

IMPACT OF FINANCIAL LIBERALIZATION ON FINANCIAL DEPTH IN IRAQ

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ABSTRACT. This paper examines the Mackinnon-Show hypothesis i.e. financial liberalization promotes financial depth in case of Iraq. Iraq launched a comprehensive program of economic and financial liberalization since 2003. Thus, this paper aims to answer the key question that “is financial liberalization stimulated the financial depth in Iraq?”. By applying the ARDL Autoregressive Distributed Lag model on quarterly data during the period 2005- 2010, the paper finds that the liberalization of interest rates as a proxy of financial liberalization stimulated the financial depth only in the long-run in the case of Iraq.

1. INTRODUCTION

The financial system plays a vital role in the whole process of economic development. Its primary task is to channel the scarce funds from those who save to those who borrow for consumption and investment¹. By making funds available for lending and borrowing, the financial system facilitates economic growth. This indicates that the banks, and not savers, who hold a key position in the process of economic growth (Studart, 1995, p1). It is undeniable that both technological and financial innovations have a direct link on economic growth since large technological innovations require large investments that are financed by banks and other financial institutions.

Since their independence, the developing countries have launched different policies to make their financial systems play a key role in the whole process of economic development and they continue to do so. Prior to the 1970s, repressive financial policies prevailed in the developing countries. These policies were highly influenced by the Keynesian thoughts which supported the repressing of the financial sector, especially through interest rate controls (Beim and Calomiris, 2001, p69). However, the financial repression policies as a means to promote financial development and economic growth were criticized by the early works of (McKinnon, 1973) and (Shaw, 1973). They argued that the poor performance of investment and growth in the developing countries was due to the financial repression policies, such as fixing of interest rate ceiling, imposition of high reserve requirements, and quantitative restrictions on credit allocation. These constraints were the main causes that lead to low savings, credit rationing and low investment. Instead, they propounded the financial liberalization thesis which involves freeing the interest rate controls, lowering the reserve requirements, reduction of government interference in banks' lending decisions, and free entry and exit of financial institutions.

Received by the editors September 13, 2011. Accepted by the editors December 11, 2011.

Keywords: financial liberalization, financial depth, ARDL approach for cointegration, Iraq.

JEL Classification: E44; C33; O53.

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This paper is in final form and no version of it will be submitted for publication elsewhere.

¹In addition to matching savers investors, the financial institutions pursue several functions such as provision of payments services, generation and distribution of information, allocation of efficient credit, pricing, pooling and trading of risks and lastly, increasing liquidity of assets (Todaro and Smith , 2003, pp733-734).

After decades of wasted development efforts, the developing countries started rethinking about their strategies. Liberalization of the financial system was one of the main agendas that these countries undertook to ensure the development of their financial systems as a key to higher levels of economic growth. Through financial liberalization, many countries have nurtured their economic growth; while, many others got frustrating results and had to face financial crises, thus retarding their economic growth.

Iraq has liberalized its financial system since 2003. Therefore, the objective of this paper is to test the impact of interest rate deregulation as a proxy of financial liberalization on financial depth in Iraq.

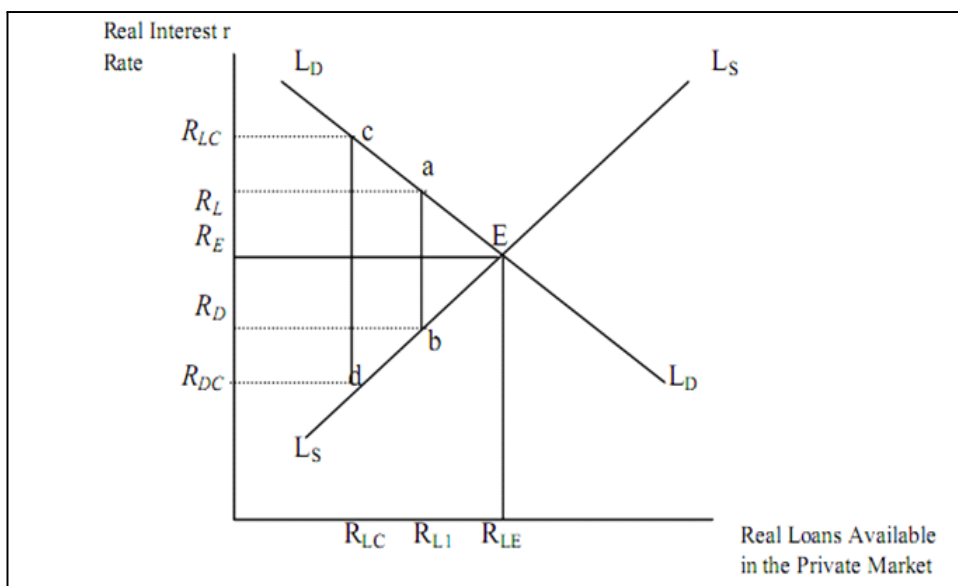
In section 1, the theoretical foundation of financial liberalization hypothesis is discussed. Section 2, reviews the findings of previous studies related to effect of financial liberalization on financial depth. The data and research methodological framework used in this study is presented in section 3. The results interpretation presented and section 4. Conclusions are presented in section 5.

2. FINANCIAL LIBERALIZATION HYPOTHESIS

The familiar McKinnon-Shaw approach to the role of finance in economic development argued that financial depth and economic performance in many developing countries is low due to government intervention in the financial system. The common practice of repressing interest rates at below market determined levels is contended be particularly damaging for several reasons. When interest rates are fixed at low levels, there is little incentive for economic units to hold surplus in the form of financial assets. In addition, the fear of expected persistent inflation and devaluation of the currency leading to capital flight, which discourages savings. Thus the supply of investible funds will be limited. Such controls also mean that the interest rate cannot be used as a mechanism to ration credit and distinguish between investment projects of different yields.

The theoretical negative effect of financial repression policies on financial development is well explained by (Beim and Calomiris, 2001, pp 47-59). Figure 1 illustrates the supply and demand graph for real loans as a function of real interest rates (Beim and Calomiris, 2001, p 48).

Figure 1: Effect of Interest Rate Control on Financial Depth



Source: Beim, David O. and Calomiris, Charles W., 2001, *Emerging Financial Markets*, McGraw-Hill Irwin, Singapore, p 48.

In Figure (1) the demand curve for real loans (L_D) presents the amount of loans adjusted for changes in the price level, which credit-worthy borrowers want as a decreasing function of real interest rate on loans (R_L). The loan-supply curve (L_S) shows the quantity of real loans that savers are willing to provide as an increasing function of real interest rate on deposits (R_D). E represents the equilibrium point at which the market would clear, where the loan rate equals the deposit rate and also where the loan supplied equals the loan demanded at the point (R_E).

In reality, bank lending will not be able to reach point E. Banks must earn sufficient spread to recoup their operating and other costs. Profit is the main determinant of a bank to be in business. The vertical line (a-b) represents the amount of the requisite spread ($R_L - R_D$). The need to channel some of the bank profit into payments for overheads thus reduces the return that depositors can receive, and shrinks the volume of real loans from (R_{LE}) to (R_{L1}).

The imposition of a deposit interest rate ceiling at (R_{DC}) reduces the available supply of deposits by constraining the ability of banks to attract deposits. In order to equate the new (lower) loan amount supplied with the amount demanded by borrowers, the size of the spread between deposit and loan rates must be hiked. This implies an enlargement of the vertical line separating the two rates, which is represented by line (c-d). Thus, an interest rate ceiling not only lowers the real return (R_{DC}) payable to savers (depositors), but also reduces the volume of loanable funds and thereby enabling higher rates to be charged to private borrowers.

Since the spread is enlarged from (a-b) to (c-d), due to interest rate ceiling, banks become more profitable, but at a lower level of business, as the R_{LE} shifts to R_{LC} . Furthermore, banking development is dampened at R_{LC} point due to shrinkage in supply and demand for real loans.

In the same vein, (Kitchen, 1988, p 82) pointed out that if bank credit is scarce or rationed, then a firm's capacity utilization may be restricted, because it cannot obtain credit to finance its working capital, which may restrict its output. Thus, Kitchen argued that liberalization of interest rates leads to greater availability of credit, which may have the effect of increasing the utilization of the existing capital stock.

The opponent of financial repression thesis such as (Shaw, 1973), (McKinnon, 1973), (Roubini and Sala-i-Martin, 1992), (King and Levine, 1993 a,b) and (Demetriades and Luintel, 1996, 1997) have argued that financial repression polices undermine both the financial development and economic growth. In this regard, they suggested thesis of financial liberalization to re-establish a sophisticated financial system to spur economic growth. A policy of financial liberalization resulting in higher real interest rates is therefore supported in order to institute a virtuous cycle of increasing savings, improved investment efficiency and higher rates of economic growth.

However, (Stiglitz, 1993) has put forth his views against the financial liberalization thesis. He argued that financial markets are significantly different from other markets and are more prone to failure. He then goes on to discuss seven key manifestations of financial market failure. He is of the view that some amount of financial repression may be beneficial until a very advanced stage of the development process has been achieved.

In the early of 1980s, there was an assault on the McKinnon-Shaw school led by the Neostructuralists such as (Edward Buffie, 1984), (Akira Kohsaka, 1984), (Lance Taylor, 1983), and (Sweder van Wijnbergen, 1982). The Neostructuralists models predict the opposite effects of financial deepening and liberalization to those derived from the McKinnon-Shaw models via using a markup pricing framework, a cost-push inflation model, and Keynesian adjustment mechanisms. The authors such as (Buffie, 1984), (Kohsaka, 1984), (Taylor, 1983), and (van Wijnbergen, 1982) conclude that, in practice, financial liberalization is likely to reduce the rate of economic growth by reducing the total real supply of credit available to business firms².

²For more illustrations see (Fry, 1988, pp110-122).

3. LITERATURE REVIEW

The recommendation made by (Shaw, 1973) and (McKinnon, 1973), towards liberalization of the financial system as means to improve the financial depth and economic growth, has been adopted by many developing countries of the world since the 1970s. Most of the Arab countries started liberalizing their financial systems since the 1990s (Nashahibi et al, 2001, p 63). The countries that adopted the financial liberalization thesis, attempted to increase the role of market forces in the determination of interest rates, the allocation of credit and overall scale of the financial intermediation. These efforts sought to mobilize more of the national savings in the form of financial assets (deposits) and making efficient allocation of financial resources for more productive investments.

However, the outcomes of financial liberalization among countries have had varied results – from disastrous to very successful transitions, i.e. to a more efficient and market-oriented financial systems. Differences in the financial structure, institutional base, the initial link between the financial sector and the real sectors, the speed and timing of liberalization process and the macroeconomic environment have played a significant role in the implementation of liberalization efforts see for instance, (Pill and Pradhan, 1995) , (Fry, 1997), (World Bank, 2005), and, (Kabir and Hoque, 2007, pp 435-36).

(Kabir and Hoque, 2007) examined the impact of financial liberalization on financial development and economic growth in Bangladesh. The results of their study revealed that despite the extensive financial development in post-liberalization period, financial and monetary variables have not fully contributed to the economic growth. (Laurenceson and Chai, 1998) examined the influence of financial liberalization on financial depth in China during the period 1978-1996. By applying the Autoregressive Distributed Lag (ARDL) model, the study found that financial liberalization led to financial deepening in China. (Habibullah and Eng, 2006) investigated the causality between financial development and economic growth of 13 Asian developing countries over the period 1990-1998. The study found that, among other things, financial liberalization promoted financial development and economic growth of the sampled countries. A study by (Galindo et al, 2007) tested the crucial question on whether the financial liberalization improves the allocation of investment in 12 developing economies. The results showed positive effects of financial liberalization on the efficiency of the resources allocation. (Shrestha and Chowdhury, 2005) tested the impact of financial liberalization on savings and investment for Nepal over the period from 1970 to 2003. Based on the ARDL model, the result of this study revealed that liberalization of interest rate has significant positive effect on both savings and investment in Nepal. (Fry, 1997) pointed out that financial repression reduces economic growth. This result was derived by examining a sample set of 16 developing countries over the period 1970-1988. Similar to the Shaw-McKinnon approach, then he has suggested financial liberalization as a means to increase economic growth. (Pill and Pradhan, 1995) reported that the outcomes of financial liberalization in some African countries (i.e. Gambia, Ghana, Kenya, Madagascar, Malawi, and Zambia) were less than the results that were obtained in the case of other Asian countries (i.e. Indonesia, Korea, Malaysia, Philippine, Sri Lanka, and Thailand). The development of financial systems in the African sampled countries as measured by (M2/GDP) did not change in the post-liberalization period. This is because the necessary and appropriate preconditions, such as a stable macroeconomic climate, institutional and financial development, were not favorable in those African countries for the success of financial liberalization as compared to the Asian countries. (Odhiambo, 2006) examined the financial liberalization influence on the savings level in South Africa. The study found, among other things, that the liberalization of interest rate may ambiguously affect domestic savings. (Jankee, 2006) investigated the effect of financial repression policies on the financial development in Mauritius over the period from 1970 to 2000. The study showed that banking controls had inhibited financial sector development. All this, therefore, suggest the pursuit of financial liberalization to achieve higher rate of economic growth. (Obhiambo, 2005) also examined the effect of financial liberalization

on financial deepening in three sub-Saharan African countries, viz. Kenya, South Africa and Tanzania. Using the co-integration and vector error-correction model, the study found positive effect of financial liberalization on the financial development in the sample countries. Recently, (Fowowe, 2008) has investigated the effect of financial liberalization on economic growth in Nigeria over the period from 1972 to 2002. The study pointed out that, though financial liberalization could cause financial fragility in the short-term, in the long-term, it will improve economic performance. For Iraq (Khalaf and Sanhita, 2009) examined the effect of financial repression policies (1970-2002) and financial liberalization policies (2003-2007) on financial development. They found that neither financial repression policies nor the financial liberalization policies promoted financial development in Iraq during the period from 1970 to 2007.

4. MODEL, DATA SOURCE AND METHODOLOGY

4.1. Model and Data Sources. This study aims to assess the impact of the financial liberalization on the financial depth in Iraq. Based on the literature³, we estimate the following model.

$$DEEPTH = f(RGDP, RIR) \quad (4.1)$$

Financial depth is proxied with the variable DEEPTH, which is defined as broad money (M2), less currency in circulation, divided by the nominal GDP. Without deducting currency in circulation, we primarily have a measure of monetization rather than financial deepening. This measure is frequently used in the analysis as a proxy of financial development, particularly in the developing countries, where considerable amount of M2 is in the form of currency in circulation outside the banks. Therefore, a rising ratio of M2/GDP may reflect a more extensive use of currency rather than an increase in the volume of bank deposits. Hence, currency outside the purview of banks is excluded from the measure, because it is not intermediated through the banking system (see Demetriades and Hussein, 1996, p 395) and (Xu, 2000, p 334).

The economic growth (RGDP) is measured as the real GDP. This variable is widely used in the literature as a proxy for the level of economic growth of an economy see (Majid and Mahrizal, 2007), (Kabir and Hoque, 2007), (Fowowe, 2008), and, (Odhiambo, 2005). This variable is expected to have a significant positive effect on financial deepening. Robinson argued that financial development follows economic growth, and articulated this causality argument by suggesting that “where enterprise leads finance follows” (Robinson, 1952, p 86).

Real interest rate (RIR) measures the nominal interest rate on one year time deposits deflated by the prevailing inflation rate. This proxy measures the indirect effect of financial liberalization on financial depth (Laurenceson and Chai, 1998, p 404). It expected to have a positive and significant effect on financial deepening in Iraq, which reflects the MaKinnon-Shaw hypothesis.

The data about GDP, inflation, general price index, deposits, and interest rates are obtained from various issues of the Central Bank of Iraq Annual Reports and Annual Statistics Abstract of Ministry of Planning. Quarterly data used for the period from 2005 to 2010 for two reasons: The first is that Iraq liberalized the financial system since 2003. The second is that the yield of financial liberalization could be materialized only after passing sometimes. All the variables in the data set are expressed in natural logarithms.

4.2. Methodology. The methodology of this study is designed to assess the impact of the financial liberalization on the financial deepening in Iraq. In this study, we utilize the Autoregressive Distributed Lag (ARDL) approach to cointegration as outlined by (Pesaran and Pesaran, 1997) and (Pesaran and Shin, 1998). This approach examines the hypothesis that financial liberalization leads financial depth as proposed by (McKinnon, 1973) and (Shaw, 1973). The ARDL model has been chosen here because it has numerous advantages. Firstly, it can be applied irrespective of whether the individual repressors are integrated of the order I(0) or I(1),

³For more information about the literatures see for instance: (Demetriades and Luintel, 1996), (Demetriades and Luintel, 1997), (Laurenceson and Chai, 1998) and (Jankee, 2006).

regardless of stationarity. Secondly, the ARDL model takes sufficient number of lags to capture the data generating process from a general to specific modeling framework (Laurenceson and Chai, 2003). Thirdly, the ARDL approach yields superior estimates of long-run coefficient, and, the diagnostic tests of the estimated equation are more reliable (Gerrard and Godfrey, 1998, p 235) and (Laurenceson and Chai 1998, p 405). Fourthly, from the ARDL model, one can derive a dynamic error correction model (ECM) through a simple linear transformation (Banarjee et al, 1994, pp 50-52). The ECM also helps us to measure the short-run relationship among the model's variables. Finally, the ARDL model is a more appropriate measure in the case of a smaller sample. Since the sample size of our study is limited to 24 observations, it provides more motivation for the study to apply the ARDL approach for analysis.

Based on Equation (4.1), we establish our ARDL model as follows:

$$\begin{aligned} \Delta LDEEPTH_t = & \alpha_0 + \sum_{i=1}^p \beta_1 \Delta LDEEPTH_{t-i} + \sum_{i=1}^p \beta_2 \Delta LRGDP_{t-i} + \\ & \sum_{i=1}^p \beta_3 \Delta LRIR_{t-i} + \lambda_1 LDEEPTH_{t-1} + \lambda_2 LRGDP + \lambda_3 LRIR_{t-1} + \mu_t \end{aligned} \quad (4.2)$$

where Δ = 1st difference of a variable,

L indicates that the data set are expressed in natural logarithms,

α_0 is a constant,

p is a maximum lag order,

β_1, \dots, β_3 represent the short-run coefficients (error correction dynamic),

$\lambda_1, \dots, \lambda_3$ correspond to the long-run relationship,

i time trend, and,

μ_t is the white noise error.

The implementation of the ARDL approach involves two stages. First, the existence of the long-run nexus (cointegration) between variables under investigation is tested by computing the F-statistics for analyzing the significance of the lagged levels of the variables. (Pesaran, Shin, and Smith, 1999) and (Narayan, 2004) have provided two sets of appropriate critical values for different numbers of regressors (variables). This model contains an intercept or trend or both. One set assumes that all the variables in the ARDL model are of $I(0)$, and another assumes that all the variables are $I(1)$. If the F-statistic lies above the upper-bound critical value for a given significance level, the conclusion is that there is a non-spurious long-run level relationship with the dependent variable. If the F-statistic lies below the lower bound critical value, the conclusion is that there is no long-run level relationship with the dependent variable. If it lies between the lower and the upper limits, the result is inconclusive. The general form of the null and alternative hypotheses for the F-statistic test is as follows:

$$H_0 : \lambda_1 = \lambda_2 = \lambda_3 = 0$$

$$H_1 : \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq 0$$

Secondly, if the cointegration between variables is identified, then one can undertake further analysis of long-run and short-run (error correction) relationship between the variables.

5. ESTIMATION AND PRESENTATION OF RESULTS

5.1. Unit-Root Tests. In order to test for the stationarity of the data used in this study, the Augmented Dickey-Fuller (ADF) test is used. This test examined the null hypothesis that the considered variable has a unit root (non-stationary) versus the alternative hypothesis that the variable is stationary. The ADF test results presented in Table I which clearly reveal that all the variables under investigation are integrated at order 1, $I(1)$, i.e., they become stationary

after first differencing. Thus, these data are applicable to be treated by Johansen-Juselius cointegration test.

Table I: Unit Root Test Results

ADF			
Variables	Levels	1st Differenced	Status of Integration
LDEPTH	-2.197	-3.164**	I(1)
LRGDP	-1.977	-2.989***	I(1)
LRIR	-2.331	-6.528*	I(1)

Notes :

1. The results obtained by using the EViews 7 package.
2. Critical values follow the MacKinnon (1996) one-sided p-values.
3. One, two and three asterisks indicate statistical significance at 1%, 5% and 10% levels respectively.

5.2. Cointegration Test.

5.2.1. *Johansen-Juselius Test of Cointegration.* Given results of the unit root test, we proceed to Johansen-Juselius cointegration test on one period of lag and the results of the cointegration test are given in Table II.

Table II: Johansen-Juselius Test of Cointegration

Null Hypothesis	Test Statistic		Critical Value 5%	
	Trace	Max	Trace	Max
$r = 0$	46.33964**	29.519**	29.79707	21.13162
$r \leq 1$	16.82061**	15.68152**	15.49471	14.26460
$r \leq 2$	1.139087	1.139087	3.841466	3.841466

Notes :

1. The results obtained by using the EViews 7 package.
2. r stands for the number of cointegration vectors.
3. *, **, and *** denoted significantly at 1% , 5%, and 10% level of significance respectively.

From the test we find evidence of cointegration among the variables based on the trace statistics and Max-Eigen statistics values. More specifically, the test suggests that there are at least two cointegration vectors or long-run relationship among the variables. Therefore, the null hypothesis of no cointegration between the variables is rejected.

5.2.2. *ARDL Bound Test of Cointegration.* The cointegration test under the ARDL bounds framework involves the comparison of the F-statistics against the critical values, which are generated for specific sample sizes. This test actually is very sensitive to the number of lags used for each variable (Bahmani-Oskooee and Brooks, 1999). In this study lags up to two periods have been imposed on each variable. The calculated F-statistics for the three variables of the study are reported in table III.

Table III: ARDL Approach to Cointegration: Result of F-Test

Estimated F-statistic	95% Lower Bound	95% Upper Bound	90% Lower Bound	90% Upper Bound
5.0446	4.5225	5.7491	3.5725	4.6254

Note: The results obtained by using Microfit 5 package.

Table III shows that there is long run relationship between the variables, since the estimated F-statistics is greater than the upper bound at 90% level. Hence the null hypothesis of no cointegration between the variables is rejected again.

5.3. **Long-Run and Short-Run Estimation of ARDL model.** After having found the long-run relationship between the variables, we move on to the second stage of the analysis. At this point we estimate the long-run and the short-run coefficients. The results of our ARDL model are presented in Tables IV and V.

Table IV: Long-Run Estimates of ARDL Model

Regressor	Coefficient	Standard Error	T-Ratio	p-value
LRGDP	-1.020	0.044	-22.772	[0.000]
LRIR	0.601	0.182	3.294	[0.005]
CON	9.584	0.283	33.830	[0.000]

Notes :

1. The results obtained by using the Microfit 5 package.
2. Dependent variable is LDEEPTH and ARDL model (1,1,2) is selected based on Akaike Information Criterion.

Table IV present the results of the long-run relationship between the dependent variable (LDEEPTH) and the other regressors. The independent variable real interest rate (LRIR) has the expected positive sign and statistically significant at the 5% level. This means that real interest rate on deposit is key determinant of financial depth in Iraq. The coefficient of LRIR is (0.601), which is positive and statistically significant. It suggests that in the long-run, an increase of one per cent in the real interest rate on deposits is associated with an increase of (0.601) in the financial deepening in Iraq. This reflects the importance of interest rate deregulation to attract the surplus funds into banking system of Iraq in the long-run.

Meanwhile, the independent variable real GDP expressed unexpected negative sing. This means that the real GDP has no significant effect of the financial deepening in Iraq in the long-run. We should not surprise of this result in the context of Iraq. The most increase in the real GDP in Iraq was via the increase in the export volume of the oil as well as the raise in the oil revenues. The razed infrastructure aftermath the USA invasion in 2003 and the unrest political situation after 2003 reduced the contribution the productive firms in the GDP. This constrained the real GDP to spur the financial depth in Iraq. The same result also found by (Khalaf and Sanhita, 2009, p395).

Table V : Error-Correction and Short-Run Estimates

Regressor	Coefficient	Standard Error	T-Ratio	p-value
Δ LRGDP	-1.012	0.023	-42.478	[0.00]
Δ (LRIR)	0.093	0.054	1.723	[0.00]
Δ (LRIR1)	-0.125	0.045	-2.765	[0.95]
Δ ECM(-1)	-0.487	0.142	-3.427	[0.02]
$R^2 = 0.996$		R-Bar-Squared = 0.995		
S.E. of Regression = 0.14336		F-stat. F(4,17) 1149.3[0.000]		

Notes :

1. The results obtained by using the Microfit 5 package.
2. ECM - ARDL model (1,1,2) is selected based on Akaike Information Criterion.

Table V presents the results of error correction of the ARDL approach and the short-run relationship of the variables as well. The results show that the real interest rate has contradictory effect on the financial depth in Iraq during the short-run. It is totally contrasted from what we have seen in long-run status (see table IV). This indicates that the real interest rate does not play a key role in promote the financial depth in Iraq. Table V also confirms that the real GDP does not influence the financial depth in the country in the short-run. This fact is associated with the thesis of (Lucas, 1988). He stated that the economic growth does not promote financial development. (Khalaf, 2009) and (Khalaf and Sanhita, 2009) found the same result that economic growth does not stimulate financial development in Iraq.

Error correction model (ECM) used to confirm the existence of a stable long-run relationship and cointegration relationship among variables. Table V shows that the coefficient of the error correction term ECM(-1) is statistically significant with the negative expected sign. This confirms the existence of a stable long-run relationship between the variables. The coefficient of ECM(-1) is (-0.487) per cent, which suggests a fast adjustment process. Nearly 49 per cent

of the disequilibrium of the previous quarter's shock adjusts back to the long run equilibrium in the current quarter.

Figure 2: Plotting of CUSUM Statistics for Stability Test

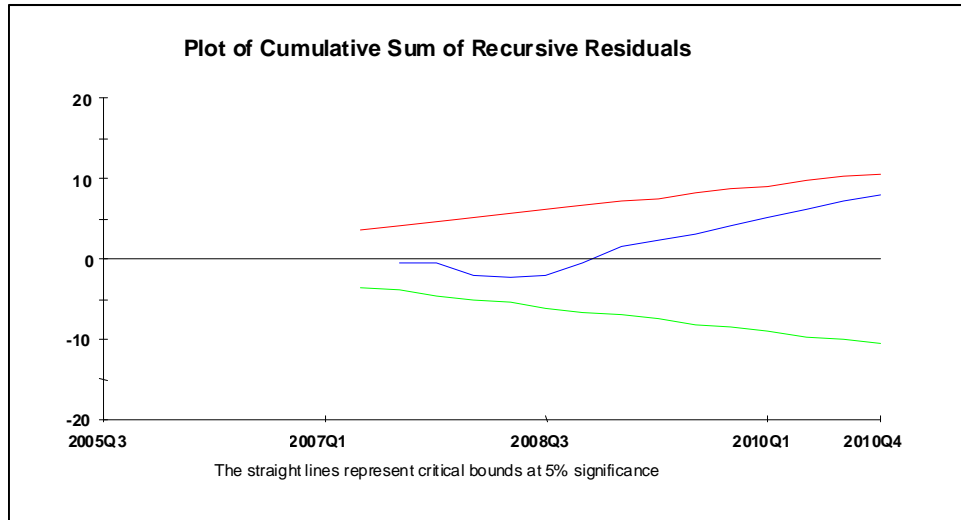
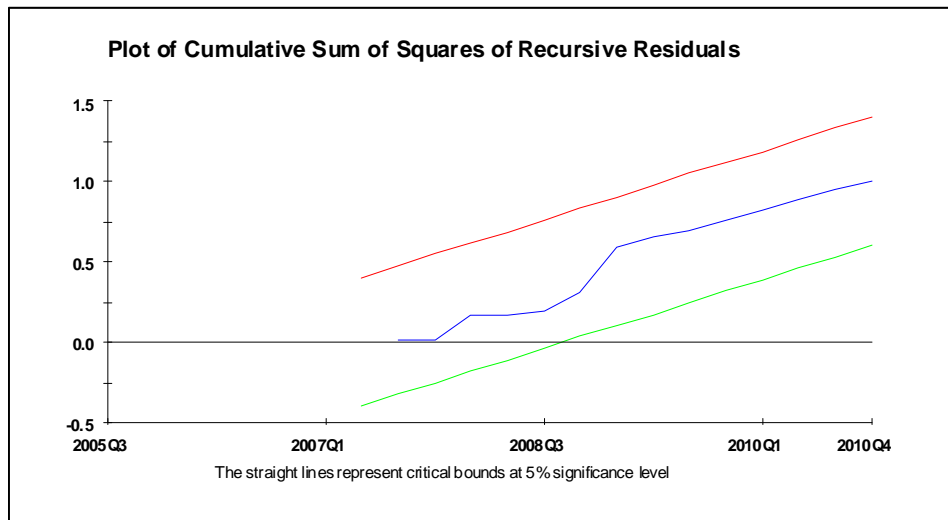


Figure 3: Plotting of CUSUMSQ Statistics for Stability Test



Finally, the structure stability of the long-run and short-run relationships of the ARDL model for the entire period is examined by the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUMSQ) of the recursive residual test which proposed by (Brown et al, 1975). The null hypothesis of these tests is that the regression equation is correctly specified. These two tests are presented in figure 2 and 3. The pair of straight lines in each figure indicates the 5 per cent significant level and if the plotted CUSUM and SUSUMSQ graphs remain inside

the straight lines the null hypothesis of correct specification of the model can be accepted. Otherwise, the null hypothesis is rejected and it can be concluded that the regression equation is miss-specified. The two figures reveal that the plots of CUSUM and SUSUMSQ stay within the lines, and, therefore, this confirm the equation 1 is correctly specified and stable.

6. CONCLUSION

The objective of this paper is to evaluate the effect of financial liberalization on the financial deepening in Iraq. Empirically, we find that the real interest rate as a proxy of financial liberalization has stimulated the financial depth in Iraq in the long-run. This implies that the deregulation of interest rate played a key role in attract more savings to be channeled into the banking system in the form of deposits. Meanwhile, this leads to increase of the financial depth in Iraq which measured by broad money (M2), less currency in circulation, divided by the nominal GDP. This finding is in association with the MaKinnon-Shaw thesis which argued that financial liberalization increases financial depth. However, in the short run, the real interest rate was not statistically significant. This can be interpreted as in the short- run the liberalization of interest rate could not promote savings (bank deposits). In Iraq the savings (bank deposits) were stimulated by the raise of salaries and wages aftermath USA invasion of 2003 rather than the interest rate (Khalaf and Sanhita, 2009). To ensure sustain financial development in Iraq some actions need to be taken by the policy makers such as controlling of inflation rate, maintain stable exchange rate, and encourage the investment context in the country.

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