



RESEARCH ARTICLE

REMITTANCES INFLOW AND FINANCIAL SECTOR DEVELOPMENT IN NIGERIA: A STRUCTURAL BREAK APPROACH

¹Godwin Chigozie Okpara and ²Joseph Chukwudi Odionye

¹Department of Banking and Finance, Abia State University Uturu-Nigeria

²Department of Economics, Caritas University, Amorji-Nike, Emene, Enugu-Nigeria

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ABSTRACT

The study investigated the impact of international remittances on the financial sector development in Nigeria. Considering the serious financial sector recapitalisation exercise in 2004, we employed the structural break approach using chow test on the Autoregressive Distributed Lagged model (ARDL) due to Pesaran and Shin (1999). The result of the Auto Regressive Distributed Lagged (ARDL) model indicated that international remittance inflow has positive but insignificant impact on financial sector development. The Chow test result showed evidence of policy change effect on the Nigerian financial sector. The Granger causality test on the other hand showed that there is a strong unidirectional causality running from international remittances to financial sector development irrespective of the measure of financial sector development used as proxy while the CUSUM and CUSUMSQ tests provided evidence for long run stability of the parameters of the model. In addition the models suggest that development in financial sector in the previous period enhances improvement in the performance of financial sector in the current period.

Key words: financial sector development, ARDL, international remittance, structural break.

INTRODUCTION

Remittances inflow has attracted much attention of researchers and academics in recent years on the account of its stable nature and increasing volume to especially developing countries. Remittances defined as a monetary transaction between migrants in the host countries and their relative in the origin countries constitute an increasingly important mechanism for the transfer of resources from developed to developing countries and are the largest sources of external funding for developing countries (Russell, 1992; Ratha, 2003). According to the World Bank, (2004) the flow of international remittances to developing countries surpassed 125 billion US dollars, and are growing at rates higher than 10% and in 2008 remittances sent to developing countries reached 300 billion US dollars. These have become the major source of income for many developing countries. Nigeria receives the highest amount of remittance in Africa (World Bank, 2004).

The country receives about 65% of officially recorded remittance flow to the region and about 2% of global remittance flows. Remittances inflows into the country has outpaced foreign direct investment (FDI), official development assistance (ODA) and other flows into the country and currently rank second to oil receipts as a foreign exchange earners (CBN, 2007). A growing academic literature has therefore been devoted to analyze the microeconomic and macroeconomic effects of remittances in

developing countries across various dimensions (Schiff and Ozden, 2006, 2007; Shahbaz *et al.*, 2007). The effects of remittances on receiving countries seem enormous. At a microeconomic level, remittances have been found to boost investment in human capital and educational attainments, thereby reducing poverty in many developing countries. Furthermore, there is significant evidence that remittances increase not only consumption but tend also to raise health levels and to increase investment in public infrastructure. At a macroeconomic level, the existence of a positive relationship between remittances and growth is more controversial. While remittances tend to favour the accumulation of important production factors such as physical capital and education, they also exert detrimental effects in terms of incentive and create 'Dutch disease' effects through the appreciation of domestic currencies, thereby leading to further deindustrialization in the receiving country.

Very little attention has been given to the question of whether remittances promote financial sector's development of recipient country or not (Shahbaz *et al.*, 2007). However, this important matter is predicated by the fact that financial system performs key economic functions and their development has been shown to enhance growth and reduce poverty (King and Levine, 1993; Beck, Deirgue-Kunt and Levine, 2004; and Giuliano and Ruiz-Arranz, 2005). Also Hinojosa-Ojeda, (2003) argues that banking remittances recipients will help in multiplying the developmental impact of remittance flow (see also Terry and Wilson, (2005); and World Bank, (2006). Two different studies by Guiliano and Ruiz-Arranz (2005), and Mundaca (2005) show that the impact of remittances on

*Corresponding author: chigoziegodwino@yahoo.com,
josephodionye@yahoo.com

growth depends on the level of financial sector development in a country. However, these studies reached different conclusions. Giuliano and Ruiz-Arranz (2005) show that remittances help to promote growth in less financially developed countries, arguing that agents compensate for the lack of development of local financial markets using remittances to ease liquidity constraints and to channel resources towards productive uses that enhance economic growth. On the other hand, Mundaca (2005) concludes that financial development leads to better use of remittances, thus boosting growth.

There is no general consensus on the relationship between remittances and financial development as it appears somewhat ambiguous (Shahbaz *et al.*, 2007). On one hand, well functioning financial markets having lower costs of transactions may help direct remittances yield the highest returns and therefore enhance financial sector development. On the other hand, remittances can also compensate for a bad financial system; by loosening liquidity constraints, potential entrepreneurs could use remittances whenever the financial system does not help them and start productive ventures due to lack of collateral or because of high lending costs. This problem is mostly seen in developing countries where informal channels are more often efficient and cheaper than the formal sectors. The paper is organized as follows: section 1 is the foregone introduction, section 2 reviews related literature, section 3 specifies the model, section 4 presents the empirical result and discussion, and section 5 is the conclusion and policy recommendations.

Literature Reviews

Giuliano and Ruiz-Arranz (2007) using a newly constructed cross-country data series for remittances covering a large number of developing countries over the period 1975-2002 finds that remittances have promoted growth in less financially developed countries. This finding controls for the endogeneity of remittances and financial development using SGMM approach and does not depend on the particular measure of financial sector development used, and is robust to a number of robustness tests. Their results suggested that remittances help alleviate credit constraints on the poor, substituting for the lack of financial development, improving the allocation of capital, and therefore accelerating economic growth. Their result further shows that there is an investment channel through which remittances can promote growth where the financial sector does not meet the credit needs of the population.

Demirgüç-Kunt *et al.* (2010) use municipality-level data for Mexico for 2000, in one of the very few empirical studies on the relationship between remittances and financial development to show that remittances are strongly associated with greater banking breadth (measured by number of branches and deposit accounts per capita) and depth (measured by the volume of deposits and credit to GDP). These effects are found to be statistically significant and robust to the potential endogeneity of remittances. Cooray (undated) investigating the influence of migrant remittances on two dimensions of the financial sector, namely, size and efficiency interest. Efficiency interest finds that, migrant remittances have a positive significant impact on deposit money bank assets, private credit and liquid assets to GDP in

the low government bank ownership group. Remittances also have a positive significant impact on deposit money bank assets and private credit in the high government bank ownership group. The study of Shahbaz, Qureshi and Aamir (2007) investigates the query whether remittances promote the financial sector development both in short run as well as in long run. They employ two techniques (ARDL and Johansen Co-integration approaches) and unrestricted Error correction model (UECM) to test the robustness of long run relationships among the concerned variables. The results indicate that remittances promote the financial sector in long run and financial sector's development also improves by the policies in previous periods significantly. Rise in inflation deters the performance of financial sector through its detrimental channels. In addition their result shows that increase in real GNP per capita and rise in exports lead to promote the efficiency of financial institutions.

Ahmed, Zaman and Shah (2011) in trying to estimate the impact of remittances, exports, money supply on economic growth for Pakistan, use time series data from 1976-2009 and employed Bounds testing approach. Their result suggest that remittances have both the long and short-run relationship with economic growth of Pakistan. Ezra and Nwosu (2008) in their study of impacts of remittances on growth for Nigeria estimate growth, investment, human and private capital using data for the period 1990-2007. They employ the simultaneous equation system based on a two-stage Least Squares Instrumental Variable [2SLSIV] approach to control for endogeneity problem that arises from utilization of lag independent variables. One important finding from their paper is that remittances have a positive impact on economic growth in Nigeria through investment in private and human capital, with a pass-through effect on private consumption. Even though the ratio of remittances to private capital investment is small compared with consumption, a combination of the two could cause a reduction in poverty through the multiplier effect. Another key policy reference from their work is that remittances should not be seen as a substitute for other source of growth but a complement.

Ziesemer (2006) examines the role of remittances on economic growth, by using two different open economy models. He used a general method of moments with pooled data for four remittances countries receiving. He finds that the countries that benefit the most from remittances are those with per capita income below \$1,200. For these countries, remittances contribute about 2 percent to steady state level of GDP per capita while the effect of remittances on growth in richer countries is found to be much smaller. Glytsos (2005) uses a Keynesian model to estimate short and long run multipliers of remittances, and then determines the impact of remittances on growth in five Mediterranean countries. He maintains that remittances can have a positive impact on growth, not only if they are directed towards investment, but also through the increased consumption and imports. He considers only the demand impact of remittances, but finds great fluctuations across time and countries for the effect of remittances on growth.

Methodological Approach

This study departs fundamentally from existing studies in three main respects. First, following different policies and programs adopted by Nigerian government in financial sector,

Structural break approach is employed to determine the effect of policy change in relation to remittances inflow in Nigeria. Secondly, empirical evidence suggests that financial openness is the key determinants of differences in financial systems (Huang, 2006, Baitagi *et al.*, 2009). Thus financial openness is included in the model to determine its effect on financial sector development. Thirdly, we used two different financial sector development measures namely the ratio of money supply to GDP (M₂/GDP) and the ratio of Credit to Private Sector to GDP (CPS/GDP). Against this backdrop, it becomes relevant to investigate the impact of international remittances on financial sector development employing structural break approach because of government serious banking system policy of the N25 billion naira recapitalisation exercise using ARDL framework for Nigeria.

Definition of Model Variables

Annual series data were used for this analysis and were sourced from Central Bank of Nigeria statistical bulletin (2010) and World Development Indicators (2010). The study covered the period 1980 to 2010 Following the adaptive expectation hypothesis which posits that investors form their expectations based on past market information, the Autoregressive Distributed Lag (ARDL) model due to Pesaran and Shin (1999) is employed to capture the effect of the previous state of the financial sector. The rationale for this model is predicated on the fact that improvement in the efficiency of the financial sector is also enhanced by the policies and development of financial sector in the previous period. The functional form is stated as:

$$FSD = f(FSD(-1), IRM, FOP, RER, RIR, \dots) \dots (1)$$

where FSD is the financial sector development proxied by the ratio of money supply to GDP (M₂/GDP) and the ratio of Credit to Private Sector to GDP (CPS/GDP), FSD(-1) is the previous state of the financial sector, IRM is the international remittances to the country, FOP is the financial openness measured as the ratio of total capital flow to GDP, RIR represents real interest rate while RER is the real exchange rate of the Nigerian naira vis-a-vis the US dollar. FOP, RER and RIR are used as control variables to avoid the problem of omitted variable bias in the model. In order to estimate equation 1, we specify it in econometric form as:

$$FSD = \beta_0 + \beta_1 FSD(-1) + \beta_2 IRM + \beta_3 FOP + \beta_4 RER + \beta_5 RIR + \mu \dots (2)$$

Where β_0 = intercept, β_i (where $i = 1, 2, \dots, 5$) = parameters to be estimated, μ = iid stochastic error term. Following Cameron (1994) and Ehrlich (1996) that suggested that a log-linear form is more likely to find evidence of a deterrent effect than a linear form, we log-linearize equation 2 as:

$$\ln FSP = \beta_0 + \beta_1 \ln FSD(-1) + \beta_2 \ln IRM + \beta_3 \ln FOP + \beta_4 \ln RER + \beta_5 \ln RIR + \mu \dots (3)$$

ln = natural log of respective variables.

In order to test for the effect of policy change, we decomposed the full sample into two sub periods: 1980 – 2004 and 2004 – 2010. In Nigeria, it is well recognized that a structural break occurred in 2004 with respect to financial sector development. The equations for the two sub periods are stated as:

$$\ln FSP = \gamma_0 + \gamma_1 \ln FSD(-1) + \gamma_2 \ln IRM + \gamma_3 \ln FOP + \gamma_4 \ln RER + \gamma_5 \ln RIR + \mu \dots (4)$$

$$\ln FSP = \alpha_0 + \alpha_1 \ln FSD(-1) + \alpha_2 \ln IRM + \alpha_3 \ln FOP + \alpha_4 \ln RER + \alpha_5 \ln RIR + \mu \dots (5)$$

Equations (4) and (5) are for 1980-2004 and 2004-2010 sub periods respectively. The Chow test is then carried out under the null hypothesis: $\gamma_i = \alpha_i$ (no effect of policy change) against the alternative: $\gamma_i \neq \alpha_i$ (effect of policy change), where $i = 1, 2, \dots, 5$. The decision rule is to reject Ho if F value is greater than the critical value at a chosen level of significance. To test for the direction of causality between international remittances and financial sector development, the study employed Granger Causality test. The function is stated as follows:

$$FSD_t = \sum_{i=1}^n \alpha_i IRM_{t-1} + \sum_{j=1}^n \beta_j FSD_{t-j} + u_{it} \dots (6)$$

$$IRM_t = \sum_{i=1}^n \lambda_i FSD_{t-1} + \sum_{j=1}^n \delta_j IRM_{t-j} + u_{2t} \dots (7)$$

where

u_{it} and u_{2t} = disturbance terms assumed to be independently and identically distributed α, β, λ and δ = lagged variables coefficients to be estimated To fully explore the data generating process, we first examined the time series properties of model variables using the Augmented Dickey-Fuller test. The ADF test regression equations with constant are:

$$\Delta Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \sum_{j=1}^k a_j \Delta Y_{t-1} + \epsilon_t \dots (8)$$

where Δ is the first difference operator, ϵ_T is random error term that is iid $k = \text{no of lagged differences}$, $Y = \text{the variable}$. The unit root test is then carried out under the null hypothesis, $\alpha = 0$ against the alternative hypothesis of $\alpha < 0$. Once a value for the test statistics

$$ADF_t = \frac{\hat{\alpha}}{SE(\alpha)} \dots (9)$$

is computed, we shall compare it with the relevant critical value for the Dickey-Fuller Test. If the test statistic is greater (in absolute value) than the critical value at 5% or 1% level of significance, then the null hypothesis of $\alpha = 0$ is rejected and no unit root is present. If the variables are non-stationary at level form and integrated of the same order, this implies evidence of co-integration in the model. The co-integration equation is stated in equation 10 as:

Co integrated equation

$$\left[\eta_m \log FSD_t = \alpha_1 + \sum_{i=2}^n \alpha_i \eta_m Z_i - \left[\eta_m \log FSD_t - \sum_{i=1}^n \beta X_{t-i} + v_{2t} \right] \right] \dots (10)$$

Where

$$\left[\eta_m \log FSD_t - \sum_{i=1}^n \beta X_{t-i} \right]$$

is the linear combination of the non co integrated vectors, X is a vector of the non co integration variables. The individual influence of the co integrated variables can only be separated with an error

correction mechanism through an error correction model as shown below.

The Error Correction Model

The model is given by

$$\left[\eta_m \log FSD_t = \alpha_1 + \sum_{i=2}^p \alpha_i \eta_m Z_t - (\lambda ECM_{t-i} + v_{4t}) \right] \dots \dots \dots (11)$$

Where $-\lambda ec m$ is the error correction mechanism, $-\lambda$ is the magnitude of error corrected each period specified in its a priori form so as to restore $\eta_m \log IRM_t$ to equilibrium

RESULT AND DISCUSSIONS

In this section, the results of the unit root test, cointegration test, ARDL structural break granger causality test and Diagonastic test are discussed as followers

Unit Root Test Result

Arising from the above discussion, we started the modeling by running the Augmented Dickey – Fuller (ADF) unit root test of stationarity on the levels of the variables at the first differences and the result displayed in Table 1. As shown in Table 1; all the variables examined were stationary (significant) at first differenced; that is, it was integrated of order one (I ~ (1)). In effects, the order of integration as shown by the unit root clearly left us with the suspicion of evidence of co-integration from the variables. And for this reason, we conduct co-integration test using Engle-Granger procedure. The result is shown in Table 2 below:

Results from Co-Integration Test

Given the unit root properties of the variables, we proceed to implement the Engle-Granger co-integration procedure. All the variables have the same order (I ~ (1)) of integration; we estimate their linear combination at their level form with the intercept term and obtain their residual which is then subjected to co integration test as shown in Table 2. From the table, since in model 1, the residual t-adf of -3.559060 at lag length 1 is greater than 5% critical value of 2.9665 it means that the residual is stationary at level form and hence there is long-run linear relationship or co-integration among the variables while that of the second model shows no long run relationship between the variables. This implies that the co-integration result depends on the choice of financial deepening used as proxy for financial sector development. Consequently, we estimated long run relationship among the variables. To check the robustness in the long run relationship among the variables, we turn to ARDL model. The result of the ARDL is shown in Table below:

The estimated models can be shown as:

$$FSD_1 = 2.881 + 0.018IRM + 0.033RER + 0.036FOP - 0.326RIR + 0.321FSD_1 (-1) \dots (9)$$

$$FSD_2 = 1.849 + 0.006IRM + 0.03RER + 0.005FOP - 0.239RIR + 0.598FSD_1 (-1) \dots (10)$$

From the results in models 1 and 2, international remittance has a positive but insignificant impact on financial sector

development in Nigeria. This implies that increase in international remittance inflows positively deepens the financial sector. However the rate at which remittances exert influence in financial deepening in Nigeria is yet to be significant. Interestingly, previous state of the financial sector has both positive and significant impact on its present state implying that development in financial sector in previous period also enhances the improvement in the performance of financial sector in current period. Financial openness has positive but insignificant impact on financial sector development in Nigeria given the probability level of t-statistic (ie 0.7 > 0.05). The implication is that the liberalization of capital control has not contributed so much in the development of Nigerian financial sector. This result validates the perfect capital mobility hypothesis which hypothesizes that capital (hot money) will move to where return on investment is relatively high. This further presupposes that capital inflow into the country is still low in influencing financial sector development in Nigeria. This result supports the works of Huang (2006) and Baltay *et al* (2009).

As expected, exchange rate has positive and significant impact on financial sector development. This is in line with “a priori” expectation validating the Mundell-Flemming rule which says that depreciation in exchange rate increases export, and hence, output and income of firms and hence deepen the financial sector. This result corroborates the findings of Adam and Tweneboah (2008) and Okpara and Odionye (2012). Interest rate has negative but significant impact on financial sector development implying that a rise in interest rate will worsen the financial sector since this will deter investors from taking loan from the financial institutions. The results show that the error correction term (ECM) for the estimated equation is statistically significant and negative. Thus, it will rightly act to correct any deviations from long-run equilibrium. Specifically, if actual equilibrium value is too high, the ECM will reduce it, while if it is too low, the ECM will raise it. The coefficient of -0.275 denotes that 27.5% of any past deviation will be corrected in the current period. Thus, it will take about three years and six months for any disequilibrium in financial sector to be corrected.

The coefficient of determination and its adjusted Figure are 0.778 and 0.702 respectively implying that there exists goodness of fit in the model. This means that about 77.8% of the deviations in financial sector is accounted for by variation in the exogenous variables. The overall regression is significant at 1% level of significance implying that the joint effects of all the included variables are significant. The Durbin Watson statistic shows evidence of no first order serial autocorrelation in the model given that it is approximately 2.

Structural Break Result

To test for the effect of policy change in financial sector, we employ Chow test. The result is shown in Table below: From the Table above, it is obvious that the probability value of F is less than 0.05 (0.036486 < 0.05) thus we reject null hypothesis of no effect of policy change and conclude that there is significant effect of policy change on the Nigerian financial sector. This implies that the policies and programmes of the Nigerian government in financial sector have significant effect in deepening the financial sector.

Table 1: ADF Unit Root Test Result

Variable	DFND I	DFND II	DIRM	DRER	DRIR	DFOP
I ~ (d)	1	1	1	1	1	1
Lag length	1	1	0	1	1	1
Level form t – adf	-1.611192	-1.362924	-2.02341	-1.568349	-2.18624	-2.35089
Ist diff. t – adf	-3.67946*	-5.24983**	-3.09555*	-4.3166**	-5.05424**	-7.81437**
Critical @ 5% and	-3.6852	-3.6752	-3.675	-3.675	-3.685	-3.685
1% values	-2.9705	-2.9665	-2.967	-2.967	-2.971	-2.971

NB ** indicates significance at both 5% and 1% critical value

* indicates significance at 5%

D= number of differencing

Table 2: Co-Integration Tests

Model	Variable	t-adf	Lag	5%Critical val	1% Critical val
1	Residual	-3.559060	1	-2.9665	-3.6752
2	Residual	-2.692462	1	-3.6752	-2.9662

Table 3: ARDL Test Result

Model 1 Dependent variable: FSD (M ₂ /GDP)					Model 2 Dependent variable: FSD (CPS/GDP)			
Variables	Coefficient	Std. Error	t- stat	Prob.	Coefficient	Std. Error	t- stat	Prob.
Constant	2.881***	0.742	3.88	0.0009	1.849**	0.7457	2.48	0.021
Log (IRM)	0.0183	0.019	0.93	0.361	0.0064	0.0143	0.45	0.656
Log (RER)	0.033*	0.019	1.75	0.095	0.0301	0.0191	1.57	0.129
Log (FOP)	0.0355	0.05	0.7	0.49	0.0053	0.047	0.11	0.910
Log (RIR)	-0.3262***	0.12	-2.7	0.014	-0.239**	0.112	-2.12	0.044
FSD(-1)	0.321**	0.139	2.3	0.042	0.5981***	0.157	3.81	0.001
ECM (-1)	-0.275**	0.104	-2.6	0.041				
F- Stat.	8.86***			0.0001	14.524***			0.000
R ² = 0.778	Durbin Watson				R ² = 0.752	Durbin Watson		
Adj. R ² = 0.702	= 1.784				Adj. R ² = 0.6999	= 1.495		

***[**] (*) denotes significant of variable at 1% [5%] (10%) significance level respectively.

Table 4: Chow Breakpoint Test: 2004

F-statistic	5.88942	Probability	0.036486
Log likelihood ratio	9.80778	Probability	0.046088

Table 5a. Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Probability
IRM does not Granger Cause FSD1	29	4.82348	0.01735
FSD1 does not Granger Cause IRM		0.62332	0.54462

Date: 07/13/12 Time: 11:32

Sample: 1980 2010

Lags: 2

Table 5b: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Probability
IRM does not Granger Cause FSD2	29	6.02159	0.00760
FSD2 does not Granger Cause IRM		2.31337	0.12058

Date: 07/13/12 Time: 11:30

Sample: 1980 2010

Lags: 2

Table 6: Diagnostic test

Heteroskedasticity Test = 1.601369 (0.181412)
Jarque- Bera = 2.015688 (0.364674)

Granger Causality Test

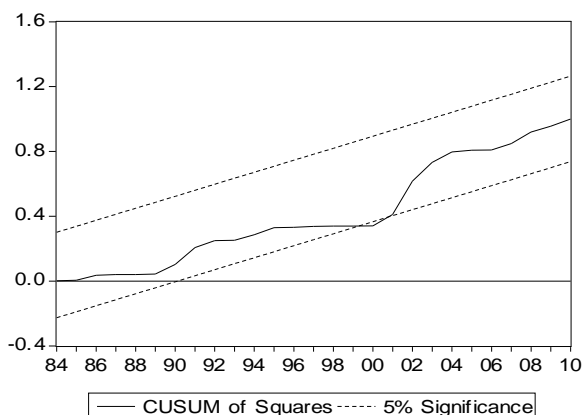
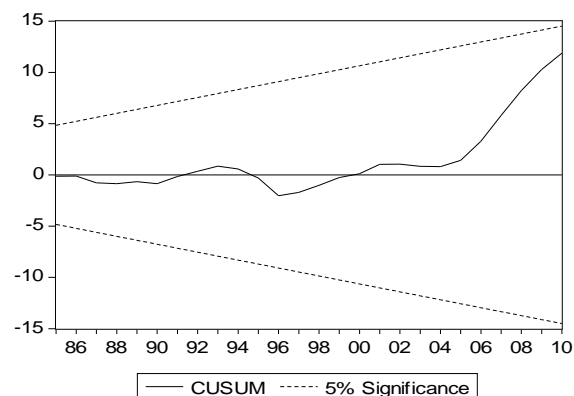
The direction of causality is tested using Granger causality test. The result is presented in Tables below: The null hypothesis of no direction of causality was tested against the alternative that there exists a direction of causality between the variables. From the two Tables (5a and 5b) above, the causality result revealed that international remittances granger causes financial sector development without a feedback. The conclusion was predicated on the fact that the F statistics were statistically significant at 5% as indicated by their P values. The implication of this result is that increase in

international remittance inflows into the country will improve the Nigerian financial sector.

Short and Long run Diagnostic Test

Short and long run diagnostic test were also carried out to know the validity of these results. The summary of the result is presented in Table 6 below: The Diagnostic test result showed no evidence of heteroskedasticity in the model implying that the conditional variances of the error terms are equal. The Jarque – Bera statistic showed that the error term is normally distributed since the Jarque-bera statistic is not

significant at 5% level. Finally, we examine the stability of the long run parameter of the model. Thus we rely on Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) test proposed by Borenstein *et al.* (1995). The same has been used by Pesaran and Pesaran (1997) and Mohsen *et al.* (2002) to test the stability of the long run. The results are presented in Figures below:



As observed in the Figures, the plot of CUSUM and CUSUMSQ statistics stay within the critical 5% bound for the period.

Conclusion and Policy Recommendations

The study has investigated the impact of international remittances on the financial sector development in Nigeria. Following the behavioural pattern of the variables, we adopted Autoregressive Distributed Lagged model (ARDL) in the study. The result of the Auto Regressive Distributed Lagged (ARDL) model showed that international remittance inflow has positive but insignificant impact on financial sector development. The Chow test result showed evidence of policy change effect on the Nigerian financial sector. The Granger causality test showed that there is a strong unidirectional causality running from international remittances to financial sector development irrespective of the measure of financial sector development used as proxy. In the light of the findings of this study, the following recommendations are considered necessary for short, medium and long term implementations. Since international remittance has positive but insignificant impact on financial sector development in Nigeria, policies that will enhance international remittance should be pursued. To achieve this, policy should focus on:

- Increase competition to reduce remittance service cost in the financial sector. According to Agu (2010), the financial sector charges more than 10% of the total amount sent by migrant. This includes increasing the number of remittance service provider.
- Unnecessary administrative bottleneck in the financial sector should be eliminated to enhance remittance inflow through the sector.
- Government should improve on the operational environment and regulation of remittance service, particularly as they relate to improving competition, reducing charges, improving access and enhancing the use of remittance proceeds in order to deepen the financial sector development and sustain momentum for growth.
- Economic reforms must target macro-economic stability, removal of structural distortion and creation of business-friendly environment for enhancing domestic production capacity such as anti-inflationary policies like non – expansionary monetary and fiscal policies. Furthermore, a more stable exchange rate policy should be pursued to deepen the Nigerian financial sector.

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APPENDIX

Table 1. Financial Sector Development Remittance and other Mentioned Control Variables

YEAR	FND	FSD	IRM	RER	FOP	RIR
1980	15	30.4	22	106.28	0.035	7.5
1981	18	31.4	16	110.39	0.005	7.5
1982	21.7	32.4	18	109.86	0.014	10.25
1983	22	33.3	14	109.84	0.015	10
1984	20.9	33.7	12	113.2	0.012	12.25
1985	19.2	32.8	10	99.9	0.013	9.25
1986	22.1	34.4	4	51.89	0.027	10.5
1987	20	26.2	3	14.72	0.047	17.5
1988	19.6	27.6	2	12.97	0.051	16.5
1989	14	21.2	10	8.88	0.042	26.8
1990	12.5	19.8	10	7.72	0.08	25.5
1991	13.2	24.2	66	6.34	0.036	20.01
1992	10.9	20.9	56	3.74	0.056	29.8
1993	18.6	24.2	793	2.97	0.19	18.32
1994	15.9	25.6	550	2.96	0.043	21
1995	9.3	15	804	0.74	0.225	20.18
1996	8.8	12.8	947	0.78	0.029	19.74
1997	11.3	14.7	1920	0.81	0.047	13.54
1998	13	18	1544	0.81	0.131	18.29
1999	13.5	19.7	1301	0.2	0.02	21.32
2000	11.6	19.2	1392	0.2	0.09	17.98
2001	16.2	26.9	1167	81.25	0.018	18.29
2002	13.5	21.8	1209	88.94	0.023	24.85
2003	12.9	23	1063	100.62	0.029	20.71
2004	12.9	18.7	2273	107.06	0.038	19.18
2005	12.6	18.1	3329	106.57	0.047	17.95
2006	12.3	20.5	5435	105.03	0.071	17.26
2007	17.8	24.8	9221	106.41	0.086	16.94
2008	28.5	33	9980	100.31	0.063	15.94
2009	36.7	38	9585	121.54	0.086	12.97
2010	34.7	37.8	10045	96.57	0.083	13.43

Sources: 1. Central bank of Nigeria statistical bulletin (2010)
2. World Development Indicator (2010)
