

Managing Interest Rate Spreads in Ghana: Some Policy Discussion

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Abstract

This paper attempted to investigate the key determinants of high interest rate spread in Ghana and what policy measures authorities can implement to address this inherent problem facing the domestic market. The study suggested that interest rate spread in Ghana remains one of the highest when compared to peer-countries across the globe and particularly, prevailing spreads in sub-regional economies. It was further observed that real deposit rate has remained negative over the years while at the same time lending rates and other rates in the market have firmed up strongly in line with developments and trends in policy rate decisions in all segments of the loanable markets. Also, the paper revealed that high interest rate spread in Ghana is determined primarily by risk-aversion attitude of banks, the rate of inflation, the level of provision for bad debts, credit risk, exchange rate risk, cost of bank operations, scale of bank operations and finally, the level of economic activities(GDP). There is therefore the need to fashion out pragmatic policies aimed at reducing the high interest rate spread currently prevailing in the market as perceived by corporate bodies and the general business environment. Banks need to innovate and develop corporate strategies and capacities which aim at reducing their general costs of operation and other related overhead cost among others.

Keywords: Spread, interest rate, fully modified least squares, policy, narrow and broad definitions

1. Brief Background

One of the expected benefits of financial liberalization and deepening of the financial sector is the narrowing of the interest rate spread which is the difference between the interest rate charged to borrowers and the rate paid to depositors. This is predicated on the understanding that liberalization enhances competition and efficiency in the financial sector. Thus, a wide deposit-lending interest rate spread could be indicative of banking sector inefficiency or a reflection of the level of financial development (Folawewol and Tennant, 2008). Embedded in the spread, is the information on the efficiency of financial intermediation, profitability, monetary policy impact, among others (Ng'etich and Wanjau, 2011).. An analysis of bank interest rate spreads and how large interest spread could be bridged to an optimal range is therefore central to the understanding of the financial intermediation process and the macroeconomic environment in which banks operate and their impact on overall economic growth in Ghana.

The issue of Bank interest spreads in Ghana has generated considerable public debate recently as the gains of the macro stability have not been translated into significantly declining interest rate spreads. According to Bawumia et al (2005), interest rate spreads within the Ghanaian banking industry are among the highest in Africa. Ghana's experience with the aim of liberalizing the interest rates through financial sector reforms has rather shown a widening interest rate. The period of liberalization has been characterized by high implicit costs with tight monetary policy achieved through increased reserves and cash ratios

(Bawumia et al, 2005).

The problems associated with high interest rate in Ghana have led to industry stakeholders suggesting for reduction in the interest rate in Ghana. The failure to reduce the interest rate spreads are known to emerge from the following problems: (i) lack of changes in the structure and institutional behaviour of the banking system shown by concentration, the conditions of free entry and competitive pricing; (ii) high reserve requirements, which act as implicit financial tax (Kwakye, 2010). While reserve requirements may be designed with the aim of protecting depositors, the availability of a pool of resources allows for financing high fiscal deficits through the implicit financial tax, creating an environment that can promote high inflation and persistent high intermediation margins; (iii) adverse selection and adverse incentive (moral hazard) effects, which could result in mounting non-performing loans and provision for doubtful debts; (iv) high operational costs have also been found to be a source of persistent and wide intermediation spreads in developing countries. Operational costs reflect variations in cost of capital, employment, and wage levels. Inefficiency in bank operations may also be shifted to bank customers through wide margins; (v) the cost of capital that banks hold to cushion themselves against risks is relatively more expensive than debt because of taxation and may lead to high spreads; (vi) macroeconomic instability and the policy environment may also affect the pricing behaviour of commercial banks. This study investigate the question of high interest rate spreads in Ghana and make policy recommendations on how this problem could be resolved.

2. The Role of Credit to Private Sector Growth

To place credit developments in Ghana into context, it is useful to recall that the financial system in most developing countries is bank-based and that capital markets (in particular corporate bond and stock market

segments) are generally not very developed. This implies that bank credit has over the years become the main source of external financing to the private sector, although foreign direct investment (FDI) has also been important in some instances.

The emerging literature on credit growth in developing economies has documented that lending to the private sector has recently grown dynamically in a number of transition economies. This can be attributed to a number of factors, including macroeconomic stabilization, comprehensive reforms and privatization in the financial sector, the introduction of market institutions and legal reforms. However, given the size of the recent boom in bank lending in some transition countries (e.g. Central and Eastern Europe), some policy-makers have questioned whether the growth rates recorded in these countries can be viewed as sustainable in the medium to long run.

The figure 1 below gives an overview of development of credit to the private sector in percent of GDP from 2005 to 2014 in Ghana. Several observations can be made on the basis of the trends in private sector credit and its impact on growth. The private sector credit-to-GDP ratio was 14.86 percent in 2005 and this inched-up to 17.68 percent in 2006. The private sector registered a marked increase in credit-to-GDP ratio of 27.9 per cent in 2008 and further rose steadily in 2009 although the overall increase was less pronounced than the previous year(see figure 1). Credit to private sector improved again in 2010 by recording a credit-to-GDP ratio of around 26.46 per cent. Private sector credit to GDP picked up strongly in 2012 to 41.20 percent from 33.37 percent in 2011. In 2014, private sector credit to GDP firmed up markedly from 49.67 percent in 2013 to 68.02 percent in 2014. The relative improvement in private sector credit to GDP ratio suggests that credit plays key role in promoting private sector growth and overall growth in the domestic economy. This re-enforces the importance of the current debate on high interest rate spread in the country and its negative effects on private sector growth and the need to formulate policies to reduce the current high interest rate spread.

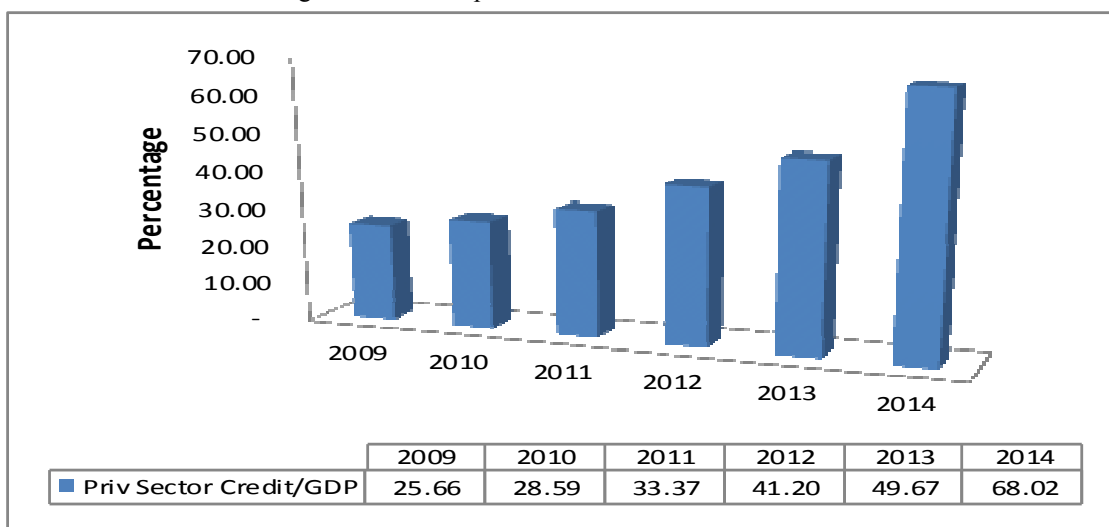


Figure 1: Private Sector Credit/Gross Domestic Product

Outstanding Deposit Money Banks(DMBs) credit to the private sector has continuously been trending up by posing strong growth over the past few years to date. DMBs credit to the private sector was GH¢2,064.02 million in 2006 as against GH¢1,445.47 million in 2005, registering a growth of 42.79 per cent. The growth in BDM's credit to private sector peaked at 59.67 per cent in 2007 compared with the 2006 figure extended to the private sector. Observations from the trends in DMB's credit to private sector over the period 2005-2014(see figure 1 & 2) suggested that since 2007 DMB's credit to the private sector has been growing at a decreasing rate and this development could potentially inhibit private sector growth since the sector needs more financial resources from the banking sector to expand.

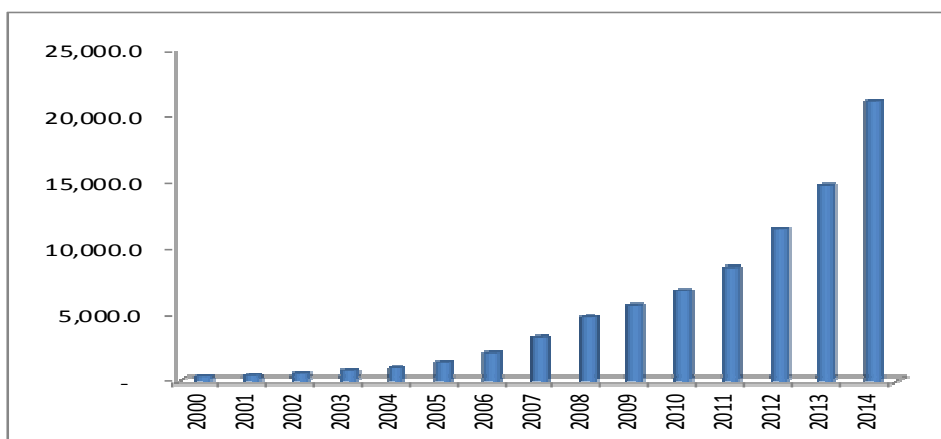


Figure 2 : Trend in Private Sector Credit

Similarly, DMB’s credit to the private sector grew by 19.86 per cent in 2010 compared with a higher growth of 48.09 per cent in credit extended to the private sector by the DMB’s in 2008. For the first quarter of 2011 alone, DMB’s credit to the private sector on year-on-year basis picked-up by 10.34 per cent above GH¢5,883 million extended to the private sector during a similar period of 2010. Credit to private sector improved again significantly in 2014 by 42.59 percent to GH¢21,042.7 million from GH¢14,757.2 million in 2013 and GH¢11,477.40 million in 2012 respectively.

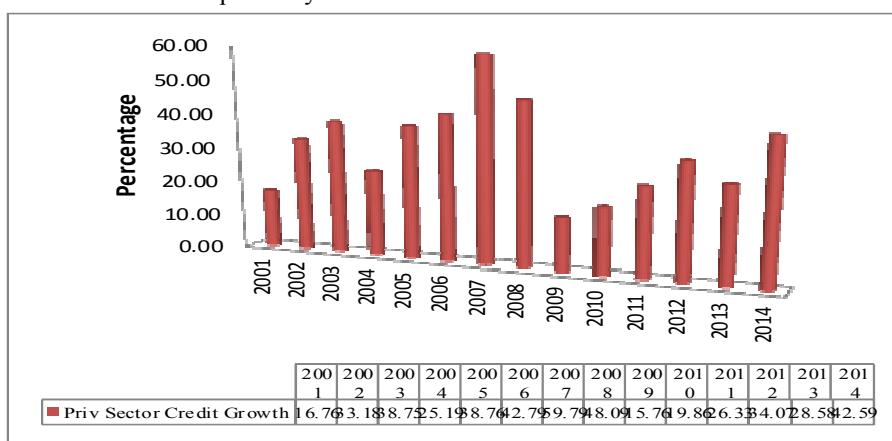


Figure 3: Private Sector Credit Growth

The evidence based on trends in DMB’s credit to the various sectors of the economy indicates that private sector continued to absorb the bulk of the credit extended by the DMB’s. As a result, continuous charging of high interest rate on loans extended to the private sector by the banking sector will severally hurt the sector’s growth prospects in the short to medium term.

2.1 Cost of Credit to the Private Sector

For some time now firms in Ghana through the Association of Ghana Industries (AGI) and some sections of the public through consumer protection agencies have been complaining about the high interest rate charges that have characterised the loan market in Ghana. Political leaders of various governments, academic think-tanks and other pressure groups have been intolerant towards the high interest charges on loans and advances extended to firms and households alike by commercial banks operating in the country. This follows the various policy measures instituted by the central bank through the Monetary Policy Committee(MPC) by consistently reducing the Policy Rate from as high as 18.5 percent per cent in 2004 to 12.5 per cent in 2011 coupled with the continues decline in headline inflation which had reduced uncertainties somehow in economic outlook during the stated period. The policy rate has been hiked recent from 12.5 percent in January 2012 to 21 percent in December 2014 in response to inflationary pressures and exchange rate depreciation.

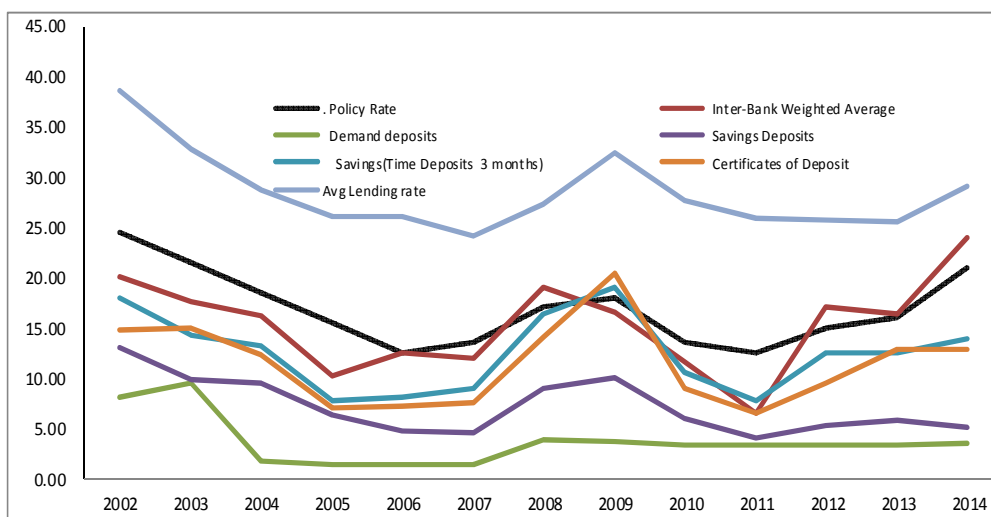


Figure 3: Trends in Average Lending and Deposit Rates

2.2 Trends in Interest Rate and Interest rate Spreads

Notwithstanding the relative achievement of macroeconomic stability in Ghana, expanded financial sector reforms, improved policy environment and increased business confidence, cost of credit to the private sector in the country remains one of the highest in the sub-region if not the highest. This is reflected in the high Annual Percentage Rates of interest charged by banks in the country by extending loans to the various sectors of the economy. The Annual Percentage Rates (APR) is the true interest rate banks and non-bank financial institutions charge on loans and advances. It reflects the true cost of credit and includes charges and commissions levied by banks. The banking industry's average annual percentage rate of interest for the agriculture and manufacturing sectors stood at 28.68 and 28.82 percent respectively as at July 2013 while some of the banks charging as high as 36.26 per cent.

In some countries (for instance, Germany), it is illegal to charge interest rates on loans (i.e. APR) which are two times higher than the prevailing market interest rate since that will amount to an abuse. However, analysis of the various APRs charged by banks in Ghana on loans extended to the private sector suggested that APRs on loans extended by banks operating in the country are normally two times higher than the prevailing market interest rate (see figure 4). Banks operating in the country should be prevailed upon to charge realistic interest rates which reflect market fundamentals (See Table A).

Insert Table A (Appendix)

Financial systems in developing countries like Ghana normally exhibit significantly larger interest rate spread on average than in industrial countries which have been attributed to high operation cost, financial taxation and high inflation rate. Spread typically declined when competition among banks increases to access the financial market to increase their customer's base. But in Ghana, the high lending rate and low deposit rate have generated large spreads for some time now despite increased competition among banks.

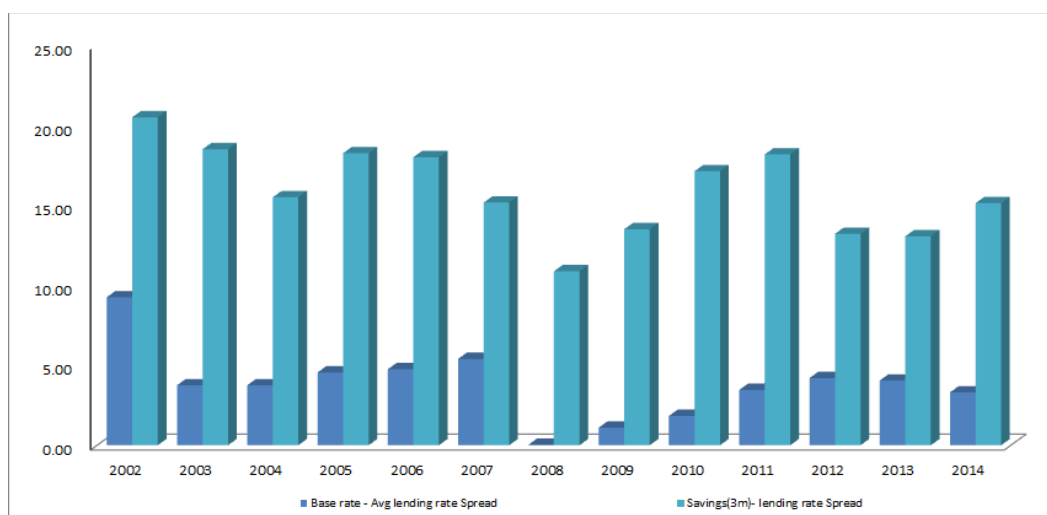


Figure 4: Trends in Interest Rates Spreads

The spread between the average savings deposit rate and bank lending rate was 22.5 percent in 2009 as against 18.25 percent in 2008, inching up by 3.25 percentage point. The upward trending of the interest rate spread continues by firming up to 21.88 percent in 2011 above the spread of 21.75 percent in 2010. Also, the interest rate spread between the time deposit rate and bank lending rate picked-up again to 23.98 percent in 2014 from 19.81 percent in 2013. The data suggested an average spread of 21.30 percent between 2002- 2014 period, which remains very high for the country seeking to boost private sector growth.

The high lending rate have increased the cost of borrowing and hence discouraged investment. This is not a healthy trend and indicates that while the large banks are earning higher spreads, both the private sector borrowers as well as depositors have been the losers. High interest spreads encourages commercial banks to continue lending to large, traditional borrowers rather than the small and medium-scale firms.

There are potentially large economic costs of the high spreads. High spreads are much more than a nuisance for the conduct of business. They mean high, and often more volatile, lending rates, leading to higher cost of capital, reduced investment, and a bias towards short-term high-risk investments, away from long-maturing investments with higher social returns. Moreover, high banking spreads can disproportionately hurt small and medium enterprises (which do not have access to local and international securities and banking markets and are more dependent on local banks for their external finance) and encourage informality (as a key benefit of formality, access to affordable finance does not arise). Moreover, high spreads can be interpreted as a symptom of a poorly functioning financial system which, by itself, can retard economic growth.

2.3 International Comparison: Average Lending and Deposit Rates

Interest rate spread in Ghana remains one of the highest across the globe and particularly, in the sub-region when compare with spreads in these countries. This is not a healthy development since it suggests high cost of doing business in the country as most private sector firms depend so much on bank credit to expand. The average spread in Nigeria dipped to 6.75 percent between 2002-2007 periods while the spread in Brazil declined to 39.28 percent with South Africa registering 4.59 in their interest rate spread which compares favourably with 15.67 percent spread in Kenya. The average interest rate spread between the savings rate and bank lending rate for the period 2008-2013 inched-up to 20.78 percent in Ghana , followed by 15.13 percent spread in Tanzania; Kenya (8.92%); Brazil(30.45%); Chile(7.92%);Mexico(4.22%), while Nigeria also recorded an average interest rate spread of 7.92 during the same period(see Table 2)

Table 1: Average Lending and Deposit for Developing and Developed Countries						
	1997 - 2001		2002 - 2007		2008-2013	
	Deposit	Lending	Deposit	Lending	Deposit	Lending
Developing Countries						
Ghana	30.16	42.35	12.04	29.79	6.65	27.43
Kenya	11.88	24.83	4.59	14.49	6.95	15.87
Nigeria	11.41	20.20	12.57	19.32	8.97	16.88
Tanzania	7.11	22.58	5.22	15.19	8.17	15.13
Emerging Economies						
Brazil	22.69	71.89	16.37	55.65	9.43	39.88
Chile	10.18	15.04	4.03	7.34	2.78	8.97
Mexico	11.58	20.39	3.23	7.89	1.60	5.82
South Africa	12.54	17.61	8.38	12.97	7.15	10.48
Advanced Economies						
Australia	3.83	8.59	3.74	9.07	3.85	7.18
Euro Area	3.20	6.68	2.86	7.98		
U.K	4.64	6.04	4.48	4.52		1.20
US	5.31	8.19	8.60	19.70		3.60

Source: World Bank Data Base and Author's Computations

It was observed that trends in interest rate spreads within Africa, emerging economies and developed world declined consistently although spreads in Ghana on the other hand trended up. (See Table 1). The declining trends in spreads across many economies during the period under review were as a result of relatively low inflation and slack in economic growth.

Table 2: Average Interest Rate Spread Across Countries			
	1997 - 2001	2002 - 2007	2008-2013
Developing Countries			
Ghana	10.69	15.67	20.78
Kenya	12.94	9.90	8.92
Nigeria	8.79	6.75	7.92
Tanzania	15.47	9.97	15.13
Emerging Economies			
Brazil	49.20	39.28	30.45
Chile	8.79	6.75	7.92
Mexico	8.81	4.67	4.22
South Africa	5.07	4.59	3.33
Advanced Economies			
Australia	4.77	5.33	3.33
Euro Area	3.48	5.13	0.00
U.K	1.39	0.04	1.20
US	2.87	2.75	3.60

Source: World Bank Data Base and Author's Computations

3. Graphical Analysis of Determinants of Interest Rate Spread

Bank spreads measure the difference between total interest payments paid on funds deposited by clients and total interest received from the users of the funds. The empirical literature focuses on two main definitions of bank interest rate spreads. That is interest rate can be defined either in a narrow or broad basis. The narrow definition of spread defines interest rate spread as the difference between ratio of interest income to total loans and ration of interest expense to deposits. On the other hand, a broad definition spread describes interest rate spread as total interest income minus total interest expense divided by total interest-bearing assets of a bank. The figure 5 below indicates trends in narrow spread and broad spreads and their relationship.

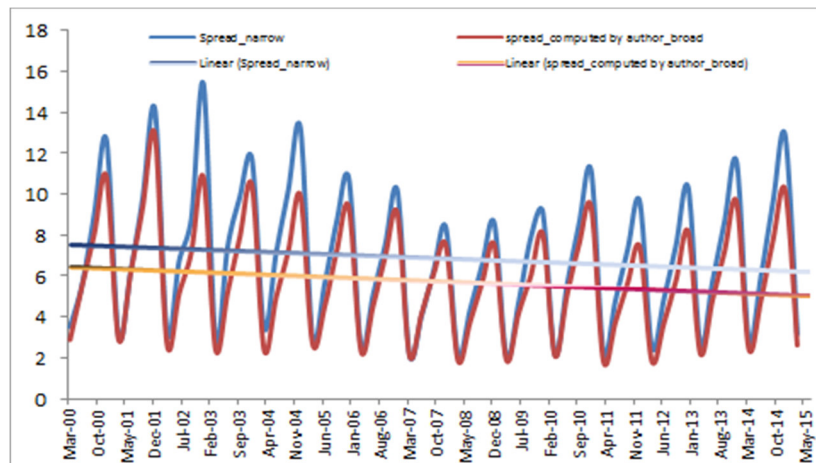
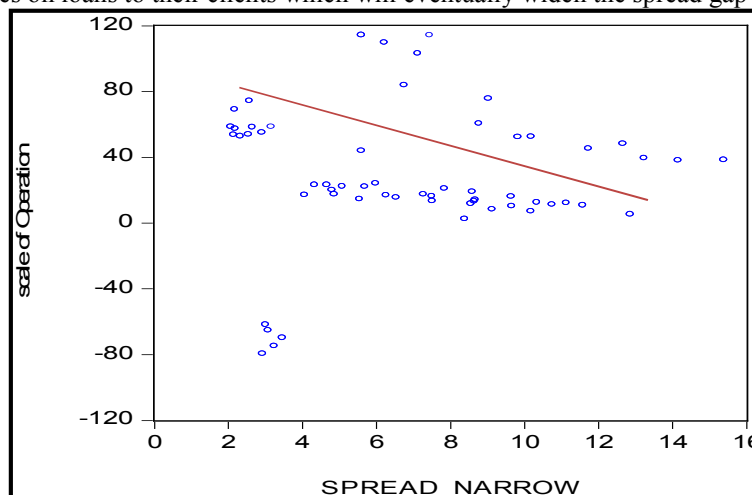


Figure 5: Trends in Narrow and Broad Interest Rates Spreads Compared

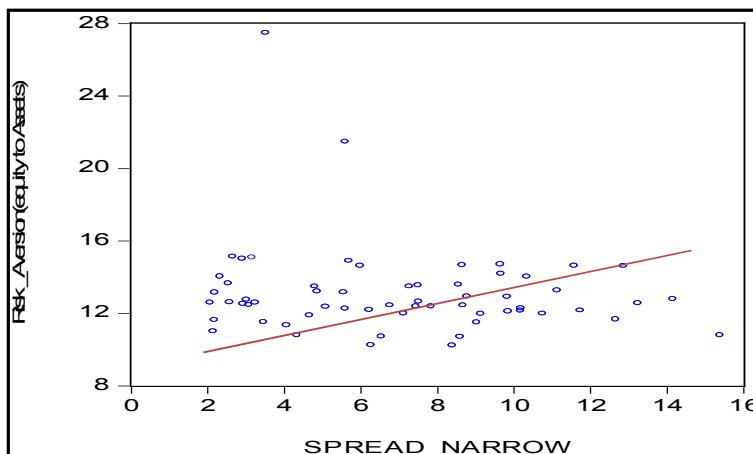
The trends indicate that spread remained high between 2000-2006 periods and 2010-2015 periods as indicated by narrow and broad spread trends. It is noted that narrow spread is higher than broad spread. As it can be seen from the trends, interest spread in Ghana is one of the highest within the sub-region as whole when comparative analysis is done across.

3.1 Narrow Definition of Interest Rate Spread

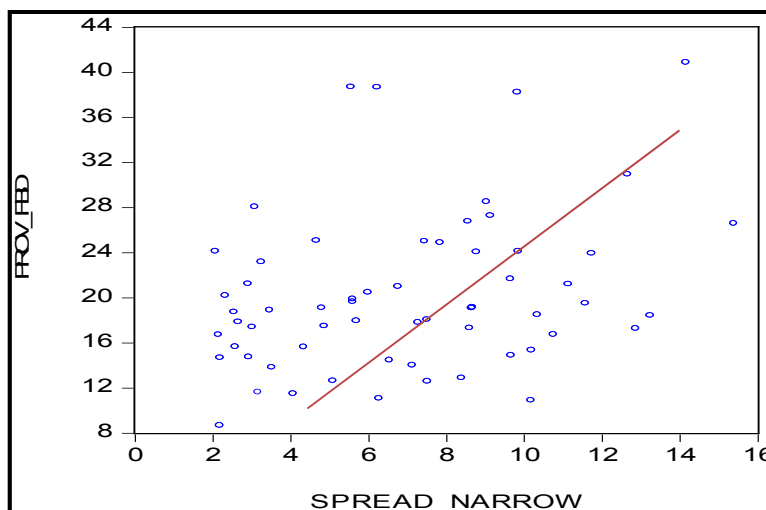
The panel of graphs below shows the graphical relationship between the various determinants of interest rate spread and the spread itself based on the narrow definition of interest rates spread. **Panel a** suggests that the scale of bank operations and interest rate spread are negatively related since larger scale of operations create economies of scale, thus leading to lower average cost and as a result impacts less on interest rate spread in the long-run. On the other hand, panel b, c, d, e, f, g indicate that risk-aversion, provision for bad debt, cost of operations, and credit risks are positively related to interest rate spread in Ghana. This implies that the higher the risk-aversion attitudes of banks, the higher the credit risks, the higher the provision for bad debt due to higher NPLs and the higher the cost of operations, then the higher would be the spread as banks would demand higher compensation in the form of higher interest rates on loans to their clients which will eventually widen the spread gap in the long-run.



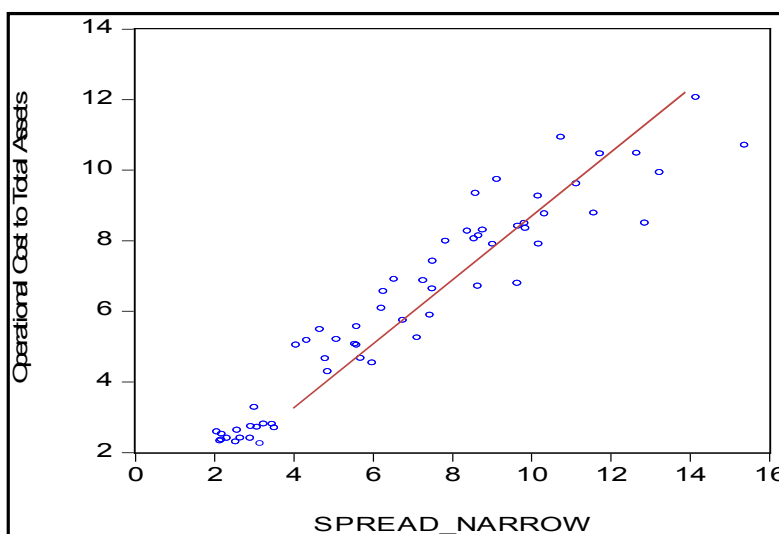
Panel a: Scale of Operations and Interest Rate



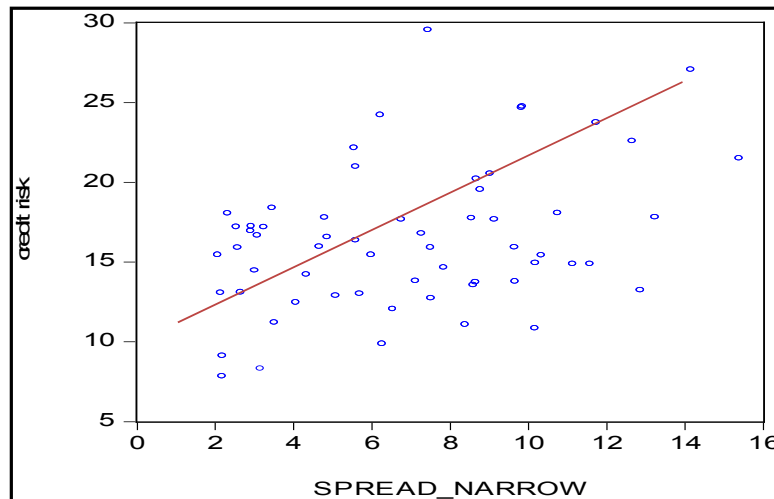
Panel b: Risk-Aversion and Interest Rate



Panel c: Provisions for Bad debt and Interest Rate



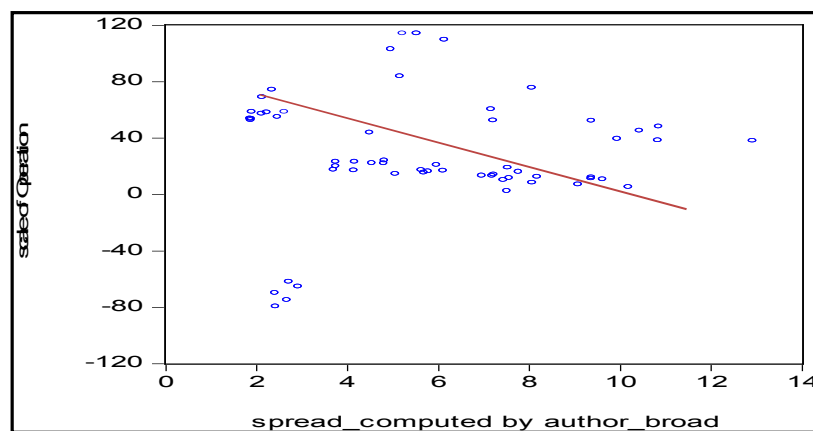
Panel d: Cost of operations and Interest Rate



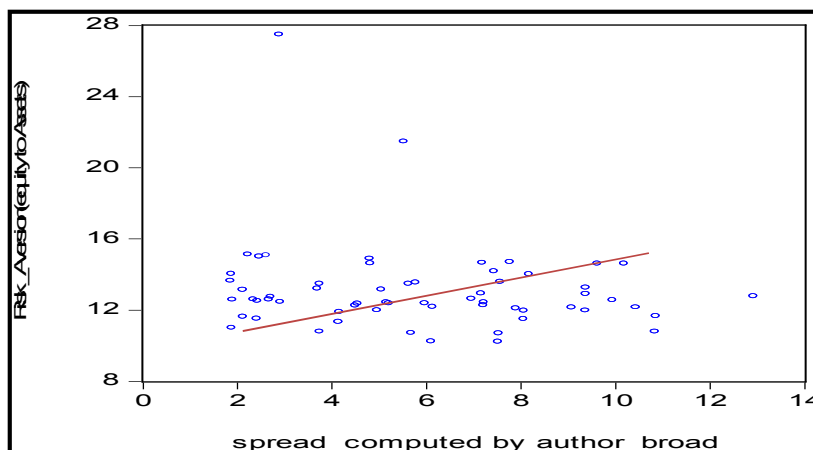
Panel e: Credit Risk and Interest Rate Spread

3.2 Broad Definition of Interest Rate Spread

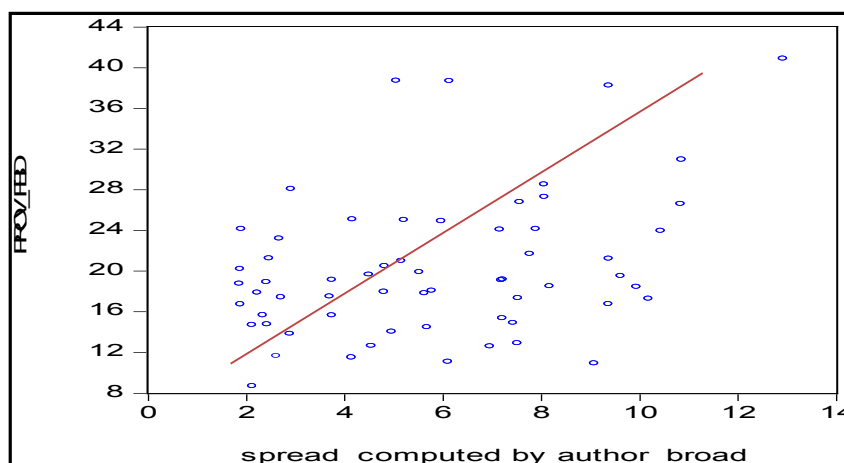
Again, the panel of graphs below also highlights the graphical relationship between the various determinants of interest rate spread and the spread itself based on the broad definition of interest rate spread as discussed above. **Panel f** shows that interest rate spread and scale of bank operations are negatively related since greater scale of operations generate economies of scale and scope, which can potentially lead to reduced average cost and then lower the spread gap in the long-run. On the other hand, **panel g, h, I, j** suggest that risk-aversion, provision for bad debt, cost of operations, and credit risks are positively related to interest rate spread in Ghana. The relationships further proof that risk-aversion, credit risks, provision for bad debt and cost of operations also widens the spread gap, thus leading to higher interest rate spread in the country.



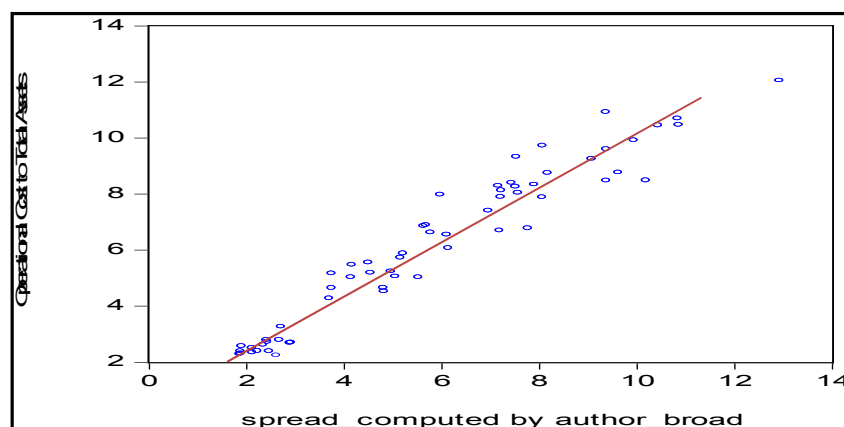
Panel f: Scale of Operations and Interest Rate Spread



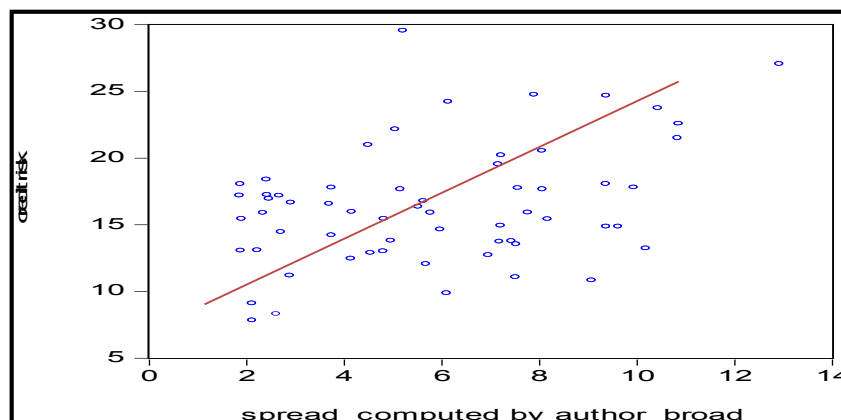
Panel g: Risk-Aversion and Interest Rate Spread



Panel h: Provisions for Bad Debt and Interest Rate Spread



Panel i: Cost of Operations and Interest Rate Spread



Panel j: Credit Risk and Interest Rate Spread

4. The Model

We employ the econometric model used by Nooman Rebei(2014) in his study on Solomon Island regarding the determinants of interest rate spread in that country. The model states that interest rate spread is a function of bank-specific variables, industry structure, macroeconomic variables and the legal variables. What it means is that interest Rate spread is influenced by bank specific characteristics, market power (industry concentration), macroeconomic fundamentals and the country’s legal environment. The model is stated below in a panel form:

$$S_{i,t} = f(X_{i,t}, MP_t, MAC_t, LG_t, \varepsilon_{i,t}) \quad (1)$$

Where $S_{i,t}$ is represents the spread variable of firm i at time t and $X_{i,t}$ is the vector of bank specific variables which include Staff Cost(SC), Capital Cost(CC), Other Bank Cost(OBC), Loan Growth(LG), risk-aversion(RA) and Credit Risk(CR). Also, MP_t is the market power proxied by Market Concentration Ratio(MCR) of the industry. In addition, MAC_t is the macroeconomic variables proxied by Inflation (INF), Exchange Rate(ER) and BOG’s Policy Rate(PR) and LG_t is the legal environment variable proxied by Index of Economic Freedom(IEF). Finally, $\varepsilon_{i,t}$ is the disturbance term which is assumed to be white-noise.

By substitution and re-arrangements, the model to be estimated is expanded and formulated as follows incorporating all the relevant variables of interest:

$$S_{i,t} = \delta_0 + \delta_2 SC_{i,t} + \delta_3 CC_{i,t} + \delta_4 OBC_{i,t} + \delta_5 LG_{i,t} + \delta_6 RA_{i,t} + \delta_7 CR_{i,t} + \delta_8 MCR_t + \delta_9 INF_t + \delta_{10} ER_t + \delta_{11} PR_t + \delta_{12} IEF_t + \varepsilon_{i,t} \quad (2)$$

Where $\delta_0, \delta_2, \delta_3, \delta_4, \dots, \delta_{11}, \delta_{12}$ are all parameters to be estimated from the model (2). Also it is expected that $\delta_2, \delta_3, \delta_4, \delta_5, \delta_7, \delta_8, \delta_9, \delta_{10}, \delta_{11}, > 0$ and $\delta_6, \delta_{12} < 0$

5. The Estimated Model and Discussions

The interest rate spread model was estimated based on the narrow and broad definitions of interest rate spreads in the empirical literature using the fully Modified Ordinary Least Squares Methodology (FMOLS) developed by Peter B.C.Philips(1993).

5.1 Augmented-Dickey Fuller and Phillips-Perron Unit Root Tests

We conducted unit root test for all the selected variables in levels using optimal lag length 2 based on the Schwarz Information Criterion(SIC), the test results in the table below suggested that all the selected variables were non-stationary, indicating the presence of unit root in them at both one percent(1%) and five percent(5%) significance levels. This result suggested that if the model is estimated using the level variables, it may give wrong coefficients and it will be misleading to interpret the results thereof using these estimated parameters(see table 3).

In order to avoid spurious regression estimates, we followed strictly the extension suggested by Dickey and Pantula (1987) and Phillips and Perron (1988) by performing standard Dickey-Fuller tests on successive differences of the variables. After differencing these variables at their first differences, we conducted further Unit root test independently for each selected variable and the results suggested that they are now stationary. The results of these tests are reported in the Table below.

Table 3: Augmented Dickey-Fuller and Phillips –Perron Unit Root Tests

Variable	ADF TEST		PHILLIPS-PERRON TEST	
	Level	1st Difference	Level	1st Difference
Credit Risk	2.504147	-11.284460*	0.654901	-12.907490*
Exch_Rate	2.671298	-3.072302*	3.418926	-3.108315*
GDP	1.817665	-8.145314*	2.226555	-8.142434*
Inf	1.655010	-6.690251*	3.734379	-4.964851*
Operation_Exp	0.497781	-9.683641*	0.265761	3.491110*
Prov_Bad	0.856951	-10.627630*	0.859116	-11.096440*
Risk_Aversion	0.885789	-6.382799*	1.923416	-7.717065*
Scale_of_Operation	1.135609	-6.011091*	6.914490	-24.118510*
Spread	0.029637	-5.315925*	3.863080	-32.079030*

Note: * and ** indicate 1% and 5% per cent level of significance

5.2 Johansen Cointegration Rank Test

The main reason behind the conduct of co-integration test is to determine whether groups of non-stationary series are co-integrated or not (Johansen, 1991). As explained below, the presence of a co-integrating relation forms the basis of the fully Modified Ordinary Least Squares Methodology (FMOLS), in this case. Using the Johansen (1991), the trace tests indicate that, the null hypotheses of no co-integration have been rejected at 5% level of significance (See the Table 4 below). This indicates that exclusive long-run cointegrating relation therefore exists between credit risk (Credit risk), Gross Domestic Product (GDP), inflation(inf), operation expenditure(Op_Exp), Provision for bad debt(Prov_fbd), risk aversion(risk aversion), scale of operations(scale_of_Op) and Spread respectively. All the variables under investigation are co-integrated. Hence, fully Modified Ordinary Least Squares Methodology (FMOLS) can be used to investigate the relationship between the variables in the mode.

Table 4: Johansen Cointegration Rank Test

Sample (adjusted): 2001Q4 2015Q4				
Included observations: 60 after adjustments				
Trend assumption: Quadratic deterministic trend				
Series: CREDIT_RISK EXH GDP_CIEA INF OP_EXP PROF_RA PROV_FBD SCALE_OF_OPERATION SPRD				
Lags interval (in first differences): 1 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.984661	507.2199	215.1232	0.0000
At most 1 *	0.952192	331.7704	175.1715	0.0000
At most 2 *	0.766962	204.0668	139.2753	0.0000
At most 3 *	0.708750	142.8915	107.3466	0.0000
At most 4 *	0.575606	91.08140	79.34145	0.0050
At most 5	0.445102	55.08352	55.24578	0.0517
At most 6	0.339739	30.34673	35.01090	0.1449
At most 7	0.168884	12.91168	18.39771	0.2466
At most 8 *	0.115237	5.142274	3.841466	0.0233

Trace test indicates 5 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

5.3 Estimated Results of the Interest Spread Model: The Narrow Definition

The estimated results suggested that scale of banks' operation positively impacts on spreads, thus increased banks' operation creates economies of scale and subsequently turns to lower spreads. The coefficient of scale of operation was significant at 1 per cent level and also carries the right sign, indicating that scale of operations reduces interest rate spreads in Ghana. Also, the results indicated that the more risk-averse a bank is, the higher would be the spreads. The coefficient of the risk-aversion variable carries the expected sign but it was not significant, suggesting that banks in Ghana are relatively less risk-averse in the granting out loans which reflects in the build of non-performing loans, thus somehow contributing higher spreads in the country. The estimated results further indicated that credit risk contributes significantly to interest rates spreads in Ghana as the coefficient of the credit risks variable had the expected sign and also significant at 1 per cent level. On the other hand, exchange rate risk reflecting exchange rate volatilities contributes less to higher spreads in Ghana as the exchange rate variable had the expected sign though not significant. On inflation, the results suggested that higher inflation in Ghana contributes significantly to higher interest rates spreads in Ghana as the inflation parameter carries the expected sign and also significant at 5 per cent significant level. This result further give credence to the reasons why the Central Bank of Ghana aims at achieving and maintaining price stability as one of key benchmarks to reducing interest rate spreads in Ghana as price instability serves as destabilizing factor in every economy since it can negatively affect other economic variables. Regarding cost of operation, the results suggested cost of operations also contributes significantly to higher spreads in Ghana as the confirmed by the coefficient of the cost of operation variable which carried the expected sign and also was significant at 1 per cent significant level. Similarly, on provision for bad debt, the results indicated that higher provisions for bad debt lead to higher interest rate spreads. This result confirms what the empirical literature postulates, thus explaining experience that as commercial banks make higher provisions for bad debt reflecting more than expected loans default occurrences or increasing non-performing loan portfolios, the higher will be the interest rates spread (see Table 5).

Table 5: Estimated Results of the Interest Spread Model: The Narrow Definition

Dependent Variable: SPREAD_NARROW				
Method: Fully Modified Least Squares (FMOLS)				
Sample (adjusted): 2002Q2 2013Q1				
Included observations: 42 after adjustments				
Cointegrating equation deterministic: C				
Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
SCALE_OF_OPERATION(-3)	-0.006042	0.002839	-2.128078	0.0409*
RISK_AVERSION_EQUITY_TO	0.138729	0.153186	0.905623	0.3717
CREDIT_RISK	0.155377	0.050067	3.103377	0.0039**
EXH	1.503958	1.903021	0.790300	0.4350
GDP_CIEA(-2)	-0.003111	0.009320	-0.333749	0.7407
INF(-4)	0.060991	0.027799	2.194004	0.0354
OPERATIONAL_COST_TO_TOTA	1.140909	0.044530	25.62085	0.0000**
PROV_FBD	0.101499	0.037935	-2.675588	0.0115*
C	-4.755283	1.536677	-3.094524	0.0040**
R-squared	0.941989	Mean dependent var		6.632411
Adjusted R-squared	0.927925	S.D. dependent var		3.390569
OS.E. of regression	0.910256	Sum squared resid		27.34270
Durbin-Watson stat	1.922593	Long-run variance		0.488774

Notes 1: * and ** represent 5% and 1 % significance level

Note 2: Author's computations and estimation

5.4 Estimated Results of the Interest Spread Model: The Broad Definition

The estimated results suggested that scale of banks' operation positively impacts on spreads, thus increased banks' operation creates economies of scale and subsequently turns to lower spreads. The coefficient of scale of operation was significant at 5 per cent level and also has the expected sign, confirming the empirical evidence that, the scale of operations reduces interest rate spreads. Again, the results suggested that the more risk-averse a bank is, the higher the spreads. The coefficient of the risk-aversion variable carries the right sign however, the coefficient was

insignificant, suggesting that banks in Ghana are relatively less risk-averse in their intermediation efforts as indicated by relatively high non-performing loans trends until recently, somehow accounting high interest rate spreads in the country. The estimated model also showed that credit risk contributes to interest rates spreads in Ghana as the coefficient of the credit risks variable had the expected sign though insignificant. On the other hand, exchange rate risk reflecting exchange rate volatilities contributes less to higher spreads in Ghana as the exchange rate variable had the expected sign though also not significant. The results further indicated that inflation in Ghana contributes significantly to higher interest rates spreads in Ghana as the inflation coefficient has the right as expected and is significant at 5 per cent level. The estimated result additionally gives credence to the motives behind the mandate of Central Bank of Ghana regarding achieving and maintaining price stability in the country. On cost of operation, the estimated results indicated that higher cost of operations significantly leads to higher spreads as evidenced by the positive sign of the parameter of cost of operations variable which has the right sign as expected and also significant at 1 per cent level. Also, on provision for bad debt, the results suggested that higher provisions for bad debt lead to higher interest rate spreads though its coefficient was insignificant at 5 per cent level. This result confirms what the empirical literature postulates, thus explaining experience that as commercial banks make higher provisions for bad debt suggesting likelihood of credit default or potential build-up in non-performing loan portfolios, the higher will be spread gap (see Table 6).

Table 6: Estimated Results of the Interest Spread Model: The Broad Definition

Dependent Variable: SPREAD_COMPUTED_BY_AUTHO/100				
Method: Fully Modified Least Squares (FMOLS)				
Sample (adjusted): 2002Q1 2013Q4				
Included observations: 46 after adjustments				
Cointegrating equation deterministics: C @TREND				
Regressor equations estimated using differences				
Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
SCALE_OF_OPERATION/100	-0.000369	0.002528	-0.145953	0.8848
RISK_AVERSION_EQUITY_TO/100	0.156096	0.161268	0.967924	0.3395
PROV_FBD/100	0.000135	0.023332	0.005789	0.9954
OPERATIONAL_COST_TO_TOTA/100	0.978672	0.042720	22.90917	0.0000**
CREDIT_RISK(-4)/100	0.020223	0.030412	0.664956	0.5103
LOG(EXH(-3))	0.010076	0.019854	0.507515	0.6149
LOG(GDP_CIEA(-2))	-0.016797	0.025813	-0.650714	0.5194
INF(-3)	9.67E-05	0.000210	0.459762	0.6485
C	0.048309	0.112303	0.430167	0.6696
@TREND	0.000292	0.000929	0.314398	0.7550
R-squared	0.957180	Mean dependent var		0.054267
Adjusted R-squared	0.946474	S.D. dependent var		0.025775
S.E. of regression	0.005963	Sum squared resid		0.001280
Durbin-Watson stat	1.061520	Long-run variance		3.89E-05

Notes I: * and ** represent 5% and 1 % significance level

6. Conclusion

The study suggested that interest rate spread in Ghana remains one of the highest when compared to peer-countries across the globe and particularly, prevailing spreads in sub-regional economies. This is not a healthy development since it suggests high cost of doing business in the country as most private sector firms depend so much on bank credit to expand their production activities. While various interest rates responded to inflation dynamics, deposit rates remained unresponsive, thus widening the spread further. It was further observed that real deposit rate has remained negative over the years while at the same time lending rates and other rates in the market have firmed up strongly in line with developments and policy rate decisions in all the segments of the loanable markets. Also, the paper revealed that high interest rate spread in Ghana is determined by risk-aversion attitude of banks, the rate of inflation, the level of provision for bad debts, credit risk, exchange rate risk, cost of bank operations, scale of

bank operations and finally, the level of economic activities(GDP).

7. Brief Policy Dialogue and Some key Recommendations

The discussions above suggested that interest rate spread in Ghana remains one of the highest in Sub-Saharan Africa and this makes the country unattractive and uncompetitive to foreign direct investment as cost of doing business begins to skyrocket. The high cost of doing business also kills local initiatives and domestic firms find it difficult to stand on their feet as they become globally uncompetitive compared to their foreign counterparts. There is therefore the need to fashion out pragmatic policies aimed at reducing the high interest rate spread currently prevailing in the market as perceived by corporate bodies and the general business environment. Banks need to innovate and develop corporate strategies and capacities which aim at reducing their general costs of operation and other related overhead cost among others. The central bank in collaboration with the commercial banks should occasionally review the base rate formula of the banking industry to make it conform to best international standards and practices. As part of these studies, a survey of related research papers was conducted and key policy issues as discussed in various studies were reviewed.

The following are key policy recommendations when taking into consideration could potentially lead to reduction in interest rate spread in the country among others.

- *Achieving and sustaining Macroeconomic Stability:* Measures to reduce interest rates follow directly from the causal factors. It should be noted that macroeconomic stability remains critical to reducing the market's perceived risks for which it seeks compensation in high interest rates.
- *Fiscal Discipline:* Also, fiscal prudence is key in any attempt to reduce interest rates since excessive deficit financing leads to high interest rate regime as demand for loanable funds normally exceeds supply of funds in the money market, thus causing crowding out of the private sector.
- *Removal of Structural Weakness in the Banking Industry:* Policies aimed at reducing interest rate spread must first address the structural weaknesses in the banking industry. Despite the fast growth of the industry, competition remains relatively low, an indication that size alone may not be sufficient in generating competition. Primary among the structural weakness in the banking industry is the control of the market by few large foreign and domestic banks, though concentration in the industry has improved recently. There is the need for continuous restructuring in a manner that removes uncompetitive practices completely from the industry.
- *Improving Banking Sector Efficiency and Competition:* Coupled with the relatively low competition in the banking industry is the problem of bank's own high operational cost, including administrative cost, the cost associated with inadequate financial infrastructure, and high cost of administering numerous small deposits and lack of proper address system in Ghana. The establishment of the Credit Reference bureau and Collateral Registry was novelty idea which has reduced some of the frustrations that banks face.
- *Improving Banking Sector Supervision and Strong Policy Actions:* The central bank must act decisively to curb the high level of banks' lending rates and spreads, which cannot be justified on the basis of their cost, especially in light of their continued high profitability. An option will be to cap interest rates spreads at 10 percent initially to be reviewed as when the central bank deem necessary. The banks should be allowed to continually set their lending rates and deposit rates freely based on realistic assumptions and calculations in line with best international practices across the globe.

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Appendix A

Households					
Banks	Deposits	Base Rate	Vehicle loans	Mortgage loans	Other consumer credit
	Average Interest Rate	Percent	Annual Percentage Rate	Annual Percentage Rate	Annual Percentage Rate
Access Bank	8.47	20.19	28.51	28.51	28.51
Agricultural Development Bank	3.92	23.91	30.02	30.14	30.14
Bank of Africa	14.13	25.57	35.96	35.96	35.96
Bank of Baroda	13.89	10.61	28.89	28.89	28.89
Barclays Bank	4.99	15.43	32.26	32.26	32.26
CAL Bank	9.77	25.00	36.26	36.26	36.26
Ecobank	9.92	19.00	30.75	30.75	30.75
Energy Bank	5.67	20.00	35.41	35.41	36.57
Fidelity	11.09	26.55	29.04	29.04	29.04
First Atlantic Bank	12.77	27.00	31.16	31.16	31.16
Ghana Commercial Bank	9.27	21.76	27.30	27.30	27.30
Guaranty Trust Bank	15.39	18.02	26.00	26.00	26.00
HFC Bank	5.14	21.30	32.77	34.08	24.60
International Commercial Bank	7.67	21.01	23.04	23.04	23.04
Merchant Bank	5.96	25.27	29.21	29.21	29.21
National Investment Bank	8.93	20.12	35.00	35.00	35.00
Prudential Bank	10.27	25.05	26.64	26.64	25.17
Sahel-Sahara Bank (BSIC)	7.84	25.41	29.54	29.54	29.66
SG-SSB	5.42	18.00	28.28	28.28	26.30
Stanbic Bank	11.16	16.87	28.12	28.12	28.12
Standard Chartered Bank	3.95	16.66	24.18	25.18	25.67
UniBank	9.50	24.28	33.20	33.20	33.20
United Bank for Africa	11.02	22.53	28.63	28.63	27.63
UT Bank	8.02	25.31	30.23	30.23	31.23
Zenith Bank	11.09	18.34	29.09	29.09	29.09

Enterprises						
Banks	Deposits	Base Rate	Agriculture	Manufacturing	Commerce	Construction
	Average Interest Rate	Percent	Annual Percentage Rate	Annual Percentage Rate	Annual Percentage Rate	Annual Percentage Rate
Access Bank	8.47	20.19	24.46	24.46	20.46	26.97
Agricultural Development Bank	3.92	23.91	26.90	30.14	30.14	30.14
Bank of Africa	14.13	25.57	34.53	34.53	38.02	34.53
Bank of Baroda	13.89	10.61	22.23	22.23	24.52	22.23
Barclays Bank	4.99	15.43	24.55	24.55	24.55	24.55
CAL Bank	9.77	25.00	36.26	36.26	36.26	36.26
Ecobank	9.92	19.00	23.09	23.09	25.37	23.09
Energy Bank	5.67	20.00	33.58	34.96	33.79	23.38
Fidelity	11.09	26.55	26.77	26.77	26.77	26.77
First Atlantic Bank	12.77	27.00	30.08	30.08	30.08	30.08
Ghana Commercial Bank	9.27	21.76	27.30	27.30	27.30	27.30
Guaranty Trust Bank	15.39	18.02	24.50	24.50	22.95	26.50
HFC Bank	5.14	21.30	32.16	30.67	30.67	30.67
International Commercial Bank	7.67	21.01	25.93	25.93	25.93	25.93
Merchant Bank	5.96	25.27	30.14	30.14	30.14	30.14
National Investment Bank	8.93	20.12	35.00	35.00	35.00	35.00
Prudential Bank	10.27	25.05	26.64	26.64	26.64	26.64
Sahel-Sahara Bank (BSIC)	7.84	25.41	29.54	29.54	29.54	29.54
SG-SSB	5.42	18.00	32.10	32.10	32.10	32.10
Stanbic Bank	11.16	16.87	28.12	28.12	28.12	28.12
Standard Chartered Bank	3.95	16.66	23.38	23.38	23.38	23.38
UniBank	9.50	24.28	27.75	33.25	31.20	36.25
United Bank for Africa	11.02	22.53	29.50	27.02	29.21	28.30
UT Bank	8.02	25.31	34.50	33.50	33.50	33.50
Zenith Bank	11.09	18.34	29.09	29.09	29.09	29.09

NOTE: The APR is the true interest rate banks and non-bank financial institutions charge the public on loans and advances. It reflects the true cost of borrowings and includes charges and commissions levied by banks. Average interest paid on deposits is the average interest paid by banks on deposits. These rates are also available on the Bank of Ghana website at www.bog.gov.gh