AN EMPIRICAL ANALYSIS   OF FINANCIAL SECTOR DEVELOPMENT AND SAVINGS MOBILIZATION IN NIGERIA: ECM Analysis

ABSTRACT

This study employs Error Correction Model (ECM) and Co-integration analysis to study the relationship between financial sector development and savings mobilization in Nigeria 1986 to 2017. As expected from a developing country like Nigeria, a short-run positive relationship is observed between the Nigerian stock market and crude oil prices and the direction is from crude oil prices to the Nigerian stock market but not the other way round. The short run, interest rate earning has a positive and significant impact on domestic savings while the other variables have no significant impact domestic savings in Nigeria. Government should therefore consolidate on past financial sector reforms to improve domestic saving mobilization to reduce the dependence of Nigeria on foreign savings to finance domestic investment

Keywords: savings, financial development, Co-integration ECM,

1. INTRODUCTION

Recent development in finance-growth nexus has led to a renewed interest in finance-savings relationship. Ideally, economic growth is a fundamental requisite to economic development. This informs why in Nigeria growth continuous to dominate the main policy thrust of government's development objectives. Fundamentally, economic growth is associated with policies aimed at transforming and restructuring the real economic sectors. Nevertheless, the lack of sufficient domestic resources, savings and investment to support and sustained the sectors is a major impediment to economic development in the country because of the gap between savings and investment (Imoughele and Ismali, 2014).

The primary roles of savings is to provide developing countries (including Nigeria) with the much needed capital for investment which improved economic growth. Increase in savings leads to increase in capital formation and production activities that will lead to employment creation and reduce external borrowing of government. Low domestic saving rates may maintain low-growth levels because Harrod Domar model suggested that savings is an important factor for economic growth.

Malunond (2007) asserts that depending on foreign sources to financed investment makes the country highly sensitive to external shocks. Therefore, domestic savings mobilization will continue to be a priority as a source of investment financing in order to minimize vulnerability to international economic fluctuations. Many empirical study studies have been carried out on the determinants of savings across the world. The reason has been that savings rate of many countries; particularly the less developed countries have been declining. In addition the role of

36 investment (via Savings) in economic growth and development has induced many researchers to
37 continuous to investigate the factors that influence savings (Gobna and Nurudeen, 2009).

38 Financial development connotes improvements in the functioning of the financial sector. These
39 include increased access to financial intermediation, greater diversification opportunities,
40 improved information quality, and better incentives for prudent lending and monitoring
41 (Ewetan&Okodua, 2013; Akinlo and Egbetunde, 2010; Ewetan and Ike, 2014).The purpose of
42 this study is to empirically examine the relationship between financial sector reformed and
43 domestic saving mobilization in Nigeria. This study is motivated by the conflicting findings in
44 the empirical literature on the nature of the relationship between financial development and the
45 saving rate for different countries, and also the need to shed additional light on this issue by
46 focusing on Nigeria.

47 In Nigeria, national savings increase continuously in absolute terms from 1981 to 1994 with a
48 continuous increased value of savings over time. However, recent data also shown that the
49 saving culture in Nigeria is very poor relative to other developing economies despite the
50 financial reformed to mobilized savings for investment. For instance, during the period 1981 to
51 1985, domestic saving averaged 8.34 percent of GDP and decreased to average of 7.81 percent
52 from 1986 to 1994. However, with the distress in the financial sector of the 1990s, the rate of
53 aggregate saving declined significantly. The distress syndrome resulted in a significant fall in
54 domestic saving in the period 1995 to 2004, with the saving to GDP ratio dropping to 5.63
55 percent. Obadan and Odusola (2002) asserted that the low level of savings in Nigeria is as a
56 result of high incidence of poverty and low level of disposable income, under developed savings
57 channels, reflecting underdeveloped financial markets, conspicuous consumption, and
58 unfavorable economic environment characterized by high unemployment and inflation.
59 However, the average saving to GDP ratio between 2005 to 2012 figure stood at 15.8 percent.

60 From the foregoing, there is an urgent need to encourage Nigerians to change their current
61 attitude towards saving. Furthermore, the right saving culture must be put in place by institutions
62 and regulatory agents who influence the decisions of households, firms and governments. In this
63 regard, there is need to put in place articulate economic policy which is capable of providing the
64 much needed enabling environment that will induced domestic savings in order to provide all the
65 funds needed for investment in various sectors of the Nigerian economy. Therefore this study
66 will examine the impact of financial sector development on domestic savings mobilization in
67 Nigeria.

68 The long-debated relationship between savings and the level and growth rate of income provides
69 a strong stimulus for analyzing the determinants of savings more thoroughly (Ozcan, Gunay and
70 Ertac, 2003). Understanding the nature of savings behaviour is critical in designing policies to
71 promote savings and investment which in turn enhance economic growth through capital
72 formation (Kudaisi, 2013).   Since, Nigeria continues to face a potential shortage of resources to
73 finance public and private investments due to low poor financial development and low domestic

74 saving rates which leads to slow economic growth rates (Obamuyi and Olorunfemi, 2011). It is
75 argued that low domestic saving rates may lead to slow economic growth rate. Imoughele and
76 Ismali (2014) revealed that low economic growth rate in Nigeria is largely due to lack of
77 sufficient domestic resources and poor financial system in mobilization of savings.

78 Understanding the finance savings relationship will guide policymakers in Nigeria in reducing
79 reliance on foreign borrowing and donor-assistance. This can be achieved by financial sector
80 reformed and raising domestic saving rates to mobilize capital for economic growth. In order to
81 raise the saving rate, the government needs to manipulate the determinants of domestic savings.
82 This could help policy-makers to formulate more appropriate policies on real deposit rate of
83 interest, capital mobilization and accumulation for the development of Nigeria. The estimation of
84 domestic savings function is to identify the factors that determines saving behavior which will be
85 appropriate for policy makers in making decisions towards promotion of domestic savings.
86 Based on the determinants of domestic savings, policy makers could have better powers over
87 savings by controlling the relevant and important variables in the desired direction so as to foster
88 self-sustained economic growth and development.

89 This study will used time series data covering the period 1986 to 2017. This period is important
90 because it covers Structural Adjustments Programs (SAPs) when Nigeria economy was
91 liberalized. Basically the study will examine the impact of financial sector development on
92 savings mobilization in Nigeria. The remainder of this study is structured as follows: section 2
93 provides a review of existing empirical literature. Section 3 presents the data and methodology of
94 the study. Section 4 presents and discusses the empirical results. Finally, section 5 offers some
95 concluding remarks on the findings.
96
97 **2. LITERATURE REVIEWS**

98 Several studies have tried to explain the meaning of saving notable are Igbatayo and Agbada
99 (2012), Imoughele and Ismali (2014), Ozioma (2013), Elbadawi and Mwega (2000)**.** According
100 to Igbatayo and Agbada (2012) savings is defined as the excess of income over consumption and
101 concluded that this is the way of acquiring assets for the whole economy. Imoughele and Ismali
102 (2014) defined savings as the amount of income per capital time period that is not consumed by
103 economic units. For the household, it represents that part of disposable income not spent on
104 domestically produced or imported consumption goods and services. For the firm, it represents
105 undistributed business profits.
106 In developing countries like Nigeria, private savings constitutes the main source of capital
107 accumulation for investment purposes. From theoretical literatures, total savings of households,
108 entrepreneurs and corporate entities in an economy have positive correlation with output.

109 Amongst other things, savings serve as the main source of financing investment and related
110 economic activities**.** Igbatayo and Agbada (2012) noted that, higher level of national savings
111 leads to higher investment and consequently higher output. This is so because the level of
112 savings determines the magnitude of capital accumulation. On the other hand, the magnitude of
113 total earnings depends on the level of total output, thus output also determines the level of
114 savings (capital accumulation) and investments by households and entrepreneurs. Ozioma
115 (2013) opined that the reverse of savings is when current expenditure exceeds current income
116 and is termed dissaving; and dissaving occur within all major groups of the country –
117 individuals, business and government.

118 Two concepts of savings are used in national income accounting - Net and Gross savings. Net
119 savings is when individuals save after taxes exceed personal outlays, business save through
120 rational profit and governments save when current receipts exceeds current expenditures.
121 Similarly, Ozioma (2013) opined that gross national savings is the source for additions to stock
122 of tangible assets, including investment in homes as well as in business inventories, plant and
123 equipment, He further states that for the economy as a whole, gross savings equals gross
124 investments. Wai (1992) earlier stated that the major portion of gross savings consists of capital
125 consumption allowance, which accrues chiefly to the business sector. Personal savings therefore
126 represents the changes in net worth of individual's assets. The change in net worth should be
127 equal to the amount of personal savings out of income as Elbadawi and Mwega (2000) opined in
128 their study.

129 Igbatayo and Agbada (2012) have however identified two broad levels of savings determinants.
130 Micro – level and Macro level determinants. In this study emphasis would be on some of the
131 macro determinants which include the level of financial markets development, level of economic
132 growth, price stability, interest rate, fiscal relations condition in the external sector which links
133 the economy to the world market, Terms of Trade changes (TOT) etc to mention but a few.

134 Financial sector development is all the wholesale, retail, formal and informal institutions in an
135 economy offering financial services to consumers, businesses and other financial institutions.
136 According to Financial Sector Team of Department for international Development (2004),
137 financial sector development includes everything from banks, stock exchanges, and insurers, to
138 credit unions, microfinance institutions and money lenders.

139 Salami and Oluseyi (2013) assert that financial system consists of different institutions, markets,
140 instruments, and operators that interact within an economy to provide financial services such as
141 resource mobilization and allocation, financial intermediation and facilitation of foreign
142 exchange transactions. Iganiga and Obafemi (2006) defined financial system as a conglomerate
143 of various markets, instruments, operators, and institutions that interact within an economy to
144 provide financial services such as resources mobilization and allocation, financial intermediation
145 and facilitation of foreign exchange transactions to exchange foreign trade. The Nigerian
146 financial sector can be categorized into two, namely, the informal sector which comprises the
147 local money lenders, the thrifts and savings associations, etc. It is poorly developed, limited in
148 reach, and not integrated into the formal financial system, but plays a major role in the Nigerian
149 financial system and the formal financial system comprises the capital and money market
150 institutions and these consist of the banks and non-banks financial institutions.

151 **2.1 EMPIRICAL ISSUES**

152 Recent trend on the relationship between financial sector reforms and growth has led to the
153 emergency literature on the impact of financial development on domestic resource mobilization.
154 (e.g Ang, 2011 In view of the critical role that domestic resource mobilization plays in
155 facilitating pro-poor growth, this issue has attracted the attention of researchers and policy
156 makers in recent times (Ang, 2011, King and Levin, 1993; Loayza, Schmidt and Serven (2000)
157 and Horioka and Yin (2010) deemed that savings is critical in the development process, and the
158 financial system must be robust to generate the needed savings to finance investment activities
159 that will accelerate the rate of growth and development. King and Levin (1993) found that higher
160 levels of financial development are associated with faster capital accumulation. A similar study
161 by Loayza, Schmidt and Serven (2000), and Horioka and Yin (2010) found a negative
162 correlation. Park and Shin (2009) find the impact of financial development to be insignificant.
163 Horioka, and Terada-Hagiwara (2012) employs data from 12 economies in developing Asia
164 countries during 1996 – 2007 and find that the relationship between financial development and
165 saving rate is nonlinear and hump-shaped.

166 Nyanzi and Kaberuka (2013), in a study on the effect of financial sector liberalization on private
167 financial savings in Uganda used the Granger and Engel framework and structural change
168 analysis and found a positive relationship between financial liberalization and private financial
169 savings.

170 Iganiga (2010) used the least square technique to evaluate the Nigerian financial sector reforms
171 within the framework of a behavioral model and found that financial reforms had a positive and
172 significant impact on domestic savings. Mathew and Olowe (2011) in a study on the impact of
173 liberalized financial system on savings, investment and growth in Nigeria found that financial
174 liberalization had a positive and significant impact on savings. Khan and Hasan (1998) in a study
175 on financial liberalization, savings, and economic development in Pakistan found that financial
176 liberalization had a positive and significant impact on savings. Quartey (2005) in a study on
177 financial sector development, savings mobilization and poverty reduction in Ghana, used a
178 multivariate VAR and vector error correction model and found that there is no relationship
179 between financial sector development and savings mobilization.

180 Asamoah (2008) examines the impact of financial sector reforms on savings, investments and
181 gross domestic product in Ghana and found a positive and significant relationship between
182 financial reforms and savings. Nair (undated) examines the impact of financial sector
183 liberalization on household savings in India using a financial sector liberalization index and
184 found that financial development impacts negatively on household saving rate. Ang (2011)
185 examines savings mobilization, financial development and liberalization in Malaysia using the
186 auto-regressive distributed lag (ARDL) model. He finds two contradictory results, a positive
187 relationship between financial deepening and private savings on one hand, and a negative
188 relationship between financial liberalization and private savings on the other hand.

189 Ewetan, Ike and Ese (2014) examines the long-run relationship between financial sector
190 development and domestic saving in Nigeria for the period 1980 to 2012 using time series data.
191 It employs bounds tests cointegration approach also known as autoregressive distributed lag
192 estimation due to mixed integration order of the variables and small sample size. The
193 econometric results provide evidence of long run relationship between financial sector
194 development and domestic saving in Nigeria and concluded that government should therefore
195 consolidate on past financial sector reforms to improve domestic saving mobilization to reduce
196 the dependence of Nigeria on foreign savings to finance domestic investment.

197 Ayalew (2013) reviewed the developments in saving and investment in Namibia over a period of
198 seventeen years. The study employed co-integration and error correction techniques to assess the
199 determinants of savings and investment in Namibia. The study found that private savings in
200 Namibia is significantly influenced by real income, while it is very doubtful if bank deposit rates

201 have any influence on saving in Namibia. In particular, real lending rates, inflation, real income

202 and government investments were found to be important determinants of investments in

203 Namibia. The study recommended the need for Namibia to address critical challenges in its

204 economy, especially the shortages of skilled labour in order to achieve higher growth targets in

205 future.

206 Nwachukwu and Egwaikhide (2007) used an error correction to investigate the determinants of

207 savings in Nigeria. The estimation results indicated that the level of per capita income, terms of

208 trade changes, public saving rate, external debt service ratio and the inflation rate has positive

209 and significant influences on domestic saving while real interest rate and growth rate of income

210 have a negative impact on the saving rate.

211 Furthermore, Gobna and Nurudeen (2009) employed error correction analysis to ascertain the

212 long run determinants of savings in Nigeria during the period 1981 to 2007. The findings showed

213 that financial deepening, bank density, real interest rate, inflation and real income per capital are

214 the major determinants of savings in Nigeria.

215 Orji (2012) investigated the determinants of bank savings in Nigeria as well as examined the

216 impact of bank savings and bank credits on Nigeria's economic growth from 1970- 2006. He

217 adopted two impact models; Distributed Lag-Error Correction Model (DL-ECM) and Distributed

218 Model. The empirical results showed a positive influence of values of GDP per capita, Financial

219 Deepening, Interest Rate Spread and negative influence of Real Interest Rate and Inflation Rate

220 on the size of private domestic savings.

221 Nwachukwu (2012) employing time series data for Nigeria for the period covering 1970 to 2010

222 examined the determinants of private savings in Nigeria. He relied upon co-integration

223 procedures to estimate savings rate function for Nigeria within the framework of the Life Cycle

224 Hypothesis. The results of the analysis showed that the saving rate rises with both the growth

225 rate of disposable income and the real interest rate on bank deposits. The degree of financial

226 deepening was also observed to have a negative impact on savings behaviour in Nigeria. Public

227 savings seems not to crowd-out private savings; an indication that government policies that are

228 aimed at improving the fiscal balance has the potential of bringing about a substantial increase in

229 the national saving rate.

230 Simon-oak and Jolaosho (2013) empirically assessed the impact of real interest rate on savings

231 mobilization in Nigeria. The Vector- Auto Regression (VAR) was employed, using the time

232 series data from 1980 to 2008. The authors reported that real interest rate has negatively
233 impacted on the level of savings mobilization in Nigeria. They concluded that there is need for
234 government in Nigeria to bridge the existing gap between the lending and savings rates and
235 increase per capita income level of the populace, to stimulate savings for investment and
236 economic growth and also efforts should be geared towards reducing domestic inflation rate to
237 arrest its negative impact on real rates in Nigeria.

238 Abu (2010) studied the relationship between savings and economic growth in Nigeria using
239 Granger Causality techniques and Co-Integration for the period 1970 to 2007. His results
240 indicate that the variables are co-integrated in such a manner that one can conclude there is a
241 long-run equilibrium relationship between them and that causality is from economic growth to
242 savings.

243 **3. RESEARCH METHODS**
244 **3.1. THEORETICAL FRAMEWORK**

245 In spirit with McKinnon (1973) and Shaw (1973) who explain the role of government in
246 mobilizing savings through the financial repression hypothesis. The hypothesis examines the
247 effect of government policy in preventing through controls the real interest rates from adjusting
248 to competitive levels to clear the market. McKinnon (1973) argues that with controlled interest
249 rates it is likely that not all economic agents will access credit and this can lead to two-fold
250 scenario; where those firms that can access subsidized credit would embark on capital-intensive
251 projects and those not favoured by the policy would only carry out a short maturity projects with
252 huge returns. Also, another result of financial repression according to McKinnon (1973) and
253 Shaw (1973) is that it substitutes market for non-market forces from determining interest rates.
254 This is manifested through rationing of the available funds to the investors.

255 This analysis concludes that removing financial restrictions in countries where interest rates are
256 controlled exerts a positive effect on growth rates towards their competitive market equilibrium
257 (Gemech and Struthers, 2003). Many countries have embarked on financial liberalization
258 programmes in order to make real returns on savings more competitive and attractive to savers.
259 This was devised as a way of maximizing savings, investment and growth. Yet there is a trade-
260 off between interest rates and investment levels. It is therefore necessary to strike a balance
261 between saving and investment promotion that is achieved through interest rate adjustments and
262 financial reform.

263 **3.2. MODEL SPECIFICATION**

264 The study adopted Ewetan,Ike and Ese (2014) model that studied financial sector development
265 and domestic savings in Nigeria for the period 1980 to 2012 using time series data. It employs
266 bound test co-integration approach due to mixed integration order of the variables. In modeling,

267 the relationship between financial sector development and domestic savings, current period.
268 Savings is assumed to be influenced by past domestic savings rate itself as well as current and
269 past values of key financial sector development indicators in the economy.

270 $$DSAV_t = \alpha + BFD_t + YX_t + E_t \qquad (1)$$

271 DSAV is domestic saving, FD is an indicator of financial development, X_t – is a vector of control
272 variables, which affect the domestic saving, the control variables includes Gross domestic
273 Product Per Capital, Credit to private sector as a percentage of real GDP, interest rate on deposit,
274 inflation. The paper attempts to fill the gap by eliminating credit to private as a percentage of real
275 gross domestic product. Over the years financial reforms have not encourage credits to private
276 sector due to poor saving mobilization mechanism. On that note, it is imperative to eliminate the
277 variable since impact is on domestic savings is highly insignificant to the dependent variable.

278 $$SAV = f(GDPPC, M_2/GDP, INT, INF) \qquad (2)$$
279 This can be stated in operational form as
280 $$SAV = X_0 + X_1 GDPPC + X_2 M2/GDP + X_3 INT + X_4 INF + E_t \qquad (3)$$
281 Apriori Expectations are: $X_1, X_2, X_3, > 0; X_4 < 0$
282 Where:

283 SAV = Domestic savings mobilization.

284 GDPPC= Gross domestic product per capita

285 M2/GDP= Financial deepening

286 INT = Interest rate proxy by deposit rate

287 INF= Inflation Rate

288

3.3 SOURCES OF DATA

290 The data to be used in carry out this study would be time series data for the period 1986 – 2017
291 obtained mainly from secondary sources. Among these are Central Bank of Nigeria (CBN)
292 statistical bulletin (various issues), The National Bureau of Statistic (NBS), Economic Journals,
293 text book and published article in the subject matter.

3.4 METHOD OF DATA ANALYSIS

295 The estimation technique used in this study is the Error Correction Method (ECM) techniques.
296 The regression analysis was used to test for the magnitude and direction of relationship between
297 the independent variables and the dependent variable. Also the Augmented Dicker-Fuller Test
298 (ADF) was used to test for the presence or otherwise unit root test in the series. The t-statistic

299 was used to test for the individual significance of the independent variable to the dependent
300 variable. The variables were also tested for co-integration, to examine their convergence status.
301 This is because, variables that fail to converge may be hazardous to policy making. The ECM
302 was used to determine the speed of adjustment to equilibrium given that long run relationships
303 exist among the data series.

304 **4.0 EMPIRICAL RESULTS**

305 **4.1. Unit Root Tests Results**

306 To test the stationary properties of the data, ADF (Augmented Dickey Fuller) unit root tests are
307 employed. The results for both the level and differenced variables are presented in Table 1 below:

308 **Table 1** below shows the result of the unit root conducted on all the variables.

Variables	At levels	First Difference	McKinnon 5% Critical value	Order of Integration
LSAV	1.3887	-3.2654*	-2.98	1(1)
LGDPPC	-0.5755	-3.0687*	-2.98	1(1)
LM2/GDP	-0.3445	-3.7478*	-2.98	1(1)
INT	-4.5199*			1(0)
LINF	-0.6143	-6.3615*	-2.98	1(1)

309

310 *Significant at 5%

311 Sources: Author Regression Output.

312 From the above table, Savings Mobilization, Gross Domestic Product per capita, Financial
313 Deepening, Inflation rate are stationary at first difference, while Interest Rate are stationary at
314 levels.

315 **4. Johansen co integration test**

316 The test of the presence of long run equilibrium relationship among the variables using Johansen Co
317 integration test involves the identification of the rank of the n by n matrix Π in the specification given
318 by.

319

$$\Delta Y_t = \beta + \sum_{i=1}^{k-1} \Gamma_i \Delta Y_{t-1} + \Pi Y_{t-k} + \varepsilon_t \qquad (4)$$

321

322 Where Y_t is a column vector of the n variables Δ is the difference operator, Γ and Π are the coefficient
323 matrices, k denotes the lag length and β is a constant. In the absence of cointegrating vector, Π is a
324 singular matrix, indicating that the cointegrating vector rank is equal to zero. Johansen co integration
325 test will involve two different likelihood ratio tests: the trace test (λtrace) and maximum eigen
326 value test (λmax) shown in equations below:

327

$$J_{trace} = -T \sum_{i=r+1}^{n} \ln(1 - \hat{\lambda}_i) \qquad (5)$$

329

$$J_{max} = -T ln(1 - \hat{\lambda}_{r+1}) \qquad (6)$$

331

332 Where r the number of individual series, T is the number of sample observations and and λ is the
333 estimated eigen values. The trace test tests the null hypothesis of r cointegrating vectors against the
334 alternative hypothesis of n cointegrating vectors. The maximum eigen value test (λmax), on the
335 other hand, tests the null hypothesis of r cointegrating vectors against the alternative hypothesis
336 of r +1 cointegrating vectors. If the two series are found to be co-integrated, then error correction
337 model (ECM) is appropriate to investigate causality relationship.
338
339 Table 2 Johansen Co-integration (Trace)

Hypothesized No of CE (S)	Eigen Value	Trace Statistic	0.05 Critical Value	Prob**
None*	0.8625	103.7919	69.8189	0.0000
At Most 1*	0.7582	62.1199	47.8561	0.0013
At Most 2*	0.5591	32.3048	29.7971	0.0252
At Most 3	0.3440	15.1083	15.4947	0.0571
At Most 4	0.2576	6.2547	3.8415	0.0124

340 Sources: eviews10
341 Trace test indicates 3 co integrating eqn(s) at the 0.05 level.
342 *Denotes rejection of the hypothesis at the 0.05 level
343 The result above shows that there exist at last three (3) co –integrating equations at 5% level of
344 significance. This further shows that there is long run relationship between savings mobilization
345 and the independent variables. The result indicates that, in the long run; the dependent variables
346 can be efficiently anticipated using the specific macroeconomic variables.
347
348
349 **4.5 Error Correlation model**
350 The result of the error correction mechanism is of the model is reported in table 3 below.

Variable	Co-efficient	Std.Error	t-statistic	Prob
C	0.1264	0.0267	4.7340	0.0001
D(LGDPPC)	0.9013	0.5677	1.5876	0.1319
DINF	-0.0695	0.0333	-2.085	0.0535
D(INT)	0.1651	0.0800	2.0639	0.0556
D(LM2GDP)	0.0773	0.1168	0.6618	0.5175
EMC (-1)	-0.3245	0.0673	-4.8188	0.0002
Key Statistics				
R^2 – Squared	0.7039			
Adjusted R – Squared	0.6114			
F – Statistic	7.6075			
Prob (F – Statistic)				0.0008
Durbin – Watson Stat	2.1084			

351 Source: eview10

352 From the above, it could be observed that the entire variables estimation met their expected sign.
353 Also, gross domestic product per capita LGDPPC has direct and insignificant impact on private
354 domestic savings in Nigeria. One percent increase in LGDPPC leads to 0.9013 percent increase
355 in Nigeria's private domestic savings. This is consistent with apriori expectation. This result
356 supports the fact that in the short run increasing LGDPPC enhanced the growth performance of
357 the Nigeria private domestic savings. This finding is not line with Ayalew (2013) and Uremadu
358 (2007) who reported that savings in is significantly influenced by real income. The result further
359 revealed that interest rate (INT) has direct and significant impact on Nigeria private domestic
360 savings. One percent increase in INT will lead to about 0.1651 percent increase in Nigeria's
361 savings. This is consistent with the apriori expectation. This result supports the fact that a well
362 managed and interest rate has the ability to induce savings in Nigeria. The significant nature of
363 this variable is as a result of robust interest rate policy and the dominance of formal sector in
364 granting savings mobilization to the Nigerian economy. This is line with Nwachukwu and
365 Egwaikhide (2007), Gobna and Nurudeen (2009) and Olayemi and Jolaosho (2013) which held
366 that interest rate statistically significant to the mobilization of savings in Nigeria.
367 The inflation rate (DINF) has inverse and significant effect on Nigeria's private domestic
368 savings. This does conform to the appriori expectation. One percent increase in DINF leads to
369 0.0695 percent decrease in Nigeria's savings. This is consistent with the apriori expectation. This
370 result supports the fact that on the short run increase in inflation reduce savings. This is
371 consistent with Uremadu (2007) who investigated the core leading determinants of financial
372 savings in Nigeria and found that inflation is the major determinants of savings in Nigeria. The
373 coefficient of financial deepening D(M2GDP) is directly but insignificantly impact on savings
374 such that one percent increase in D(M2GDP) leads to 0.0773 percent increase in the Nigeria
375 savings. The insignificance of this variable is attributed to poor financial development in the in
376 mobilizing savings in Nigeria but the direct relationship of the variable indicate financial
377 development induce savings mobilization. This is consistent with Ayalew (2013), Gobna and
378 Nurudeen (2009) and Ewetan, Ike and Ese (2015) who reported that there is direct relationship
379 between financial sector development and domestic saving in Nigeria for the period 1980 to
380 2012 using time series data. It employs bounds tests cointegration approach also known as
381 autoregressive distributed lag estimation due to mixed integration order of the variables and
382 small sample size. The econometric results provide evidence of long run relationship between
383 financial sector development and domestic saving in Nigeria.
384 From Table above, the coefficient of determinations R^2 of the estimation is 0.7039 which
385 indicates that about 70 percent of the total variations in Nigeria private domestic savings are
386 explained by the included explanatory variables. The F-statistic shows overall significance of the
387 model. The F-statistic is significant at 5% level. The probability of its value (0.0008) is less than
388 the 0.05 critical levels. We, therefore, reject the null hypothesis that the model is not significant
389 in explaining the variations in the Nigeria private domestic savings. Finally, The Durbin Watson
390 statistic value is 2.1084. This test value shows the absence of positive serial autocorrelation
391 among the independent variables since the DW statistics is approximately 2

5. CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Conclusion

This study has investigated the financial sector development and savings mobilization in Nigeria for the period which spanned between 1986 and 2014. Econometric model was specified and estimated via Error Correction Mechanism (ECM) to ascertain the relationship between financial sector development and savings mobilization in Nigeria. The variables were tested for stationarity, co-integration analysis was carried out and also error correction test was performed. The study found that the savings and selected macroeconomic variables included the model have a long run relationship. The empirical results showed the following:

1. Interest rate on deposit has a direct and significant relationship with private domestic savings mobilization in Nigeria. Interest rate earned on deposit had attracted savings mobilization in Nigeria.

2. Income has direct but insignificant impact on private domestic savings in Nigeria. The implication of this result is that the higher the economic position of the household, the higher the level of savings. This is consistent with Gobna and Nurudeen (2009) findings.

3. The result shows that inflation rate has inverse and significant relationship with Nigeria private savings. This is consistent with the apriori expectation. This findings conform to Olusuji (2007); Uremadu (2007) and Gobna and Nurudeen (2009) who reported that inflation rate has inverse and significant effect on savings in Nigeria.

4. Financial development has direct but significant relation with private domestic savings in Nigeria. This finding implies that the various initiatives adopted by the Nigeria Central Bank in the last few years to strengthen and further develop financial markets and institutions contribute insignificantly to increase private savings.

5.2 Recommendations

The growing gross domestic product per capita should be encouraged through productive venture as skill acquisition, technology advancement and entrepreneurial growth.

1. The interest rate earning on deposit should be increased, this will enhance the banking habit of the people, thus stimulate savings culture that will lead into investment.

2. Government should look inward on the danger associated rising inflation, look for a structural solution to the menace of inflation in Nigeria.

3. There is the need to constantly encourage financial sector reforms in order to meet the expected financial sector development in Nigeria.

Reference

Abu, N. (2010). Saving-economic growth nexus in Nigeria, 1970-2007: Granger causality and co-integration analyses. *Review of Economic and Business Studies (REBS)*, (5), 93-104.

Akinlo, A. E., & Egbetunde, T. (2010). Financial development and economic growth: The experience of 10 sub-Saharan African countries revisited. *The Review of Finance and Banking*, *2*(1).

Ang, J. B. (2011). Savings mobilization, financial development and liberalization: The case of Malaysia. *Review of Income and Wealth*, *57*(3), 449-470.

Asamoah, G. N. (2008). The impact of the financial sector reforms on savings, investments and growth of gross domestic product (GDP) in Ghana. *International Business & Economic Research Journal*, *7*(10), 73-84.

Ayalew, H. A. (2013). Determinants of domestic saving in Ethiopia: An autoregressive distributed lag (ARDL) bounds testing approach. *Journal of Economics and International Finance*, *5*(6), 248-257.

Elbadawi, I. A., & Mwega, F. M. (2000). Can Africa's saving collapse be reversed?. *The World Bank Economic Review*, *14*(3), 415-443.

Ewetan, O. O., & Ike, D. N. (2014). Does Financial Sector Development Promote Industrialization in Nigeria?. *International Journal of Research in Social Sciences*, *4*(1), 17-25.

Gemech, F., & Struthers, J. (2003). A Review of Recent Developments of Financial Liberalization Theory. In *Annual Conference on "Globalisation and Development*.

Gobna, W. O., & Nurudeen, A. (2009). Long Run Determinants of Savings in Nigeria (1981-2007); Evidence from Time Series Data. *The Nigerian Journal of Economics and Management Studies*, *4*(1), 87-106.

Horioka, C. Y., & Terada-Hagiwara, A. (2012). The determinants and long-term projections of saving rates in Developing Asia. *Japan and the World Economy*, *24*(2), 128-137.

Horioka, C. Y., & Yin, T. (2010). A panel analysis of the determinants of household saving in the OECD countries: The substitutability of social safety nets and credit availability. *Institute of Social and Economic Research, Osaka University*.

Iganiga, B. O. (2010). Evaluation of the Nigerian financial sector reforms using behavioral models. *Journal of Economics*, *1*(2), 65-75.

464   Igbatayo, S., & Agbada, A. O. (2012). Inflation, savings and output in Nigeria: A VAR
465   approach. *Journal of Emerging Trends in Economics and Management Sciences*, *3*(5),
466   447-453.

467   Imoughele, L. E., & Ismaila, M. (2014). An econometric analysis of the determinants of private
468   domestic savings in Nigeria (1981-2012). *International Journal of Humanities and
469   Social Science*, *4*(5), 12-21.

470   Khan, A. H., & Hasan, L. (1998). Financial liberalization, savings, and economic development in
471   Pakistan. *Economic Development and Cultural Change*, *46*(3), 581-597.

472   King, R. G., & Levine, R. (1993). Financial intermediation and economic development. *Capital
473   markets and financial intermediation*, 156-189.

474   Kudaisi, B. V. (2013). Savings and its determinants in West Africa countries. *Journal of
475   Economics and Sustainable Development*, *4*(18), 107-119.

476   Loayza, N., Schmidt-Hebbel, K., & Servén, L. (2000). What drives private saving across the
477   world?. *Review of Economics and Statistics*, *82*(2), 165-181.

478   Malunond, A. T. (2007). Determinants of Domestic Saving Performance in Egypt An Empirical
479   Study. *World Bank, African Develop ant locks: ors*.

480   Matthew, O., & Olowe, O. (2011). The impact of liberalized financial system on savings,
481   investment and growth in Nigeria. *Knowledge Management, Information
482   Management, Learning Management*, (14), 109-122.

483   McKinnon, R.I . (1973). *Money and capital in economic development*. Brookings Institution
484   Press.

485   Nwachukwu, T. (2012). *Determinants of Private Savings in Nigeria*. Unpublished article, Africa
486   Development Bank, Tunis. Tunisia.

487   Nwachukwu, T. E., & Egwaikhide, F. O. (2007, July). An error-correction model of the
488   determinants of private saving in Nigeria. In *A Paper presented at the African
489   Economic Society (AES) Conference, Cape Town, South Africa*.

490   Nyanzi, S., &Kaberuka, W. (2013). The Effect of Financial Sector Liberalization on Private
491   Financial Savings in Uganda (1980-2007). *Greener Journal of Social Sciences*, 3(4),
492   187-202

493   Obadan, M., & Odusola, A. (2001). *Savings, investment and growth patterns in developed and
494   developing countries* (No. 267053). United Nations Development Programme
495   (UNDP).

496 Obamuyi, T. M., & Olorunfemi, S. (2011). Financial reforms, interest rate behaviour and
497   economic growth in Nigeria. *Journal of Applied Finance and Banking*, *1*(4), 39.

498 Orji, A. (2012). Bank savings and bank credits in Nigeria. *International Journal of Economics*
499   *and Financial Issues, 2 (3),357-372.*

500 Ozcan, K. M., Gunay, A., & Ertac, S. (2003). Determinants of private savings behaviour in
501   Turkey. *Applied Economics*, *35*(12), 1405-1416.

502 Ozioma, O. (2013). *The determinants of savings in Nigeria (1985-2011)*. Unpublished. A
503   Research project submitted to the Department of Economics, Caritas University
504   Amorji Enugu State

505 Park, D., & Shin, K. (2009). Saving, investment, and current account surplus in developing
506   Asia. *Asian Development Bank Economics Working Paper Series*, (158).

507 Quartey, P. (2008). Financial sector development, savings mobilization and poverty reduction in
508   Ghana. In *Financial development, institutions, growth and poverty reduction* (pp. 87-
509   119). Palgrave Macmillan, London.

510 Salami, G. O., & Oluseyi, A. A. (2013). Impact of financial sector development on the Nigerian
511   economic growth. *American Journal of Business and Management*, *2*(4), 347-356.

512 Shaw, E. S. (1973). *Financial Deepening in Economic Development*, New York, Oxford
513   University Press.

514 Simon-oak, O. O., & Jolaosho, O. M. (2013). Real interest rate and savings mobilization in
515   Nigeria. *International Journal of Development and Economic Sustainability*, *1*(2), 28-
516   40.

517 Wai, U. T. (1992). What have we learned about informal finance in three decades?. Informal
518   finance in low-income countries. *Westview Press,* 337-349.

519

520