do not make decisions as to how funds entrusted in their care should be invested.

3.0 METHODOLOGY

Secondary data on some key macroeconomic indices relevant to the paper in the Nigerian economy were collected from the period 2001 to 2007. These indices are the nominal GDP, domestic credit to the private sector (DCP), stock-market capitalisation (SMC), total bank deposit liabilities (TBD), currency in circulation (C), broad money (M2), total domestic savings (TDS), and the inflation rates. The sources of these data are CBN Annual Reports and Statement of Accounts (2001 2007) and CBN Statistical Bulletin (2001, 2007).

Some of these data were transformed into measures of financial deepening including degree of trust in the economy and real gross domestic product (RGDP). As regards measures of financial deepening, the following computational approaches were adopted: domestic credit to the private sector as a share of GDP $\left[\frac{DCP}{GDP}\right]$ as in Khan (2002), McDonald and Schumacher (2007), Hasan et al (2007) and Singh et al (2007); domestic credit to the private sector as a share of GDP plus stock market capitalisation as a share of GDP $\left[\frac{DCP}{GDP}+\frac{SMC}{GDP}\right]$ as in Khan (2002); total bank deposits divided by GDP- $\left[\frac{TBD}{GDP}\right]$ as in Ardic and Damar (2006), de Jesus Emidio (2007) and Hasan et al (2007). In order to capture the degree of enforcement of contracts and the protection of property rights (quality of institutions) and therefore the level of trust in the economy as mentioned in Kiyotaki and Moore (2005), the contract intensive money (CIM) was utilised as in Clague et al (1999). The CIM is very objective because it avoids the problem of ordinality inherent in the use of other indexes of institutional quality.

The CIM is derived thus:

$$CIM = M_2 - C/M_2$$

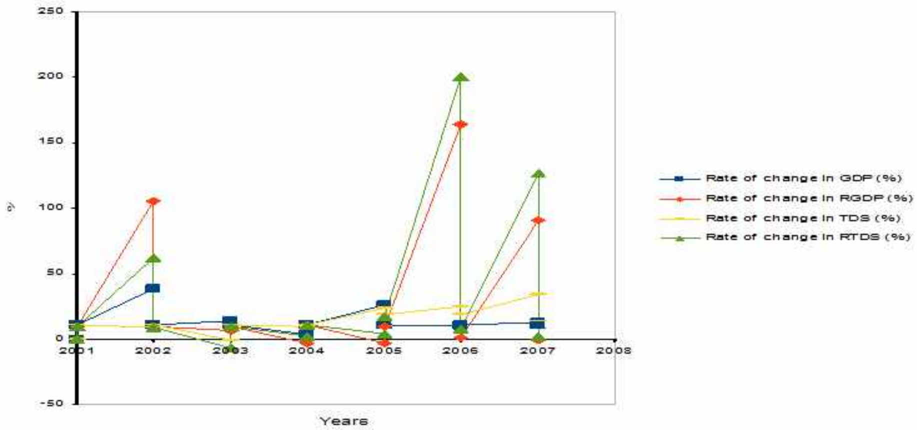
Where:
CIM = Contract Intensive Money
C = Currency in Circulation
M_2 = Broad Money

Contract intensive money of one (1) indicates a high degree of trust in the economy while contract intensive money of zero (0) shows an absolute lack of trust in the economy. The CPI data were used to generate inflation series. RGDP data were derived by using the CPI data to deflate the nominal GDP figures. Likewise, the CPI figures were used to deflate the nominal TDS figures to get the RTDS figures.

Since the data are of time series in nature and based on the survey of literature, the appropriate method of analysis should be regression analysis. But since the observations on the indices are inadequate, any regression performed would suffer from many econometric problems among which is serial correlation; so the appropriate method of analysis of the bi-annual data, in this instance, is descriptive analysis.

In order to evaluate the performance of domestic savings, nominal GDP, real GDP, measures of financial deepening including contract intensive money, the study period was broken into two sub-periods, viz: 2001 to 2004 (pre-pension reform period) and 2004 to 2007 (post-reform period). In essence then, this paper is a country-specific, inter-temporal comparative one.

Figure 1: Trends in the Rate of Growth of Nigeria's GDP, RGDP, TDS and RTDS (2001 2007)



2.0 DISCUSSION

Figure 1 shows that the rate of growth of nominal domestic savings (TDS) from the first half of the first year (2001) of the pre-pension reform period was about 11.11 percent. This index decreased to about 9.46 percent at the end of this period. At the start of the post-pension reform period in the first half of 2004, the growth rate of TDS was about 11.11 percent and at the end of the period, it increased to about 14.01 percent. The average rate of growth of TDS during the pre-pension reform period was about 7.38 percent, while the average rate of growth of TDS during the post-pension reform period was about 21.81 percent (see Table 3, Appendix III). In real terms, Figure 1 also shows that the rate of growth of real domestic savings (RTDS) from the first half of the first year of the pre-pension reform period was about 10.02 percent. This index decreased to about 2.63 percent at the end of this period. At the start of the post-pension reform period in the first half of 2004, the growth rate of RTDS was about 11.15 percent and at the end of the period, it decreased to about 2.20 percent. However, the average rate of growth of RTDS during the pre-pension reform period was about 12.42 percent while the average rate of growth of RTDS during the post-pension reform period was about 52.94 percent (see Table 3, Appendix III). What this implies is that after the defined contributory pension scheme was introduced, total domestic savings increased somewhat both in nominal and real terms.

Figure 1 also shows that at the start of the pre-pension reform period in 2001, the rate of growth of nominal GDP was about 11.11 percent and at the end of this period, the growth rate of nominal GDP decreased to about 3.65 percent. At the start of the post-pension reform period in the first half of 2004, the growth rate of nominal GDP increased to about 11.11 percent and at the end of this period in 2007 it remained at that level. The average rate of growth of nominal GDP during the pre-pension reform period was about 12.82 percent while the average growth rate of the nominal GDP during the post-pension reform period was about 13.39 percent.

A marginal increase in real terms, at the start of the pre-pension reform period in 2001, the rate of growth of RGDP was about 10.02% and it decreased to a negative value of about -2.83 percent. At the start of the pre-pension reform period in 2004, the rate of growth of RGDP was about 11.11 percent and at the end of the period in 2004, it decreased to a negative value of about -0.38 percent. The average growth rate of RGDP during the pre-pension reform period was about 23.10 percent while the average growth rate of RGDP during the post-pension reform period was about 39.09 percent (see Table 3, Appendix III). When the growth rates in the two periods are compared, it can be seen that those growth rates are comparable. So the appreciable increase in nominal and real domestic savings cannot be said to have its origin in the growth of nominal and real Gross Domestic Product. But did the increase in savings lead to increased intermediation and financial deepening?

Figure 2: Trends in Nigeria's CIM, DCP/GDP, SMC/GDP, DCP/GDP + SMC/GDP (2001 2007)

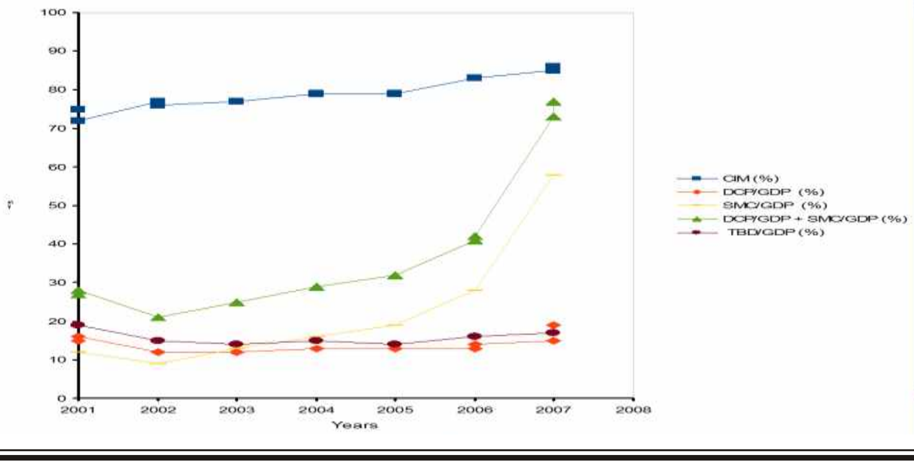


Figure 2 shows that the DCP/GDP measure of financial deepening was about 15 percent at the start of the pre-pension reform period. It closed the period by decreasing to 13 percent. At the start of the post-pension reform period, it remained at 13 percent and at the close of the period it increased to about 19 percent - a marginal increase in its performance during the post-pension reform period.

Also, figure 2 shows that the TBD/GDP measure of financial market deepening was about 19 percent at the start of the pre-pension reform in 2001. It decreased to about 15 percent at the end of this period. At the start of the post-pension reform period in 2004, it stood at the 15 percent mark and increased to about 17 percent at the end of the post-pension reform period. It should be noted that the performance of this measure at the close of the post-pension reform period was far less than the value of this measure at the start of the pre-pension reform period. So the TBD/GDP measure returned a very poor performance during the reform period. When the behaviour of the DCP/GDP and TBD/GDP measures are considered, it can be said that intermediation during the post-pension reform was poor and quite understandably so as one measure feeds the other measure i.e. the TBD/GDP feeds DCP/GDP in this instance.

The SMC/GDP measure of financial deepening at the start of the pre-pension reform period was about 12 percent and at the end of the period, it increased to about 16 percent. At the start of the post-pension reform, it remained at about 16 percent. At the end of this period, this measure increased appreciably to 58 percent. When the DCP/GDP and SMC/GDP measures were combined, a better performance was realised. At the start of the pre-pension reform period in 2001, DCP/GDP + SMC/GDP measure of financial deepening was about 27 percent and at the end of the period it increased quite marginally to about 29 percent. At the start of the post-pension reform period, the measure still stood at about 29 percent. At the end of the period, it had increased substantially to about 77 percent. It must really be emphasised though that this improvement in performance was largely due to the performance of the SMC/GDP and not the performance of the DCP/GDP measure.

Figure 2 also shows that the CIM as a measure of financial deepening at the start of the pre-pension reform period was about 75 percent. At the end of this period in the first half of 2004, it marginally increased to 79 percent. At the start of the post-pension reform period in the second half of 2004, it still stood at 79 percent. At the close of the period in 2007, it marginally increased to 86 percent.

As it has been shown, the measures of financial deepening like the DCP/GDP, TBD/GDP and CIM have not performed spectacularly well as they have all turned in less than impressive performances. But can it now be said that the better performance of the DCP/GDP + SMC/GDP and the SMC/GDP measures translated into increased nominal GDP and RGDP? As it has been discussed earlier, the increases in the nominal GDP and RGDP during the post-pension reform period when compared with pre-pension reform period were quite minimal and as such it cannot be said that these measures contributed to their growths.

5.0 RECOMMENDATIONS AND CONCLUSION

5.1 Recommendations

The following are recommended: although the TDS may have increased probably due to pension funds, there is indeed room for improvements in this area. Presently, the only group participating in Nigeria's defined contributory pension scheme is the Federal Government's employees. The perennial high unemployment rate and the high excess capacity rates in Nigeria's industries, if not reversed may lead to low participation rate which in the future may erode the base of the scheme causing the number of retirees to outstrip the number of the workers in the labour force who should be supporting the system. This outcome is not the same but similar in consequence to the problem presently confronted by pension systems in the industrial economies of North America, Europe and Asia where as a result of longevity and low fertility rates, the bases of these systems may be thinning out (lower replacement rates) which if not reversed may cause the retirees, in the case of Nigeria, represented by their PFAs to offload huge amounts of equities into the market in an attempt to make the pensioners maintain their old living standards. The outcome of this would be lower returns on these assets and lower living standards of the retirees.

The other arms of governments at the states and local governments' levels must emulate the federal government in making the participation of their employees in the new scheme compulsory and this must be inserted as a clause in their conditions of service. Nigerian governments at all levels must also face squarely the problem of perennial unemployment and excess capacities plaguing the Nigerian economy by instituting employment-boosting policies like for instance, retraining employees who as a result of the changing structure of the domestic and foreign economies become unemployable. This can be done by governments sending these unemployed and unemployable agents to government approved but privately-run retraining centres.

Another way by which governments can increase employment and hence improve participation rate is for governments to commit more resources to the education sector. One crucial positive externality can be derived from this. Improved funding for education implies that more research in the area of technology would be carried out in Nigerian institutions. This may cause innovations to be discovered. The industries in Nigeria, which are presently operating at excess capacities, and whose manufactured exports are low, may partner with these institutions and tap into the innovations and incorporate them into their production processes. This, coupled with the fact that increased funding for education would produce a pool of well disciplined and more productive workforce would enable the Nigerian industries to produce more qualitative and quantitative goods that would compete favourably in the international markets. The ensuing better-terms-of-trade for Nigerian manufactured goods would generate employment and income.

The workers in the informal sector (artisans and traders), can be encouraged to join the new pension scheme by governments embarking on media sensitisation campaign to educate this group on the positive aspects of the scheme.

In order to reverse the poor performances of DCP/GDP, TBD/GDP and CIM measures of financial deepening, the banking regulations as outlined in the banking sector reforms must be seriously enforced by the appropriate regulatory agencies so as to improve intermediation. That may be achieved because of customers' confidence that their deposits would not be lost due to insolvencies of banks .And in the event of insolvencies, the judicial system would wade in appropriately in cases where some banks try to prove difficult and ensure that customers are paid back their deposits promptly so that hidden losses would not be incurred by depositors through an erosion of the purchasing power of the naira that may be caused by ravaging inflation. This would happen if Nigeria's judicial system is truly reformed such that the practitioners in the system are enabled to readily enforce contract laws and protect property rights.

Although the DCP/GDP + SMC/GDP measure of financial deepening has improved due to the SMC/GDP component, there is also room for improvements. Nigeria's capital market and the pension funds management guidelines as outlined by PenCom are plagued by what is referred to as "home bias". This term means that portfolios are concentrated in the domestic market of investors (Oxera, 2007). The Nigerian capital market must be internationalised such that domestic institutional investors can invest in foreign-based instruments and likewise, foreign institutional investors can invest in Nigerian-based instruments. Granted that PenCom relaxes its guidelines, this objective is achievable only if the Nigerian stock exchange is ICT compliant through the acquisition and use of the state-of-the-art ICT hardware and software such that Nigerian-based insruments are listed on the exchanges in New York, London, Paris, Singapore and

Johannesburg and vice versa.

Internationalisation of the market may as a result of foreign investors' demand for new investment instruments, compel the Nigerian capital market operators to float such new and innovative instruments. This may further deepen Nigeria's capital market. Some other advantages of internationalisation are the reduction of risk and higher average returns. In this regard, Jorion and Goetzmann (1999) have submitted that greater international diversification results in higher average returns and/or lower risk compared with a domestic investment strategy.

5.2 Conclusion

From the results in section (4.0), the following can be concluded: First, TDS increased both nominally and in real terms during the post-pension reform period. Second, the increase in TDS cannot be said to have its origin in GDP growth as the GDP only increased marginally in both nominal and real terms during the post-pension reform period. So the increase in TDS must have been derived from a different source other than from the GDP which may be from pension funds. Third, the DCP/GDP, TBD/GDP and CIM measures of financial deepening did not improve appreciably during the post-pension reform period. This indicates the possibility that there was poor intermediation in the banking industry as the TBD/GDP feeds the DCP/GDP. The low CIM also points at the possibility that the level of trust in the Nigerian economy is low due largely to poor enforcement of contract laws and lack of protection of property rights. So the Nigerian economic agent is still reluctant to put his money in naira denominated instruments. Fourth, the measures of financial deepening that showed remarkable improvement was the DCP/GDP + SMC/GDP and this was due largely to the good performance of the SMC/GDP component. This buttress the fact that the Nigerian capital market had achieved some measure of deepening. But this has not translated into nominal GDP or RGDP growth.

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APPENDIX I

Table 1: Nigeria's Currency in circulation (C), Broad Money (M2), Inflation rates, CPI, Nominal GDP, RGDP, TDS, DCP, SMC. TBD (2001 - 2007).

(i) Year	(ii) Currency in Circulation (C) (₦bln)	(iii) Broad Money (M2) (₦ bln)	(iv) Inflation Rates (%)	(v) CPI	(vi) Normal GDP (₦ bln)	(vii) RGDP (₦ bln)
2001						
1	323.72	1302.72	18.70	100	4669.11	46.69
2	357.28	1315.87	18.90	101	5187.90	51.37
2002						
1	370.09	1583.51	12.80	68	7185.96	105.68
2	390.21	1599.50	12.90	69	7984.40	115.72
2003						
1	446.50	1965.35	13.90	74	9122.76	123.28
2	451.32	1985.20	14.00	75	10136.40	135.15
2004						
1	467.38	2240.96	14.90	80	10506.24	131.33
2	478.90	2263.59	15.00	80	11673.60	145.92
2005						
1	557.61	2600.20	17.70	95	13405.05	141.11
2	563.24	2626.46	17.90	96	14894.50	155.15
2006						
1	587.02	3395.86	7.38	40	16400.52	410.01
2	651.57	3735.45	8.20	44	18222.80	414.15
2007						
1	726.83	4889.70	4.86	26	20564.01	790.92
2	776.77	5378.67	5.40	29	22848.90	787.89

(viii) DCP (₦ bln)	(ix) SMC (₦ bln)	(x) TBD (₦ bln)	(xi) Nominal TDS (₦ bln)	(xii) RTDS (₦ bln)
709.66	583.61	877.98	439.30	4.39
820.26	648.45	975.53	488.05	4.83
897.07	672.84	1088.77	532.89	7.84
964.01	747.60	1209.75	592.10	8.58
1112.46	1192.41	1275.35	590.17	7.98
1231.18	1324.90	1417.06	655.74	8.74
1340.06	1733.35	1600.84	717.77	8.97
1503.26	1925.94	1778.71	797.52	9.97
1708.39	2610.05	1832.48	985.02	10.37
1968.39	2900.03	2036.09	1171.64	12.20
2107.18	4608.85	2634.79	1466.75	36.67
2547.14	5120.94	2976.35	1741.60	39.58
3078.10	11965.12	3443.63	2336.54	89.87
4335.26	13294.58	3958.98	2663.78	91.85

Sources: (i) CBN *Annual Report and Statement of Accounts* (2001 - 2007)
(ii) CBN *Statistical Bulletin* (2001, 2007).

APPENDIX II

Table 2: Nigeria's CIM, $\frac{DCP}{GDP}$, $\frac{SMC}{GDP}$, $\left[\frac{DCP}{GDP}+\frac{SMC}{GDP}\right]$, $\frac{TBD}{GDP}$ (2001 – 2007)

(i) Year	(ii) CIM	(iii) CIM (%)	(iv) $\frac{DCP}{GDP}$	(v) $\frac{DCP}{GDP}$ (%)	(vi) $\frac{SMC}{GDP}$	(vii) $\frac{SMC}{GDP}$ (%)	(viii) $\left[\frac{DCP}{GDP}+\frac{SMC}{GDP}\right]$	(ix) $\left[\frac{DCP}{GDP}+\frac{SMC}{GDP}\right]$ (%)	(x) $\frac{TBD}{GDP}$	(xi) $\frac{TBD}{GDP}$ (%)
2001										
1	0.75	75	0.15	15	0.12	12	0.27	27	0.19	19
2	0.72	72	0.16	16	0.12	12	0.28	28	0.19	19
2002										
1	0.77	77	0.12	12	0.09	9	0.21	21	0.15	15
2	0.76	76	0.12	12	0.09	9	0.21	21	0.15	15
2003										
1	0.77	77	0.12	12	0.13	13	0.25	25	0.14	14
2	0.77	77	0.12	12	0.13	13	0.25	25	0.14	14
2004										
1	0.79	79	0.13	13	0.16	16	0.29	29	0.15	15
2	0.79	79	0.13	13	0.16	16	0.29	29	0.15	15
2005										
1	0.79	79	0.13	13	0.19	19	0.32	32	0.14	14
2	0.79	79	0.13	13	0.19	19	0.32	32	0.14	14
2006										
1	0.83	83	0.13	13	0.28	28	0.41	41	0.16	16
2	0.83	83	0.14	14	0.28	28	0.42	42	0.16	16
2007										
1	0.85	85	0.15	15	0.58	58	0.73	73	0.17	17
2	0.86	86	0.19	19	0.58	58	0.77	77	0.17	17

Source: Author's Computation.

APPENDIX III

Table 3: Rate of change in GDP, RGDP and TDS in the Nigerian Economy (2001 – 2007)

(i) Year	(ii) Rate of change in GDP (%)	(iii) Rate of change in RGDP (%)	(iv) Rate of change in TDS (%)	(v) Rate of change in RTDS (%)
2001				
1	-	-	-	-
2	11.11	10.02	11.10	10.02
2002				
1	38.51	105.73	9.19	62.32
2	11.11	9.50	11.13	9.44
2003				
1	14.26	6.53	-0.33	-6.99
2	11.11	9.63	11.11	9.52
2004				
1	3.65	-2.83	9.46	2.63
2	11.11	11.11	11.11	11.15
2005				
1	26.32	-3.30	23.51	4.01
2	11.11	9.95	18.95	17.65
2006				
1	10.11	164.27	25.19	200.57
2	11.11	1.01	18.73	7.94
2007				
1	12.85	90.97	34.16	127.06
2	11.11	-0.38	14.01	2.20

Source: Author's Computation.