THE INTENSITY OF FINANCIAL REPRESSION IN NIGERIA

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Abstract

This paper focuses on financial repression in Nigeria and its intensity using data from the Central Bank of Nigeria Statistical Bulletin to construct the financial repression index for Nigeria by employing the summary measure of the Principal Component Analysis(PCA). Results indicated a preponderance of financial repression over the study period of 1986-2020 and provided a financial repression index at a measure of less than 30% over the study period. This measure is seen as far less than average measures of financial repression from extant cross-country literature on Nigeria's financial repression index at the level 64.53% over the period of 1990-2009 and 39.08% average over the period of over 1970-1997. *The study concludes the presence of financial repression in Nigeria at a magnitude that is reasonably lower than previously estimated from cross country studies in which Nigeria was sampled.*

1.0 INTODUCTION

Financial Repression is the embodiment of stealthily entrenched controls which keep interest rates below inflation rate through macro prudential policies. It prevents financial intermediaries from achieving optimal price setting necessary for financial deepening, enables the government to finance its budget deficits at low interest cost and retards financial intermediation as expounded in the financial repression hypothesis, McKinnon (1973) and Shaw (1973); Macro prudential policy instruments in use for repressing the financial system globally includes controls on deposit interest rates, bank lending rates as well as layers of regulations on capital account restrictions, high reserve requirements (usually non-remunerated), measures that requires financial institutions to keep government debts in its portfolios as well as regulations that direct Deposit Money Banks (DMBs) to invest in government debt instruments in their asset portfolio, Reinhart and Sbrancia (2015). The mechanism by which governments repress the financial system most often comes with stealth via macro prudential policies by which loanable funds are directed towards government issued debt instruments at interest rates that are below the market rate and qualities that endear them as better securities for the banking system to hold. One of such quality is that which qualify Government issued securities as securities that are acceptable in the composition of commercial bank liquidity ratios by the central banking authorities. This suggests that, in the event of the absence of financial repression, the government would be required to offer a higher interest rate in order to motivate lenders. Failure to do so would potentially result in the government facing the possibility of losing substantial investor funds to alternative free market investments that yield greater rates of return (Hileman, 2017). The market reforms introduced in Nigeria during the year 1986 Structural Adjustment Programme (SAP) were among other objectives expected to have led to greater efficiency in financial intermediation measures such as the ratio of Liquid liabilities to GDP (M_2/GDP) and the ratio of private sector domestic credit to GDP, but the comparative evidence of financial depth measures of liquid liability to GDP ratio (M_2/GDP) pre and post SAP era from the CBN Statistical Bulletin , indicates evidence of a

shallow finance characterized by low and declining level of liquid liability ratios from the pre-sap level (1985) of 38.7% to 23.75% as at 2020. This poor performance is corroborated by the World Bank (2020) data in which Nigeria ranked lowest in terms of financial depth measures of liquid liability ratio (M2/GDP) at 25%, compared to Egypt's 84% and South Africa at 74.6% despite having Nigeria as the largest economy in Africa in GDP terms. This poor level of financial intermediation measure was noted in the findings of Ayadi, Adegbite and Ayadi (2008), in which the absolute measures of the size of financial intermediaries measured by the ratio of liquid liabilities to GDP, Central bank asset to GDP and Deposit Money Bank Assets to GDP were reported to have done poorly in the post structural Adjustment period thus raising concerns on whether there is financial repression in Nigeria despite the financial liberalization that followed the Structural Adjustment Programme (SAP) in 1986 and if there is, what is the extent or intensity of financial repression in Nigeria. We examine the presence of financial repression in Nigeria and its intensity in this paper, by constructing the index for financial repression in Nigeria based on Nigerian specifics as different from other cross-country studies in which Nigeria was part of the sample of study. This study covers 1986- 2020 which is a period of 35 years. The choice of period 1986 as base allows the study to capture the post- structural adjustment period and market reforms which began in 1986 using data set on financial policy instruments and macro prudential regulation on interest rates on deposit liabilities with Deposit Money Banks, inflation rates , real interest rates, exchange control and capital account restrictions. Statistics will be sourced from the Central Bank of Nigeria Statistical Bulletins 1986-2020. The terminal year of the study is set to be co-terminus with the Nigerian Vision 2020 programme into which SAP dove-tailed.

2.0 LITTERATURE REVIEW

Conceptually financial repression can be described as the conglomeration of macroprudential and regulatory policies through the central monetary authority like the Central Bank of Nigeria targeted at achieving control and reduction of excessive government debt through financial policy pillars that includes; negative interest rates, inflation targeting, ring-fencing regulations and data obfuscation to effectively expropriate private savings towards government fiscal programmes. In a study conducted by Batilossi (2004), an empirical investigation was carried out to examine the potential factors influencing financial repression. The study utilized various independent variables, such as fiscal, institutional, and political indicators, to estimate regression based on pooling cross-section time-series data. The findings indicate that several factors, namely a less effective tax system, increased inflation, higher debt levels, and a Central Bank that is reliant on external sources, are the primary drivers of heightened financial repression. The evidence is consistent with findings in the Sbrancia and Reinhart (2011) in which fiscal policy benefits of debt reduction anchored the basis for financial repression across countries globally. Policy instruments in use to repress financial systems have been known to include the mix of nominal interest rate which is persistently lower than the inflation rate, creating a captive domestic audience for government bonds thereby crowding out the private sector domestic credits, ensuring a financial environment that makes government bond yields to levels that are lower than the rate of inflation ,continuing pursuits of inflation targeting as part of the monetary policy objective, government restrictions on capital account transactions such that no opportunity exist for investors to seek higher rents for their investible funds outside the local economy as well as banking system maintenance of high reserve requirements which most of the time are never remunerated. A typical conceptual framework of financial repression is represented thus:

Conceptual Framework of Financial Repression

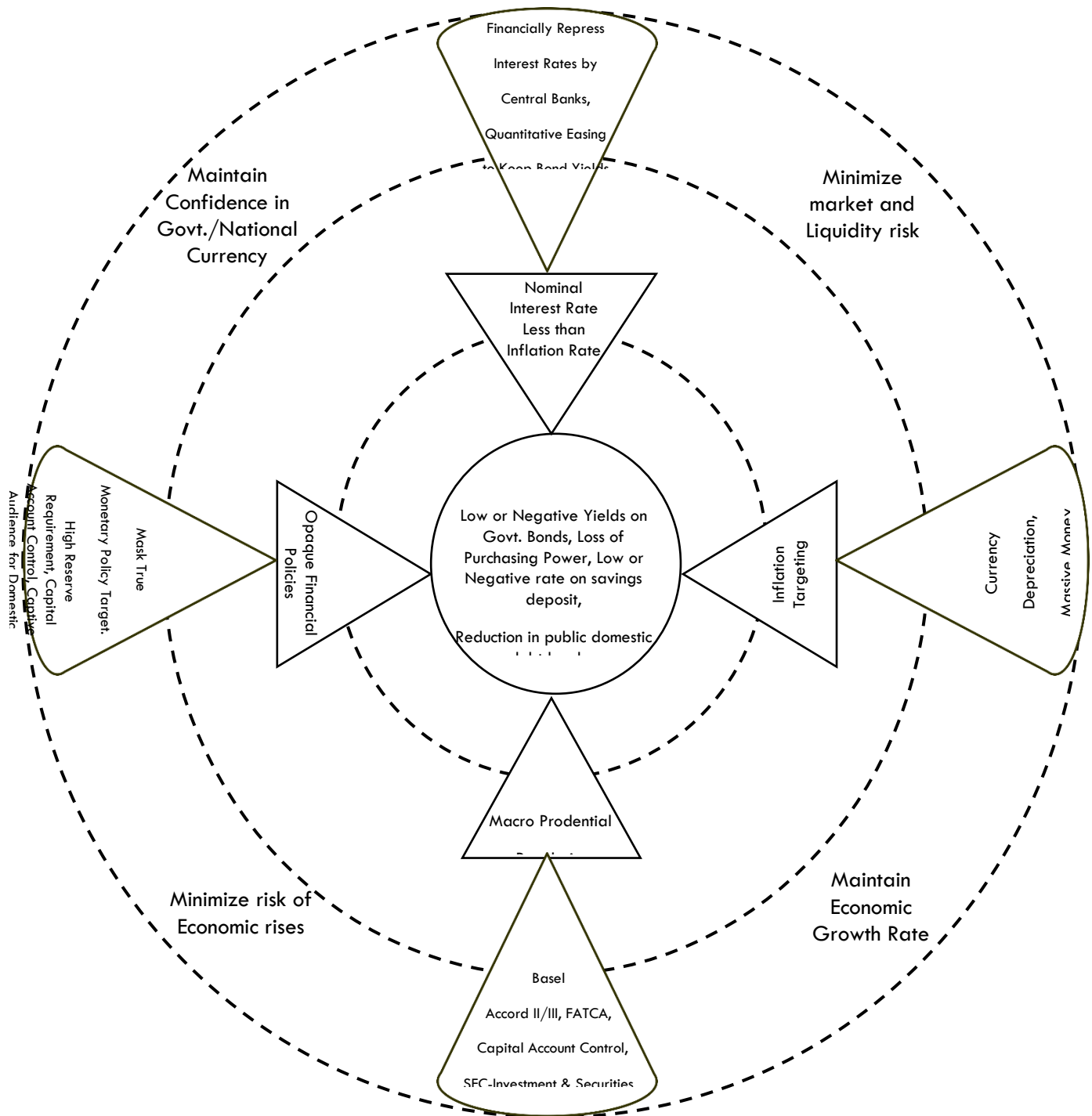Figure 1: Conceptual framework of financial repression

Theoretical literature

Theories on whether the financial system should embrace financial liberalization or financial regulation has been a subject of intense academic debate. Financial regulation theories argue strongly for entrenchment of controls in the conduct of financial intermediary functions on the premise that financial system functions such as the Payment system is a public good which must not be left in the hand of private enterprise without control. Secondly, agency problems and associated moral hazards could cause financial system breakdown and the very foundation of the economy through incidences of bank failure which may arise from contagions and panics if a financial system is completely left to laissez faire policy framework. (Stiglitz, 2001). Financial liberalization theory on the other hand have argued on the need for a laissez faire financial system on the premise that financial system should allow the dictates of the market to provide guidance on financial intermediation activities as led by McKinnon (1973) and Shaw (1973) with their postulations well documented in the financial repression hypothesis. The theoretical framework of the financial repression hypothesis highlights the negative impacts of various aspects of the controls imposed on the financial structure and development which constrain the efficient functioning of financial intermediaries. The argument is the need for reliance on market equilibrium interest rates as basis for pricing savings by the financial intermediaries. Control especially of interest rate, could distort financial intermediation activities and financial development and by implication economic growth. Critical to the McKinnon-Shaw model is the basic assumption of complementarity, meaning that savings are distributed between two asset classes which consist of tangible assets used as inflation hedges and deposits earning a nominal interest rate. Financial institutions perform intermediation functions by sourcing savings of the household and making same available to investors. In this study, the theoretical model of McKinnon, (1973); Shaw, (1973) was adopted where; Demand for money (M_d) is a function of the real money stock, ratio of investment to output, real output, real deposit rate of interest and the lagged value of real money demand. Hence;

$M_d = f\ (I/Y,\ \gamma,\ i,\ Md\text{-}1)$ (1)

Where:

Md =   M/p = the real money stock

I/Y =   the ratio of investment to output

3.1   =   real output
i =   real deposit rate of interest

Md*-1 = lagged value of real money demand

The investment function, which is the McKinnon's complementarity's hypothesis, is stated as:

$I/Y = f(r, i)$: Where r = average rate of return in physical capital and I = real deposit rate of interest
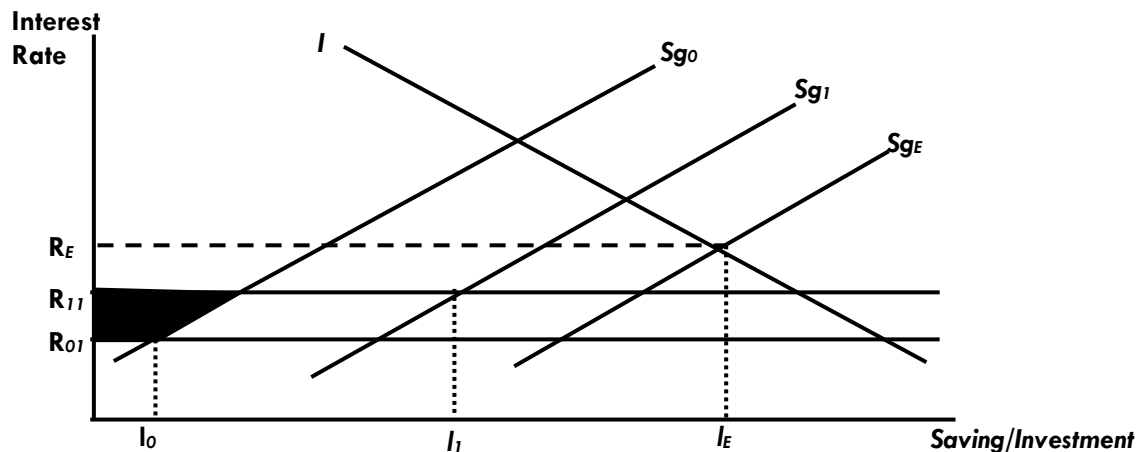

Figure 2: Graphical Illustration of financial repression hypothesis.

Source: Ghatak, (1995),

Figure 2, shows the real interest rate being measured on the vertical axis, while investment /savings (I/S) on the horizontal axis. The functional relationship between Savings (s) at different levels of economic growth (Sg_0, Sg_1, Sg_E) is represented in the Real interest rate /Investment=Savings plane. Given a financially repressive policy regime, real interest rate is constrained at its lowest level of R_0, this is seen stifling the level of investment /savings at its lowest of I_0 and growth in savings is weakest at Sg_0. Policy regimes that lead to increase in real interest rate from $R_0 > R_1$ incentivizes the holders of savings to bring more savings to the market thus leading to increase in Investment/savings level to I_1. Growth in savings is seen to be at a higher level of Sg_1. Reforms to market which allows a market determined real interest rate leads to a greater incentive for savers to supply available savings /investment at the point I_E at the equilibrium level of interest rate of R_E at which point also growth is seen to the market determined level of Sg_E which is the highest growth level in the plane. The contention posits that, it is the responsibility of monetary authorities to stimulate savings growth by deregulating the interest rate market, thereby allowing market forces to determine the equilibrium level of real interest rates that align with the supply and demand of savings and investment. By permitting the market to adjust the real interest rate from R0 to R1, both saving and investment will experience an increase. The elimination of low yielding investment activities, as depicted by the shaded area in Figure 1, will result in an overall enhancement of investment efficiency. As a result, there will be a subsequent increase in income and savings. Consequently, the savings curve will shift to the right, denoted as Sg1, while actual investment will increase to I1. The implementation of market reforms that eliminate regulatory limitations on interest rates has the potential to result in an increased level of real saving and investment, thereby fostering further growth in income. Gurley and Shaw (1973) put forth a significant proposition in their influential paper, asserting that the imposition of control leads to suboptimal outcomes in saving, investment, and financial intermediation. This occurs when the real interest rate is artificially set at a level significantly below its equilibrium point. The implementation of administrative controls on interest rates, as opposed to allowing market forces to determine savings rates, results in a decrease in the effectiveness of financial intermediaries in facilitating the mobilisation and allocation of savings. This

implies that in a financially repressed setting, these intermediaries are unable to generate credit in accordance with market rates and prices. Furthermore, the maintenance of artificially low interest rates hampers the capacity to effectively mobilise savings at an optimal level. Consequently, this results in a decrease in capital accumulation for the economy, ultimately leading to weakened levels of economic growth. In a free market setting, financial intermediaries have the potential to provide significant benefits. These include enhancing the real rate of return for savers, reducing the real costs for investors through the provision of liquidity and information, as well as mitigating risk and diversifying the asset structure.

The literature on the measures of financial repression index has been largely based on cross country studies while few attempts were made to include Nigeria in several regional cohorts. Specific measure of the intensity of financial repression in Nigeria has been neglected in the cross-country exploration which lacuna this study sets to fill.

Zarra-Nezhad, M., Parsaeian, S., & Anvari, E. (2012) studied financial repression across selected members of the Organization of the Petroleum Exporting Countries (OPEC) which included Nigeria using variables of Real Interest Rate, level of financial Intermediation (M2/GDP), Private sector credit to Government, Private sector Credit/GDP to construct the index of financial repression over a decade panel (1990-2009). The methodology followed the Beeim and Calomiris method. The results showed average index of 64.53% for Nigeria's level of financial repression over the period of 1990-2009.

Huang & Wang (2010) examined the impact of financial repression on the china's economic growth over the reform period 1978-2008 measuring the index of financial repression over the period using the Principal Component Analysis Method. The results showed that that financial repression in China fell from 100% in 1978 to 58.6% in 2008 following the china reform policies over the period.

Beim & Calomiris (2001) constructed the index of financial repression for all countries on the IFS data base in 1997 which included Nigeria. The index was constructed by averaging the indexes for each of the six measures of financial repression namely Real interest rates, Reserve Ratios, Liquidity (M2/GDP), Ratio of Private sector borrowing, Captive Audience for domestic credit and Market capitalization.

The results showed that Nigeria's index of financial repression over 1970-1997 averaged 39.08%

Laurence & Chai (1998) studied financial liberalization and financial depth in China over the period of 1978-1996 measuring the index of financial repression. The Principal Component Analysis method was employed and the finding showed that China's index of financial repression averaged 50.2% over the period and gave the indication that the China reform policies had made significant strides towards market liberalization. This study observed a literature gap in the strands of literature in which Nigeria's index of financial repression were studied. Firstly, the period of the of the study in both Beim & Calomiries (2001) and Zarra-Nezhad et al (2012) ignored period which Nigeria commenced its reform to market policies under the structural Adjustment programme, hence the results did not account for the full performance of Nigeria's liberalization policies and deregulation which started in 1986 and its dovetail to the vision 2020 economic reform programmes. Secondly Both studies used the statistical estimation method over which the Principal component Analysis method used by Laurence & Chai (1998) and Huang & Wang (2010) seemed to have greater statistical efficiency in dealing with the

problem of multi-collinearity and over-parametization. It is against this backdrop that this paper sets to examine the presence of financial repression in Nigeria and construction of the index using the PCA method.

There are diverse instruments of financial repression such as real interest rate, reserve requirement on DMBs, directed credit and capital flow restrictions. Real interest rate is defined in line with the Fisher real interest rate model equation by which the nominal interest rate at any point in time is equal to the real interest rate plus the rate of expected inflation between t – 1 and t. As summarized by Ojo (2010), interest ceiling should take the rate of inflation into account to avoid creating a repressed level of private savings. The measures of control on interest rates by the central monetary authorities (CBN) since 1986 made it mandatory for banks to align the structure of borrowing and lending rates to the Minimum Rediscount rate (MRR) which is now called the Monetary Policy Rate. The period post 1986 brought up terminologies like guided deregulation/partial deregulation, hence did not provide the experience of a fully liberalized market for interest rates. The financial intermediation efficiencies continue to be tinkered through regulations of interest rates anchored on the (Minimum Rediscount Rate) Monetary policy rate which in itself are fixed by the CBN. In addition, the minimum reserve requirements impose an upper limit on the creation of deposit money and impedes on the ability of commercial banks to optimally perform their financial intermediation functions. It stifles growth in domestic credit through its impact on the money creation functions. Furthermore, it induces additional costs on financial intermediation thus making their remuneration less than what banks would receive were they able to invest the money without restrictions and thus affects bank spreads. High reserve ratio requirements on commercial banks implies that the banking systems is stealthily being manipulated or forced to hold greater amount of non-interest bearing monetary reserves with the potential effect of expanding the monetary base and by implication the tax base for seigniorage revenues, (Brock ,1989; Rother, 2001). Reserve requirements has continued to be a feature of the Central Bank discretional control measures of the commercial bank intermediation in conjunction with stabilization securities and several conducts of open market operations that allow treasury bill instruments to be sold to the banks and other financial institutions as instrument of borrowing for Government fiscal operations. The on such instruments are usually less than inflation rates and market rates. What seems opaque in the process is that seigniorage (savings from the market interest cost) revenue is generated from central bank's monopoly over the issuance of reserve money arising from expropriation from non-interest earning bank reserves such as cash reserve requirements held at CBN. Estimates of seigniorage revenues/taxes defined as the change in reserve money as a share of GDP) have been noted as major source of deficit finance on the government budget constraints (Haslag &Young,1998). As for directed credit, the objective has always been the need to generate domestic debts for the government at less than market interest rates or inflate away the burden of domestic debts through negative interest rates when combined with inflation target frameworks as anchors for monetary policies. The Bank for International Settlement BIS (2008) in its policy support instruments for prudential regulation on international capital convergence for internationally active banks under Basel III provision allows for the preferential treatment of government debt in bank balance sheets in regulatory capital measurement. This has tremendously assisted sovereigns to satisfy the attendant common policy challenge of finding prospective buyers of sovereign debts. This is also consistent with CBN regulations by which only specified government securities are acceptable as prescribed assets in the computation of liquidity ratio for banks in line with the provisions of the Investment and Securities Act 1961/2007/2019 as amended.   In relation to capital flow restrictions Nigeria is known to have gone through several exchange control regulations as part of its monetary policy to deliberately repress financial flows to

protect a country's exchange rate policy or regimes. Exchange and capital controls that prevent nationals from flowing their capital outside the shores of the domestic economy for more attractive returns /yield or risk are all part of the repressive financial policies designed to make domestic debt instruments more attractive. Reasons for restrictions on capital flows include among others the need to prevent unsustainable market growths that may result in contractions from a sudden stop. In the process, government control policies often   fail to realize that capital inflows could provide the international capital which may lead to rapid capital market growths when adequate measures of market discipline are entrenched towards a greater market efficiency. Indices for capital account control uses measures of openness such as the KAOPEN index as one of many. As an index measuring a country's degree of capital account openness, KAOPEN is based on the binary dummy variables that codify the tabulation of restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER). Other measures of capital openness widely in use is the Quinn-Toyoda Index. This index takes on higher values the more open the country is to cross-border capital transactions (Chinn, & Ito 2006).

3.0 METHODOLGY

Several methods have been employed in the construction of financial repression index from strands of extant literature with the most common been the method of Beim and Calomiris and the summary measure of the principal component analysis. Other alternatives measures have followed the method of classification using degree of distortions to create financial repression dummies. Huang and Wang (2010) following the order of Agarwala (1983) used financial repression dummy variables in their examination of the China's reform experience in the following degrees:

Parameter	Value	Fin Rep index
Real interest rate on deposits	+	0.0
Real interest rate on deposits	> (-5)	0.5
Real interest rate on deposits	< (-5)	1.0

The Beim and Calomiris method maps each measure of the financial repression instruments onto a 0 to 100 scale to produce an index that is approximately normally distributed, with a mean of 50 and a standard deviation of 20. Before constructing this mapping, each variable's empirical distribution is examined. Distributions that appear more lognormal than normal are first transformed by taking their natural logarithms (this applies to liquidity and market capitalization).

The following mapping translates each ratio or logarithm onto a 0 to 100 index:

Index = α+ßx,

Where

x = ratio or In (ratio)

α = 50 – ß mean (x)

ß = 20/standard deviation (x)

When this formula produces an index less than 0 or greater than 100, the index is set at 0 or 100, respectively. As would be expected at 2.5 standard deviations in a normal distribution, such censoring is relatively infrequent.

Principal Component Analysis (PCA) is a popular method for capturing system variability using a linear combination of independent principal components. Principal Component Analysis (PCA) uses linear combinations of observed variables to capture the variance structure. Components—linear combinations—can be used in subsequent analysis. Interpreting components can also use loadings, or combination coefficients. To reproduce the initial variance structure, components and variables must be equal. However, a few components should explain most of the initial variability. PCA computes the principal components of a series' estimated correlation or covariance matrix. PCA also simplifies results presenting. Line graphs with ordered eigenvalues can follow the table of eigenvalues and eigenvectors. Scatterplots can analyse loadings and component scores. Eigenvalue decomposition of the observed variance matrix yields the principal components of a set of variables. The linear combination of the original variables with the largest variance and normalised length is the initial principal component. Maximum number should be obvious. The minimum eigenvalue only shows results for components whose variance exceeds a threshold. The Cumulative Proportion Target selects and retains initial components so that the cumulative total of their variance proportions equals or exceeds the target proportion of the overall variance. The first two table sections are analysed first. The header describes the sample, the dispersion matrix calculation method, and the retention of all four variables. The next section summarises the eigenvalues, including their values, the forward difference between them, and the proportion of total variance explained, among other details. Principal component analysis on a correlation matrix shows that the scaled variances for the four variables add up to 4. Principal components are constructed in order of variation. PC1 records the most variation, followed by PC2 and so on. Each person adds information to the collection, and a Principal Component Analysis (PCA) has the same number of principal components as characteristics.

4.0 RESULTS AND INTERPRETATION OF RESULTS

Table 1: Eigenvalues and Eigenvectors of the Correlation Matrix of Financial Repression Variables

Principal Components Analysis					
Sample: 1986 2020					
				Cumulative	Cumulative
Number	Value	Difference	Proportion	Value	Proportion
1	1.766086	0.719864	0.4415	1.766086	0.4415
2	1.046222	0.275851	0.2616	2.812309	0.7031
3	0.770371	0.353052	0.1926	3.582680	0.8957
4	0.417320	---	0.1043	4.000000	1.0000
Eigenvectors (loadings):					

Variable	PC 1	PC 2	PC 3	PC 4	
CAC	0.652030	0.016163	0.160528	-0.740829	
CAP	0.429340	-0.657063	0.420886	0.454742	
RIR	0.505900	-0.009696	-0.820057	0.267353	
RRR	0.366866	0.753600	0.352976	0.415818	

The third section of the output displays the calculated correlation matrix:

Ordinary correlations:					
	CAC	CAP	RIR	RRR	
CAC	1.000000				
CAP	0.394751	1.000000			
RIR	0.398331	0.175107	1.000000		
RRR	0.350300	-0.046515	0.143538	1.000000	

The result show that all of the underlying original variables are not highly correlated with the first principal component, with a correlation coefficient of 0.395 for CAP, 0.398 FOR RIR and 0.350 for RRR.

Calculation of Financial Repression Index (FRI)

FRI is calculated in time period t as:

$$FRI_t = 0.652(CAC_t) + 0.429(CAP_t) + 0.506(RIR_t) + 0.367(RRR_t)$$

Table 2: An overall financial repression index for Nigeria 1986-2020

YEAR	CAC	CAP	RIR	FRI
1986	-1	30	-4.17	10.73
1987	-1	37.3	4.31	18.04
1988	-1	27.4	-46.71	-11.76
1989	-2	12.2	-28.27	-9.31
1990	-2	27	15.19	19.03
1991	-2	18.1	-8.67	3.14
1992	-2	10.7	-32.7	-11.65
1993	-2	30.6	-44.6	-8.54
1994	-2	33	-63.26	-17.06
1995	-2	12.4	-38.98	-13.58

1996	-2	23.5	-2.62	10.20
1997	-2	14.3	-5.42	4.95
1998	-1	16.4	-6.42	6.18
1999	-1	46.7	5.11	26.26
2000	-1	65	-9.21	26.17
2001	-1	50.5	-11.01	19.41
2002	-1	49.5	-8.05	20.40
2003	-1	45.6	-19.69	12.62
2004	-1	47.1	-5.81	19.77
2005	-1	39.5	-7.77	15.92
2006	-1	38.5	-5.36	14.11
2007	-1	38.4	-3.06	15.30
2008	-1	18.8	-12.26	2.31
2009	-1	12.9	-9.32	0.64
2010	-1	24.8	-9.59	5.50
2011	-1	39.5	-8.89	14.73
2012	-1	26.9	-10.3	10.08
2013	-1	22.8	-5.83	10.58
2014	-1	23.8	-4.62	14.56
2015	-1	17.6	-6.02	11.19
2016	-1	17.8	-14.85	7.73
2017	-1	23.8	-11.27	12.11
2018	-1	22.3	-7.33	13.46
2019	-1	21.7	-8.06	12.84
2020	-1	24.4	-13.83	11.08

$$FRI_t = 0.652(CAC_t) + 0.429(CAP_t) + 0.506(RIR_t) + 0.367(RRR_t)$$
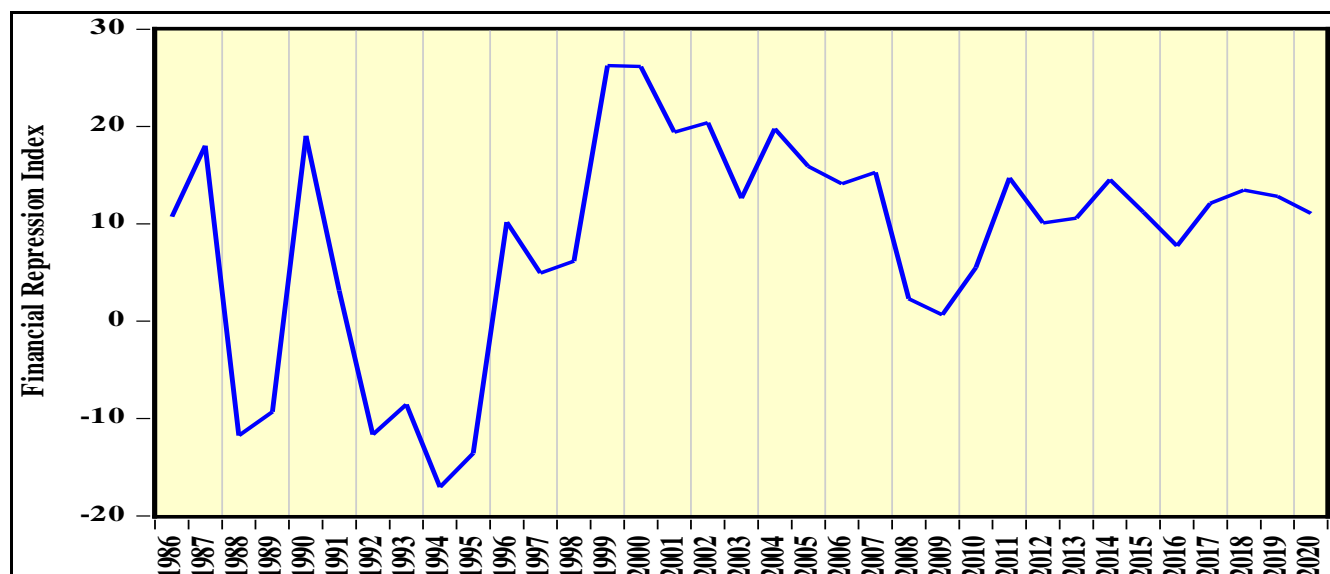
Source: Author's computation on e-view

Figure 3: Overall Trend in financial repression in Nigeria (1986-2020)

Source: Author's computation on e-view

DISCUSSION OF RESULTS

This paper presents the construction of a summary measure of financial repression through the application of Principal Component Analysis (PCA), a statistical methodology. The financial repression index comprised four primary components, with the initial two components contributing to more than 70% of the overall variation in cumulative proportion. By utilizing the eigenvalues, it is determined that the initial principal component is responsible for 44% of the overall variance (1.766/4.00 = 0.4415), whereas the second principal component accounts for 26% (1.046/4.00 = 0.2616) of the total variance. The subsequent section provides an account of the coefficients used in the linear combination. It is observed that the initial principal component (referred to as "PC1") is a linear combination of the four indicators of financial repression, with roughly equal weights. This component can be interpreted as a comprehensive financial repression index (FRI). The second principal component, denoted as "PC2," exhibits positive loadings for CAC and negative loadings for CAP and RIR, as well as positive loadings for RRR. This loading appears to represent a component that is specific to financial matters.

From the financial repression index, we see the behavior of financial liberalization in Nigeria occasioned by the policy impact of the structural adjustment programme which began in 1986 when rates were initially deregulated with degree of financial repression in 1988 and 1989 crashing to a low right after the policy lag period of 1987. Policy reversals of 1990-1991 under the guise of guided deregulation reversed the gains of the interest rate reform as evidenced in the index going back to the height of control which is explained by the policy summersault in 1991 in the re- introduction of maximum interest rate of 21% pa, which was later removed in 1992 and re-introduced in 1994 (Alege & Ogunrinola,2005).

Policy inconsistencies dressed as guided deregulation/partial deregulation did not provide the experience of a fully liberalized market for interest rates and financial system. The financial

intermediation efficiencies continued to be tinkered through regulations of interest rates anchored on the Minimum Rediscount Rate (Monetary policy rate) which in itself are fixed by the CBN with savings deposit interest rate under control at 3-5 % per annum on the back of an average real interest rate of about -12.8% over the 35yers period –Post SAP. As evident in the index of financial repression in Nigeria the period of 1999-2001 financial regulation on interest rate and other instruments of repression had shut back to the pre-SAP era and beyond which meant a full case of policy reversal on financial liberalization. Attempts to gain momentum on financial liberalization in 2008-2009 reversed almost immediately in 2010-2011 due largely to greater need for control on the back of the global contagion from the 2008 financial meltdown and panic it introduced to the global financial markets as can be seen from the index. The SAP programme finally dovetailed into the Nigerian Vision 20:2020 as the driver for an economy with an investment friendly interest rate in 2010. On this policy note, the index highlighted improvement in financial market liberalization through reduced trend of negative real interest and lower rate for captive audience for domestic credit market from 2011-2015. These gains were lost as credit market began to experience greater audience for public domestic debt and crowding out private sector domestic credit from 2016-2020 with growth in the count of negative interest incidence at above -5% up to 2020 as observable from the financial repression index.

5.0 CONCLUSION AND RECOMMENDATION

We conclude based on the available empirical evidence in this study that there is financial repression in Nigeria at index level of less than 30% over the period 1986-2020. This ratio is however less than extant estimates of 64.53% over the period of 1990-2009, Zarra-Nezhad et. al (2012) and 39.08% average index estimated over the period of 1970-1997, Beim and Calomiris (2001). The consequences of financial repression on the retiree ability to maintain a life time of happiness through consumption smoothing from their retirement income gets continuously eroded when their savings are inflated away through financial policies that entrench financial repression. The impact of these on the lifetime of senior citizen that depend on their retirement benefits as source of living is a negative contribution to their welfare.

RECOMMENDATIONS

Factors such as a lower efficiency of the tax system, a higher inflation, a higher debt and a dependent central bank were noted in this study as significant determinants of higher levels of financial repression.
Governments may have no need to lean towards repressing the financial system, if the weakness in tax base and the tax system can be smoothened by entrenching a more robust fiscal policy framework.

Government policies need to have a greater pursuit of financial market liberalization as panacea against financial repression. Financial repression at its height crowds- out private sector domestic credit which is inimical to economic growth as productive assets experience funding starvation from the banking system. Reserve requirement ratio at high levels of about 27.5% specified for cash reserve in addition to prescribe minimum liquidity ratio of 30% as at 2020 appears largely on the high side. The cash reserve ratio need policies that would consider reduction in order to free up liquidity for the banking system. Policy clues need to be taken from high income economies in which

the legal reserve requirement on commercial banks have been long abolished such as Canada, the United Kingdom, Australia, Sweden, Hong Kong among others.

There is need for interest rate pricing through macro prudential policies to consider the effect of inflation on savings interest rate in order to incentivize savers to deposit their savings with DMBS and prevent migration of savings to alternative assets on the basis of the complementarity assumption in the financial repression hypothesis. This tendency if uncontrolled has the capability to create a shallow financial system which Nigeria is currently experiencing at its current level low ratio of liquid liability measure (M_2/GDP) of less than 25% after over 100 years of recorded banking history.

Macro prudential policy designs needs to allow for indexing of savings deposit interest to the inflation rate such that saving of the people will not be continuously expropriated by inflation.

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