

Financial Sector Reform and the Growth of Nigerian Economy: 1986-2015

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Abstract

The study investigates the effectiveness of financial sector reforms towards the growth of Nigerian economy from 1986 to 2015 using error correction model approach. The long-run pre-estimation tests revealed that there is long-run relationship between financial sector reform and the economic growth in Nigeria. Findings from the study showed that consistent fall in real deposit rate had engineered the mobilised credit that was invested in the economy; little wonder none of the determinants coefficient was significant. The fact that the real deposit rate has the right sign though statistically insignificant shows that given an enabling environment devoid of inflation; it could encourage savings and probably economic growth. The right sign of the credit to the private sector is equally encouraging investment – proxied by ratio of private sector credit to Gross Domestic Product (GDP) which leads one to wonder where the resources have gone. The study thus recommends that an enabling environment devoid of discouraging inflation must be provided and the financial institutions must be seen to be acting also for the interest of the economy.

Keywords: financial sector reforms, credit to private sector, real deposit rates, real lending rates and economic growth

JEL Classification: B26, E42 and O47

1. Introduction

The achievement of economic growth and consequently economic development is one of the over-riding objectives of most developing countries Nigeria inclusive. Since economic growth depends on capital accumulation or investment, whatever policy that will make resources available for investment was readily acceptable to developing countries. McKinnon (1973) postulates that third worlds' administrative interventionists policies in resource allocation-nominal interest rate ceiling, controlled credit allocation, high reserve requirement etc. was not only inefficient but also the source of macroeconomic instability that reduces the volume of savings, the rate of real economic growth and even the real size of financial system relative to the non-financial magnitudes in developing countries. Shaw (1973) on the other hand emphasizes the ability of the banking system to intermediate adequate amounts of credit to finance higher economic growth. As both McKinnon (1973) and Shaw (1973), (M-S) argue non-intervention will ease the repression of the financial system and thus improve the rate of economic growth on the premise that higher interest rates positively affects economic growth.

M-S hypothesis became a mantra in the decade following its proposition for most LDCs who had unsuccessfully practiced interventionist policies in the bid to better the lot of their people. Most of them including Nigeria progressively pursued financial sector reform. The chronology of reform embarked upon by Nigeria and sometimes the reversal too is in appendix one.

1.1 Statement of the Problem

Nigeria financial reform will soon be three decades long and it has been on-going since 1987 though there have been times of apparent reversals. As we look at the economy it is possible to conclude that what sounded like a one-size-fit-all by M-S may not have worked for Nigeria. Nigeria is still a low growth economy.

Though many authors have written on this topic but this paper sequel to Umejiaku (2011) seeks to appraise the outcome of financial sector reform in Nigeria by finding out whether the reform lead to (a) increases in deposit rate which will serve as an incentive for more savings (b) reduction in inflation rate providing the economic stability needed for economic growth (c) increases in private savings such that there will be fund for investment (d) and increases in economic growth in Nigeria. To this end section II will provide us with the literature review. In section III we will discuss financial system reform in Nigeria. Methodology is in section IV while in section V we will look at results, analyse and conclude.

2. Literature Review

The theoretical rationale for financial sector reforms, as provided by the financial repression theory of McKinnon (1973) and Shaw (1973), explained that actions like interest rate ceilings, directed credit, high reserve requirements and restrictions of entry into the banking industry are repressive policies which reduce the rate of economic growth by retarding financial development. The primary arguments in the literature against financial repression as outlined by McKinnon (1973), Shaw (1973) and Williamson and Maher (1998) are as follows:

- 1). That administrative ceilings on deposit and lending rates, because of high inflation rates, frequently results in negative real rates of interest, which discourage saving and create excess demand for investable funds. It also discourages financial savings through the formal financial system.
- 2). That the volume of investment declines when real interest rates are too low and so do the productivity of capital since, when real interest rates are low, low productivity investment projects may become profitable.
- 3). That, with low interest rate in the formal financial system, informal and uncontrolled markets are likely to emerge with higher market clearing rates. This will in turn lead to differences in returns on investment financed in different markets.
- 4). Interest rate ceilings also discourage financial institutions from charging risks premiums, which may ration out large number of potential borrowers with high return projects.
- 5). Furthermore, selected or directed credit (allocation of credit to so-called priority sectors, frequently a euphemism for cronyism and corruption) are unlikely to allocate funds to most productive projects or to those who are default-free or of lowest risk of default and of lowest transaction cost on loans.
- 6). Consequently financial repression policies result in higher loan defaults, reduced flexibility and increase the fragility of the banking system.
- 7). In addition governments impose excessively high reserve requirements on banks, usually low or even zero interest rates in order to finance their own deficits cheaply. As tax on the banking system, they further depress deposit rates thereby creating greater disincentives for financial savings.

Positive relationship between investment and economic growth has long been established by Chenery and Stout (1966). Almost two centuries ago Schumpeter (1934) posit that financial institutions provide efficient means of mobilising and allocating funds in the economy and hence assist in economic development process. In agreement Robinson (1954) called the financial sector the handmaiden of economic development. Not long after empirical investigations of the relationship between financial sector development and economic growth began to appear. King and Levine (1993a,b) cross country studies for the post war period show that financial intermediation development is a good predictor of economic growth. These studies and similar others showed that the depth of financial sector development and greater provision of financial intermediary services are associated with economic growth (Levine, 1997 and Theil, 2001). Wachtel (2001) submitted that richer countries have more developed intermediaries, and market based private sector institutions which are more robust than those in poorer countries. He went on to explain that financial intermediaries liabilities are over two-thirds of GDP in very rich countries and about half as much in below-median-income countries pointing out that there are differences in credit allocation in rich and poor countries. Albu (2006) used two partial models to investigate the impact of investment on GDP growth rate and found that the behaviour of the national economic system and the interest rate – investment – economic growth relationship tend to converge to those demonstrated in the normal economy. Oosterbaan et al (2000) estimation of the relationship between the annual rate of growth of GDP and real rate of interest and shows that growth is maximised when real rate of interest lies within the range say -5% to 15%. It was however De Gregorio and Guidotti (1995) who posit that the relationship between real interest rate and economic growth might resemble an inverted U-curve; such that very low negative real interest rates tend to cause financial disintermediation and hence reduce growth. Some other studies however posit that financial reform does not affect growth. In this league are Mamoon (2004) who posit that financial sector reform did not work in Pakistan because it failed to generate its predicted chain reaction. Earlier authors concerning

reform in Nigeria for example Emenuga, (2005) had posit that only the tertiary sector of the economy who borrow for a short term and are able to pay the effective rate are readily serviced by the banks. This however is to the disadvantage or detriment of the primary sector whose productivity drives more growth relatively (Nnanna et al 2004). Umejiaku (2011) explained that the continuous falling on average of the ratios CPS/GDP and DOM/GDP is inconsistent with the M-S hypothesis because it indicates relative narrowing of the financial sector and will negatively affect real economic activities. Eichengreen and Leblang (2003) also posit that it has negative effect on economic growth

3. Financial Sector Reform in Nigeria

The Nigeria financial system policies at the pre reform period were characterised by intensive public sector intervention by way of direct credit, selective credit controls, sustained increase in paid-up capital of new banks, strict control of interest rates, preferential treatment to some sectors in terms of allocation of credit. Such was the scenario when in 1983, the World Bank urged Nigeria to deregulate its financial system drawing on the financial repression hypothesis. The World Bank chided the government over the allocation of credit, public subsidies to financial institutions thereby fostering negative real interest rates, the inadequate number of banks and the complexity and rigidity of government regulation.

The first in the series of reforms of the Nigerian banking sector was the liberalisation of credit allocation policy in 1986. In 1987, the number of priority sectors for the purpose of allocation of bank credit was reduced to two, namely priority and other sectors. Another notable banking sector reform policy measure of this period was deregulation of banking licensing. There was also deregulation of interest rate which was embarked on in January 1987. Banks were allowed to fix their interest rate on both deposits and loans with a desired spread of 3% between the deposit and lending rates. The process of complete deregulation was achieved in August of the same year. Market determined interest rate ruled until 1991 when interest rate was capped. Market forces were once more permitted to prevail in 1992 and 1993 in interest rate determination.

In 1990 an auction system meant to make the treasury bill more attractive align the rate with other money market rates which had earlier been deregulated, reduce the inflationary effect of governments cheap borrowing and strengthen the use of treasury bill rates as an effective tool of monetary control was introduced. New financial institutions (quasi banks and non-banks) were licensed. This gave rise to the establishment of community banks, peoples bank and finance houses. The essence was to make credit easily accessible to the members of the community and to serve the low income earners operating small scale businesses. Two decrees, CBN decree No. 24 of 1991 and the Banks and other Financial Institutions Decree No. 29 of 1991 gave CBN the impetus to a higher degree of autonomy in the conduct of monetary policy, regulatory and supervisory powers over the deposit money banks and such other financial intermediaries like finance companies.

Then came the re-introduction of pre-reform policy of regulations. The return of regulation started with embargo placed on bank licensing. By the second quarter of 1996, there was a liberalizing of savings deposit rates, a prescription of maximum spread of 7.5% and thus a ceiling on lending rates. In August 1996, the government liberalized interest rates yet again but maintained MRR at 13.5%. The banks maintained the maximum lending rate equally but reduced the interest rate on savings deposit. The reason for deregulating interest rates was part of the process of freeing the banking system and allowing the market forces to prevail, guaranteeing efficient allocation of scarce resources and enabling mobilization of idle funds by the banks. This policy however witnessed reversals when lending rates became intractable.

Soludo (2004) assertions that the banking system was inefficient, characterized by structural and operational weaknesses and thus unable to play the catalytic role of promoting private sector led growth, led to a 13 point agenda of banking sector reforms focused on further liberalization of banking businesses that will ensure competition, safety of the system and proactively position the industry to perform the role of intermediation and catalyse economic development was put in place. Unfortunately, what would have been the gains from this exercise was short lived following the negative impact of the global financial crisis which affected a section of the banking industry that by 2007 some banks were already having liquidity problems.

4. Methodology

4.1 Description of Variables

The Real Interest Rates: Contrary to expectations the real deposit rate (nominal deposit rate adjusted for inflation) is negative for most of the on-going reform years. The expected competition that was to ensue due to the reform never manifested. Though the number of banks increased consequent of liberalisation it did not significantly change the asset concentration ratio. Furthermore, the interest rate spread which was expected to get

smaller as more efficient practices are pursued sequel to increasing competition rather went into double digits. This is captured in diagram (B2a) where the nominal deposit and lending rates were drawn alongside inflation rate. This may have affected the M2 to GDP which was consistently above 30% pre reform to fall lower than 30% from reform to date. At a period between 1995 and 1997 it went as low as 20%. The outcome is consistent with Nissanke and Aryeetey (1998) submission that savings mobilisation and credit allocation expected of reform may not be achieved in some countries. In fact the M2/GDP ratio suggests that the growth of the real sector GDP may not have been engineered from the financial sector. The real lending rate though low and at times even negative was not attractive to the banks and other commercial lenders due to unrecovered profits associated with operating costs.

Savings: The level of development of the financial sector, the income and savings deposit rate coupled with the savings habit of the people affect the level of funds that can be mobilised. Within the study period, Gross National Savings as percent of GDP shows a gradual but inconsistent rise. This however is a paradox really and also contrary to M-S hypothesis because the low and most often negative real deposit rate should be a disincentive for savings. However, the financial sector reform has not brought about the expected deepening of the financial sector as M-S Hypothesis posits (Nissanke and Aryeetey 1998). Note that M2/GDP (diagram two) fell to its lowest in 2001 even with universal banking instituted in 2000. The fall in this ratio shows that there could have been a probable crisis of confidence in the banking sector. Furthermore a little of this deposit seems to be channeled to the economy as we look at the domestic sector credit as a ratio of gross domestic product (DOM/GDP). The ratio fell from an average of 15% pre-reform to 8%. As we go further (diagram B2b) and look at the private sector credit as a ratio of gross domestic product (CPS/GDP), the ratio which was about 24% pre-reform, fell consistently from 23% in 1987 to 14% in 1990 and thereafter between 8% and 16% through the reform period. The lower average ratio indicates relative narrowing of the financial sector, which is another contradiction of M-S hypothesis; thus neither the monetary aggregates M2/GDP nor the aggregates nearer the real economic activities for example CPS/GDP and DOM/GDP is consistent with the M-S hypothesis.

Investment: Discussing investment takes us to the dichotomy concerning which variable gross capital accumulation or variants of investment is really amenable for policies concerning economic growth. If we tow the path of DeLong and Summers (1991, 1992) who posit that gross capital formation as a ratio of gross domestic product (GCF/GDP) determines the rate of a country's economic growth, we can say (GCF/GDP) shows that there has been positive growth of investment in the country. This ratio was negative pre-reform but averaged 16.2% during deregulation; fell back when the policy makers went back regulation, came up again thereafter, and was at its highest immediately after the recapitalisation and consolidation policies which brought in a lot of funds into the banking sector but with the so called consequences of recapitalisation and consolidation and the recklessness in risk taking by the banks coupled with the worldwide financial system near collapse post 2009, it fell back again. If we rather key into Blomstorm et al, (1996), Granger (1969) and Sim (1972) who posit that there is no evidence that gross capital formation precedes economic growth we can use any other concept of investment. This study however will make use of private sector credit lagged one year following Nnanna et al who posit that the level of investment in any giving year is influenced by the level of credit extended to the private sector in the preceding year

Economic Growth: A bird's eye view of the comprehensive answer of the contribution of the reforms to the real sector is the real GDP growth rate. The real GDP growth rate improved markedly from the negative growth of repressive period to about an average of 5% at the on-set of the deregulation phase. It is remarkable that it dropped again within the reversal (re-regulation) period only to rise again on average during the liberalisation era and remaining relatively stable at the recapitalisation and consolidation era. Its relationship with the real deposit and lending rate is captured in diagram (B2d). While the slow but relatively consistent rise in RGDP can be seen the real deposit rate remained consistently low and the gap between it and the real lending rate continued to widen.

4.2 Econometric Analysis

Data for the analysis were secondary obtained from CBN statistical bulletin of various years. In consonance with neo-classical model, M-S hypotheses and Albu's postulation, the standard growth functional relationship between economic growth and the interest rate is adapted to include the following as specified:

$$RGDP = \beta_0 + \beta_1 RDR + \beta_2 RLR + \beta_3 CPS / GDP + \beta_4 M2 / GDP + \mu \text{-----} (1)$$

where;

RGDP is real gross domestic product; RDR is real deposit rate; RLR is real lending rate; CPS/GDP is our proxy for investment and M2/GDP is index of financial deepening and our proxy for savings; μ is the error term.

The apriori expectations are: $\beta_1 > 0; \beta_2 > 0; \beta_3 > 0; \beta_4 > 0;$

Specifying the model in an error correction model form, we have:

$$RGDP = \beta_0 + \beta_1 RDR + \beta_2 RLR + \beta_3 CPS / GDP + \beta_4 M2 / GDP + \sum_{j=-k}^p (\theta_1 \Delta RDR_{t-j}) + \sum_{j=-k}^p (\theta_2 \Delta RLR_{t-j}) + \sum_{j=-k}^p (\theta_3 \Delta CPS / GDP_{t-j}) + \sum_{j=-k}^p (\theta_4 \Delta M2 / GDP_{t-j}) + v_t \text{------(2)}$$

We detrended the variables to avoid possible spurious regression from time series. Augmented Dickey Fuller which is an extension of Dickey Fuller test was used. Bound test test was used to confirm long run equilibrium relationship between the variables.

5. Results, Discussions and Conclusion

Table 1. Summary of Unit Root Test Results

Variables	ADF Test Statistic	Order of Integration
RGDP	-2.8084847(-2.625121)***	I(1)
RDR	-3.301369(-3.243079)***	I(0)
RLR	-7.4546565(-4.374307)*	I(0)
M2/GDP	-4.918543(-4.323979)*	I(1)
CPS/GDP	-3.389878(-3.225334)***	I(0)

Source: Authors Compilation (2017)

The ADF test indicates that two of the variables (RGDP and M2/GDP) were found stationary at first difference and hence the unit roots for ADF test were rejected at the first difference for the three variables. This means that they are all integrated at order one I(1). However, the other three variables: RDR, RLR and CPS/GDP were found stationary at levels, and as such integrated at order zero, I(0).

Table 2. Summary of Cointegration Test Results

Test Statistic	Value	k
F-statistic	5.738266	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: Authors Compilation (2017)

From Table 2, the calculated F-Statistic that the joint hypothesis that the lagged level variables of the coefficients is zero equals 5.73. This figure is greater than the upper bound of the critical values of all the conventional levels 5% (2.86) and 5% (4.01). This means that joint null hypothesis of all the lagged level variables of the

coefficients being zero is rejected even at 5%. This suggests that there is cointegration between financial sector reform variables and the economic growth. The financial sector is a very dynamic sector and the variables are prone to shocks and given the implications to policy, the short run interactions and the adjustment to long run equilibrium are important (Soyibo and Olayiwola, 2000) Consequently the error correction model (ECM) was applied to analyse the short run dynamics.

Table 3. Error Correction Regression Results

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.160560	7.2289669	1.405534	0.1738
D(RDR)	8.433012	4.4856263	1.880008	0.0734
D(RLR)	8.695336	3.2416178	2.682407	0.0136
D(CPS_GDP)	89.351092	71.159931	1.255638	0.2224
D(M2_GDP)	90.389393	67.671710	1.335704	0.1953
CointEq(-1)	-0.221471	0.1005977	-2.201551	0.0423

Source: Authors Compilation (2017)

The results of the ECM regression shows that the error correction term is significant, negatively signed and less than unity. It shows that about 22.14% of the disequilibrium in the real GDP growth rate is offset by short run adjustments in a year. The post estimation diagnostic test indicates that there is no presence of autocorrelation and heteroscedasticity as shown in Table 4 and Table 5.

From Table 4 the Prob. F-statistic gave 0.3420, and it's greater than 0.05 (or 5%) significance level; thus we accept the null hypothesis that there is no serial correlation among the variables used in the model.

Table 4. Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.132458	Prob. F(2,20)	0.3420
Obs*R-squared	2.950049	Prob. Chi-Square(2)	0.2288

Source: Author's Compilation, 2017

More so, from Table 5, the Prob. F-value gave 0.8206, and it's greater than 0.05; thus we accept the null hypothesis that there is no heteroscedsticity among the variables used in the model.

Table 5. Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.473476	Prob. F(6,22)	0.8206
Obs*R-squared	3.316507	Prob. Chi-Square(6)	0.7682
Scaled explained SS	1.702492	Prob. Chi-Square(6)	0.9449

Source: Author's Compilation, 2017

Thus the results could be reliably deployed for policy purposes. Normality test by histogram- Jaque-Bera test indicates that the residuals are normally distributed as shown in Figure 1.

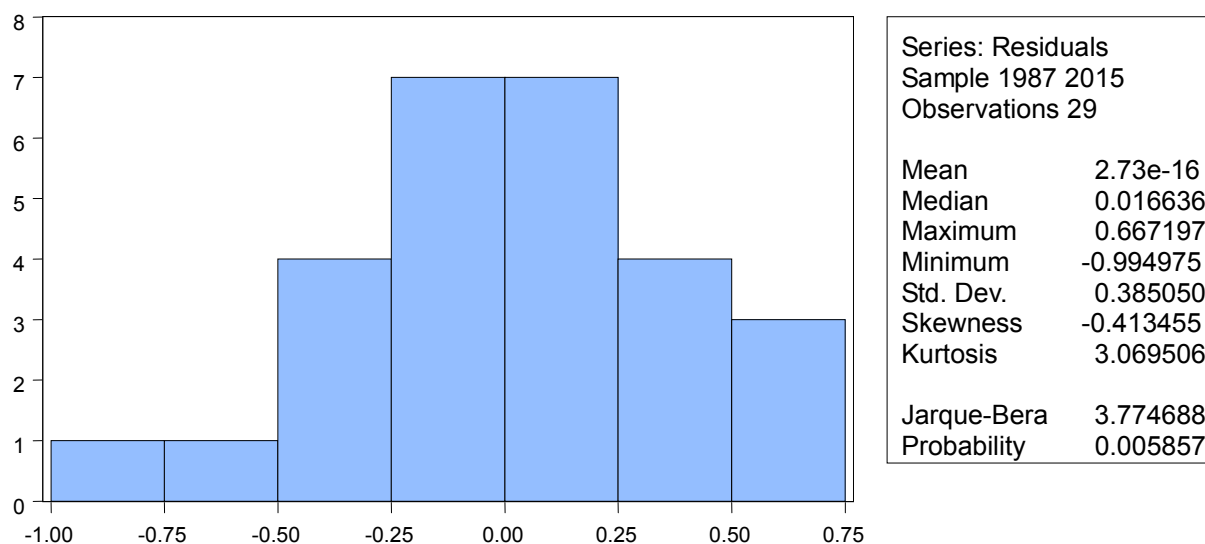


Figure 1. Testing the normality assumption

Source: Author's Compilation, 2017

As shown in Figure 1, the hypothesis of non-normality is rejected since the p-value of the Jarque-Berra statistics which is 0.005 is less than 0.05 (at 5% level of significance) thus showed that the residuals are normally distributed.

As one looks at the results, what readily comes to ones mind is Nisanke and Aryeetey (1998) submission that savings mobilisation and credit allocation expected of reform may not be achieved in some countries. This was not the case for Nigeria because the results show that consistent fall in real deposit rate had engineered the mobilised credit that was invested in the economy; little wonder none of the determinants coefficient was significant. The sluggish rise in RGDP may either have been powered from elsewhere or by the tertiary sector which could afford the high rate of interest being that they borrow short term or further still, or by investors of low productivity projects (Emenuga 2004; Nnanna, 2004).

The fact that the real deposit rate has the right sign though statistically insignificant shows that given an enabling environment devoid of inflation; it could encourage savings and probably economic growth. The right sign of the credit to the private sector is equally encouraging. investment – proxied by CPS/GDP which leads one to wonder where the resources have gone (Umejiaku 2011). The deposit money banks should improve their lending to the private sector as credit to the private sector is found to be positively correlated with an economy's level of real production and with its real economic growth (Nnanna et al 2004).

In summary the result show that though the deposit rate , the lending rate, the proxies for savings and investment came out with the apriori expected signs and only real lending rate was found significant, while others aren't. This suggests that the reform failed in Nigeria giving the outcome of this paper.

The paper looked at four important variables in the M-S hypothesis to ascertain whether they behaved as expected during the reform process. The time series secondary data used was detrended and both cointegration and error correction model used. The result came out with all the apriori expected signs but none of them is significant. An enabling environment devoid of discouraging inflation must be provided and the financial institutions must be seem to be acting also for the interest of the economy.

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Appendix

Table 6. Data Presentation

Year	RGDP	RDR (%)	RLR (%)	M2/GDP (%)	CPS/GDP (%)
1986	15,237.99	0.69	0.76791	17.7	11.3
1987	15,263.93	1.44	1.80509	14.3	10.9
1988	16,215.37	0.24	0.26956	14.6	10.4
1989	17,294.68	0.37	0.59995	12.0	8.0
1990	19,305.63	5.20	7.05583	11.2	7.1
1991	19,199.06	0.62	0.87153	13.8	7.6
1992	19,620.19	0.33	0.61063	12.7	6.6
1993	19,927.99	0.27	0.29904	15.2	11.7
1994	19,979.12	0.18	0.27358	16.5	10.2
1995	20,353.20	0.24	0.39115	9.9	6.2
1996	21,177.92	0.82	1.37869	8.6	5.9
1997	21,789.10	0.47	1.32596	9.9	7.5
1998	22,332.87	0.46	1.53552	12.2	8.8
1999	22,449.41	0.52	2.08537	13.4	9.2
2000	23,688.28	0.36	1.2377	13.1	7.9
2001	25,267.54	0.33	1.10898	18.4	11.1
2002	28,957.71	0.34	2.04215	19.3	11.9
2003	31,709.45	0.17	0.86975	19.7	11.1
2004	35,020.55	0.42	1.91637	18.7	12.5
2005	37,474.95	0.33	1.55208	18.1	12.6
2006	39,995.50	0.37	2.01902	20.5	12.3
2007	42,922.41	0.54	2.58038	24.8	17.8
2008	46,012.52	0.19	1.0053	33.0	28.6
2009	49,856.10	0.19	1.36335	38.0	36.9
2010	54,612.26	0.19	1.49031	20.2	18.6
2011	57,511.04	0.14	1.55803	19.3	16.9
2012	59,929.89	0.14	1.4014	19.4	20.4
2013	63,218.72	0.27	2.10168	18.9	19.7
2014	67,152.79	0.42	2.07418	19.9	19.2
2015	69,023.93	0.38	1.76424	20.1	19.8

Source: CBN, 2015

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