

Interest Rate Liberalization: Motivations and Requirements

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Résumé:

Cet article décrit les motivations et les prescriptions pour la libéralisation des taux d'intérêt dans les pays en développement. Il commence par la discussion des justifications traditionnelles de la libéralisation des taux d'intérêt, puis fournit une partie de la preuve empirique. Il aborde ensuite une série de conditions préalables pour la réussite de cette libéralisation. La conclusion de l'analyse est que la libéralisation des taux d'intérêt est susceptible d'être en seconde ordre d'importance après le développement des institutions financières et monétaires dans les pays en développement. Un accent sur les réformes institutionnelles plutôt que la libéralisation des taux d'intérêt peut rendre les pays en développement à être en meilleure santé et moins fragiles aux crises qu'on a vécu au cours de ces dernières années.

Mots Clés: La répression financière, la libéralisation des taux d'intérêt, la libéralisation financière.

Abstract: This paper describes the motivations and requirements for interest rates liberalization in developing countries. It begins by discussing the traditional justifications for interest rate liberalization, and then provides some of the empirical evidence. It then discusses a range of prerequisites for successful interest rates liberalization. The conclusion from the analysis is that the interest

rates liberalization is likely to be of second order importance after the development of good, financial, and monetary institutions in developing countries. A focus on institutional reforms rather than on the interest rate liberalization may encourage developing countries to be healthier and less prone to the crises that we have seen in recent years.

Keywords: Financial Repression, Interest Rates Liberalization, Financial Liberalization.

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Introduction

Academic economists and practitioners have long debated over the effects of interest rates liberalization on growth. The removal of restrictions on interest rates has on some occasions been welcome as a growth opportunity and in others blamed for triggering financial instability and crises. This debate has addressed theoretically the mechanism through which interest rates liberalization affects growth.

The theoretical literature proposes various mechanisms through which interest rate liberalization may affect economic performance. In a standard neo-classical framework, opening international capital markets generates capital flows from capital abundant towards capital scarce countries, thereby affecting growth in the poor countries through acceleration in the convergence process.

All of these models support the view that interest rates liberalization affects positively economic performance. However, in a country characterized by market imperfections and weak institutions, financial integration could open the door to speculation, misallocation of capital and financial instability, thereby leading to bad economic outcomes.

In the earlier literature on the subject, McKinnon [1973] and Shaw [1973] posited that the removal of interest rates ceilings and other government regulations which prevent the competitive operations in the market for funds will be beneficial to developing countries. With higher interest rate comes higher savings and investments which contribute to economic growth on the one hand, and a true reflection of scarcity of capital on the other. Allocative efficiency of capital is also enhanced, thereby enabling the economy to grow more quickly. All these place the thrust of monetary policy on interest rate deregulation.

This paper is organized as follows. Section I discusses some basic relationships and gives a short review of the McKinnon-Shaw argument for interest rates liberalization policy, and reviews the empirical literature on the relationship between interest rates liberalization and economic growth in developing countries. Section II discusses the prerequisites for successful interest rates liberalization. Section III provides an overview of Algeria's financial deregulatory process since the early 1990s and investigates the effects of interest rates liberalization on the structure of the banking system, behavior of financial intermediaries and some financial indicators.

I. Motivations and justifications for Interest Rate Liberalization

An important reason why so many developing countries have liberalized their interest rates in recent years is that there has been a growing consensus, particularly among central bankers and even in the public at large, that positive real interest rates and price stability should be the primary or overriding long-term goal of economic growth. This consensus has emerged from economic research especially the works of McKinnon [1973] and Shaw [1973] and actual economic events over the last four decades.

The rationale for pursuing real interest rate as the primary long-term goal for economic growth rests on two basic propositions: First is that there is a systematic inverse relation between growth and several measures of financial repression*. Second, is that positive real interest rate on deposits in the long run promotes a higher level of saving and investment and more rapid economic growth. The corollary of these two propositions is that real interest rate is the appropriate overriding, long-run goal of economic growth because it will increase saving and both the real volume and productivity of investment in developing countries.

Forty years ago, both the public and the majority of the economics profession supported a so-called Preferential interest rate policy; i.e., the low interest rate would promote investment spending and economic growth, through reducing the rate of return on financial assets, and inducing a shift to investments in «productive» assets in developed and developing countries alike, according to the Keynesian and neo-classical theories.¹

As a result, much of the economic policymakers in developing countries frequently adopted policies of low interest rates and extensive direction of credit severely as a way of promoting economic growth, and as a policy to fund government fiscal imbalances and subsidize priority sectors, by

* - Financial repression is low and administered interest rates, domestic credit controls, high reserve requirements and concessional credit practices. It is also associated with negative real interest rates and the choice of a high inflation tax.

¹ - Lazaros E. Molho, Interest Rates, Saving, and Investment in Developing Countries, A Re-examination of the McKinnon-Shaw Hypotheses, Staff Papers- IMF, vol.33 No. 1, 1986, p 90.

forcing financial institutions to pay low and often negative real interest rates. Depending on the following theoretical framework and analytical:²

First, the government needs to impose anti usury laws thereby intervening in the free determination of interest rates, because lowering the interest rate could increase the expected quality of borrowers, and this effect would be even greater if it were assumed that the government had some positive selection capabilities.³

Second, the control strict (supervision) and prudential regulation of the banking system would give the monetary authorities a better control over the money supply and inflation.

Third, the governments knew better than markets or private banks, what the optimal allocation of savings was or what kind of investments were more or less desirable from a social perspective.

Fourth, financial repression was identified with interest rates below market rates which reduced the costs of servicing government debts. It also increases firm equity because it reduces the cost of capital, leading to investments with higher expected returns.

McKinnon [1973] and Shaw [1973] challenged the economic growth argument, however, arguing instead that high yielding instruments may be crowded out of the market by distortions introduced by financial repression, creating a false preference for capital intensive investment, and discouraging savings. They argued that raising interest rates to market-clearing level increases the amount people are willing to hold as financial assets by decreasing the holdings of non-financial assets such as cash, gold, commodities, land, etc. Thereby, the domestic financial system is able to extend more loans to the investors and hence the equilibrium rate of investment increases. This effect is further enhanced if the cost of intermediation by banks is kept low by having a competitive banking structure and minimum taxation on financial intermediation.

Because low interest rates are insufficient to generate savings, and even reduce savings especially if substitution effects dominate the income effect

² - Nouriel Roubini and Xavier Sala-i-Martin, Financial Development, the Trade Regime, and Economic Growth, NBER, Working Paper No. 3876, October 1991. p 11.

³ - Joseph E. Stiglitz, The Role of the State in Financial Markets, The International Bank for Reconstruction and Development , The World Bank, 1994, p 40.

for households, as well as increasing the desired level of investment but they also reduced the actual level of investment, owing to the reduction in savings.⁴ As that below equilibrium interest rates lead to capital flight, thereby reducing the availability of savings for domestic investment. Generally, according to MacKinnon[1990] this policy distorts the economy in five ways.⁵

First, low interest rates produce a bias in favor of current consumption and against future consumption. Therefore, they may reduce saving below the socially optimum level. This leads to reducing the flow of loan able funds through the organized banking system, forcing potential borrowers to rely more on self finance.

Second, Interest rates on the truncated flow of bank lending vary arbitrarily from one class of favored or disfavored borrower to another, as well as the potential lenders may engage in relatively low-yielding direct investment instead of lending by way of depositing money in a bank.

Third, The process of self finance within enterprises is itself impaired. If the real yield on deposits is negative, firms cannot easily accumulate liquid assets in preparation for making discrete investments.

Fourth, the pool of potential borrowers contains entrepreneurs with low yielding projects who would not want to borrow at the higher market-clearing interest rate. Lowering interest rates does not necessarily increase the average efficiency of investment because lower interest rates can encourage entrepreneurs with lower-yielding projects to bid for funds.⁶

Fifth, Inflows of foreign financial capital may be unproductive when the domestic capital market is in disarray and foreign exchange rates are unpredictable.

The traditional justification for financial repression is that it is presumed to increase the rate of economic growth. This turns on the dubious

⁴ - Ishan Kapur, Interest Rate Liberalization: Some Lessons from Africa, International Monetary Fund, Working Paper, 91, 121, December 1991, p 3.

⁵ - McKinnon Ronald, Financial Repression and the Productivity of Capital: Empirical Findings on Interest Rates and Exchange Rates, Asian Development Bank, DSP, July, 1990, p 9.

⁶ - Maxwell J. Fry, saving, investment, growth, and financial distortions in pacific Asia and other developing areas, international economic journal, volume 12, Number 1, Spring 1998 , p 4.

assumption that money and real assets are perfectly substitutable. The basic idea is that increasing returns in real asset markets relative to money market instruments will induce a shift in investor behavior, out of money and into capital investment. An important implication is that setting interest rate ceilings will reduce the rate of return on financial assets, and induce a shift to investments in productive assets, thereby increasing the rate of economic growth.

On the contrary, McKinnon [1973] asserts that money and real capital assets are complements in developing economies because in the absence of deep financial markets and extensive financial intermediation, money balances have to be accumulated before relatively costly and indivisible investment projects can be undertaken. This hypothesis (complementarity hypothesis) implies that the demand for real money balances depends positively upon real income, the own real rate of interest on bank deposits, and the real average return on capital. Critically, the positive association between the average real return on capital and the demand for money balances represents the complementarity between capital and money.⁷ Overall, deposits may serve as a conduit for capital formation, making deposits and capital complementary assets. The availability of deposits with positive real rates of return may thus encourage both saving and capital accumulation.

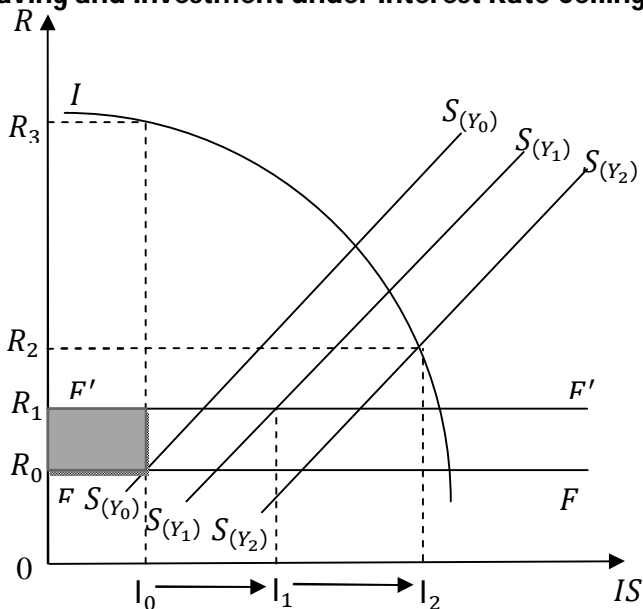
The essential common elements of the McKinnon-Shaw model are illustrated in Figure [1]. Saving $S_{(Y_0)}$, at a rate of economic growth Y_0 , is a function of the real rate of interest. F represents financial repression, taken here to consist simply of an administratively determined nominal interest rate, which holds the real rate R below its equilibrium level. Actual investment is limited to I_0 , the amount of saving forthcoming at the real interest rate R_0 .

If the ceiling applied only to savers' interest rates, e.g. only to deposit but not loan rates of interest, the investor would face an interest rate of R_3 , the rate at which the market clears. The spread $R_3 - R_0$ would be spent by a regulated but competitive banking system on non-price competition, e.g. advertising and opening new bank branches. These non-price services may

⁷ - Tomoe Moore, A critical appraisal of McKinnon's complementarity hypothesis: Does the real rate of return on money matter for investment in developing countries?, Economics and Finance, Working Paper No. 09-11, 2009, p 5.

however not be valued on par with interest payments. Also, interest rate ceilings distort the economy by producing a bias in favor of current consumption against future consumption, thereby reducing savings below the socially optimum level. In fact, there are loan rate ceilings as well as deposit rate ceilings in most financially repressed economies. Although private commercial banks evade the former through compensating balances, they are generally observed by state owned banks and for all public sector borrowing. To the extent that banks do observe loan rate ceilings, non-price rationing of loanable funds must occur. So credit cannot be allocated according to the expected productivity of the investment projects but according to transaction costs and the perceived default risk, quality of collateral, political pressures. Loan rate ceilings discourage risk taking on the part of financial institutions; risk premia cannot be charged when ceilings are binding and effective. This itself rations out a large proportion of potentially high yielding investments. There is, therefore, a strong tendency for the investments which are financed to yield returns barely above the ceiling interest rate R_0 . These are shown in Figure [1] above FF in the shaded area.

Figure 1: Saving and Investment under Interest Rate Ceiling.



Source: Maxwell J. Fry, Models of Financially Repressed Developing Economies, World Development, Volume. 10. Number 9, 1982, p 733.

Raising the interest rate ceiling from FF to $F'F'$, i.e. from R_0 to R_1 , in Figure 1 increases saving and investment. It also rations out all those low yielding investments, illustrated by the dots in the shaded area, which were financed before. They are no longer profitable at the higher interest rate R_1 . Hence, the average efficiency of investment increases. The rate of economic growth is increased in this process and shifts the saving function to $S_{(Y_1)}$. Thus, the real rate of interest as the return to savers is the key to a higher level of investment, and as a rationing device to greater investment efficiency. Thus, abolishing interest rate ceilings altogether produces the optimal result of maximizing investment and raising investment's average efficiency.

This is shown in Figure 1 by the equilibrium I_2, R_2 , and a higher rate of growth, Y_2 . Clearly, changes in the real interest rate trace out the saving function.⁸

From an empirical perspective, Fry [1981, 1988] provide evidence on the relationship between real deposit rate and economic growth. The results show a high correlation between the two variables, with the regression coefficient of the interest rate variable being statistically significant at the 1 percent level in the first study⁹ and at the 5 percent level in the second. From several pooled time series and cross-country studies for Asian economies since 1960, Fry found that estimates show positive and statistically significant relationships between the rate of economic growth and the real deposit rate. The empirical results suggest that on average a 1 percentage point increase in the real deposit rate of interest towards its competitive free-market equilibrium level is associated with a rise in the rate of economic growth of about 0.5 a percentage point in Asia.

In a more comprehensive study Presented by Alan Gelb [1989] analyzed the relationship between average 3 to 6 month deposit rates (deflated by the CPI rate of inflation) and average real GDP growth. Gelb used the same methodology as Fry for a sample of 34 developing countries, over a longer time period [21 years, 1965-1985]. He found that average growth rate was 5.5 percent for countries with positive real interest rates, 3.8 percent for those with moderately negative real interest rates, and only 1.9 percent for

⁸ - Maxwell J. Fry, Models of Financially Repressed Developing Economies, *ibid*, p 733.

⁹ - Maxwell J. Fry, Inflation and Economic Growth in Pacific Basin Developing Economies, Federal Reserve of San Francisco, Economic Review, 1981, p 12.

those with strongly negative real interest rates. Literally interpreting results, for every one percentage increase in the real deposit rate, output growth increases by 0.2 to 0.25 percentage points.¹⁰

Recent empirical work has tended to resort to far larger data sets than were used in studies before 1990. For example, De Gregorio and Guidotti [1995] suggested in a study contained 85 developing countries over the period [1971- 1995], that the relationship between real interest rates and economic growth might resemble an inverted U curve: Very low or negative real interest rates tend to cause financial disintermediation and hence tend to reduce growth, On the other hand, very high real interest rates that do not reflect improved efficiency of investment, but rather reflect a lack of credibility of economic policy.¹¹

II. Requirements for Interest Rate Liberalization

After more than a four decades of interest rates liberalization, policymakers in many developing countries remained concerned about the effects that highly volatile interest rates, which may be on their financial systems. This is not surprising given the increasing evidence that, with low levels institutional quality* and banksupervision weak, financial crises will become more frequent following interest rates liberalization.

As a result, many developing countries have intensified their attempts to strengthen their domestic economies, and especially their banking systems. The hope is that if only the right policies could be designed to insulate domestic banking systems from the volatility of international capital flows, countries could enjoy the benefits of both additional foreign capital for growth and stable domestic banking systems. Therefore, over the past four decades several changes in the systems of prudential regulation have occurred:

¹⁰ - Alan Gelb, Financial Policies, Growth and Efficiency, The World Bank, WP No 202, 1989, p 20.

¹¹ - Jose De Gregorio and Pablo E Guidotti, Financial development and economic growth, World Development, vol. 2 No 3, March 1995, pp 433- 448.

¹² - Measures of institutional quality are law and order, government stability, widespread corruption, lack of enforcement of property rights for investors, repudiation of contracts, and predominance of political institutions that do not constrain their politicians, among others.

First, given the increased number and complexity of transactions, there has been greater emphasis on monitoring banks' risk management systems, and less emphasis on monitoring individual transactions.

Secondly, in a wave of financial market liberalization, interest rates have been deregulated and restrictions on the asset choices of banks have been lifted.

Thirdly, greater emphasis has been placed on capital requirements, typically using the BIS standards of the Basel Accord.¹²

Nevertheless, policy recommendations for dealing with the domestic banking market problems generated by highly volatile interest rates after financial liberalization have not been in short supply, and many of these recommendations have indeed been applied in a wide range of developing countries. While that all banking crises after interest rates liberalization could be traced back to inadequate supervision or Weak institutional environment. Because removing interest rate constraints has led to more competition in almost all cases, but this competition became destructive rather than constructive when banks were allowed to enter too risky businesses. Weak regulations and institutional environment can also weigh on the interest rate transmission as they cause problems of asymmetric information and contract enforcement which raise the cost of financial intermediation. This reduces the elasticity of the demand for loans and makes bank rates less sensitive to changes in the policy rate and can result in lower lending by banks. A better institutional and regulatory environment can also help to develop capital markets, thus strengthening the interest-rate transmission mechanism. These institutional weaknesses, which tend to be more prevalent in developing countries and emerging markets than in advanced countries, cover government effectiveness, regulatory quality, the rule of law, and control of corruption.

Thus, strengthening prudential regulation requires institutional reforms which are considered the most important factors in the success or failure of interest rate liberalization.

North [1991] defines institutions as follows: "Institutions are the humanly devised constraints that structure political, economic and social

¹² - Hellmann Thomas, Kevin Murdoch, and Joseph Stiglitz, Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?, The American Economic Review, Vol. 90 No. 1, March 2000, p 148 .

interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights)".¹³ He points out that institutions form the incentive structure of a society, and the political and economic institutions; i.e., the Institutions provide the incentive structure of an economy; as that structure evolves, it shapes the direction of economic change towards growth, stagnation, or decline, consequently, are the underlying determinants of economic performance. Many studies show that financial liberalization in developing countries leads to larger capital inflows, and higher investment and growth in countries with stronger institutions, more developed domestic financial markets, and higher initial income.¹⁴

A better institutional and regulatory environment is one of the most studied areas of interest rate liberalization for two reasons. First, understanding how behavior of banks affects the economy is essential to evaluating what the stance of economic policy is at a particular point in time. Second, in order to decide on how to set policy instruments, economic policymakers must have an accurate assessment of the timing and effect of their policies on the economy. To make this assessment, they need to understand the mechanisms through which interest rate impacts on real economic activity and inflation.

Prudential regulatory policies to deal with interest rates volatility can be divided into two groups. The first consists of regulations aimed at directly controlling monetary aggregates, such as liquidity expansion and credit growth. Their purpose is to limit the unusually high to interest rates on deposits following a period of interest rate liberalization to minimize the adverse effects on the banking system. The second group, which can be identified in providing financial incentives to managers and owners of banks to avoid excessive risk taking activities, the main feature of this set of regulations is that they encourage banks to internalize the costs associated with the particular risks of the environment where they operate.

¹³ - Douglass North, Institutions, the Journal of Economic Perspectives, Vol. 5, No. 1, 1991, p 97.

¹⁴ - Fernando A. Broner and Jaume Ventura, Rethinking the Effects of Financial Liberalization, NBER Working Paper No. 16640, December 2010, p 4.

There are many empirical evidence tending to support the idea that the success of interest rate liberalization requires institutional quality. For example, Demirguc-Kunt and Detragiache [1998] examined the relationship between banking crises and financial liberalization in a panel of 53 over the period [1980-1995]. They concluded that the impact of financial liberalization on the fragility of the banking sector is weaker where the institutional environment is strong. In particular, respecting the rule of law, it requires a low level of corruption, and good contract enforcement. These results support the view that financial liberalization should be approached cautiously where the institutions necessary to ensure law, contract enforcement, effective prudential regulation and supervision are not fully developed, even if macroeconomic stabilization has been achieved, as well as that strong institutions cannot be created overnight, not even by the most reform oriented government. Thus, the financial liberalization should be gradual. While for countries that were initially in a state of financial repression, the positive effect of liberalization on financial depth appears to be stronger than the negative effect of a banking crisis.¹⁵

In a more comprehensive study Presented by Okada [2012] examined how financial liberalization and institutional quality affect international capital inflows for a sample of 112 countries during the [1985–2009] period. He concludes that, first, capital inflows in countries with good institutional quality benefit more from financial liberalization than those in countries with poor institutional quality. Second, among institutional factors, bureaucratic quality and law and order play an important role in foreign direct investment.¹⁶

In recent study, Duncan [2014] examined the relationship between the cyclicity of monetary policy, the quality of institutions and the volatility of output and the nominal interest rate. In a sample of 56 developed and developing economies, he concluded that the countries with strong institutions tend to show positive output interest rate correlations, (i.e., signals of countercyclical monetary policy), while countries with weak institutions have negative correlations between the central bank's policy rate and the output gap and follow policies usually characterized as pro-

¹⁵ - Asli Demirguc-Kunt and Enrica Detragiache, Financial Liberalization and Financial Fragility, IMF, Working Paper /98/8, Jun 1998, p 35.

¹⁶ - Keisuke Okada, The interaction effects of financial openness and institutions on international capital flows, Journal of Macroeconomics, 35 [2013], p 140.

cyclical.¹⁷ Thus, the institutional framework of a country plays a crucial role in the design of macroeconomic policies.

In this framework Friedman (the biggest advocates of financial liberalization) said in 2001, "we have learned about the importance of private property and the rule of law as a basis for economic freedom. Just after the Berlin Wall fell and the Soviet Union collapsed, I used to be asked a lot: What do these ex-communist states have to do in order to become market economies? And I used to say: You can describe that in three words: privatize, privatize, privatize. But, I was wrong. That wasn't enough. It turns out that the rule of law is probably more basic than privatization".¹⁸

Regarding volatility effects, there is some evidence suggests that the Macroeconomic and structural imbalances present important challenges. Removing the ceilings on interest rate can expose other problems in the economy, unusually high positive real interest rates possibly triggered by macroeconomic instability, as was the case in some Latin American countries, especially Chile during the 1970s,¹⁹ where demand was growing too rapidly and policies allowed for excessive borrowing, facilitated by a rapid liberalization of interest rate and capital account. Inadequate regulatory and supervisory frameworks and poor governance in banks also have exacerbated problems in virtually all the cases.

Throughout the discussion on interest rate management policy in developing countries during the 1970s, McKinnon [1973] stressed on the importance of stable macroeconomic and financial conditions has been stressed on:²⁰

"This preferred strategy of high real rates of interest--where real finance is plentiful at those rates--may be nearly impossible in an economy with high and unstable inflation. Uncertainty and the desire to avoid risk may make nominal rates of interest that incorporate the expected future price inflation look too high to borrowers and too low to depositors."

¹⁷ - Roberto Duncan, Institutional quality, the cyclicity of monetary policy and macroeconomic volatility, *Journal of Macroeconomics* 39 [2014], p 150.

¹⁸ - James Gwartney and Robert Lawson, *Economic Freedom of the World: Report 2002*, p 17.

¹⁹ - Diaz – Alejandro Carlos, *Good-Bye Financial Repression, Hello Financial Crash*, *Journal of Monetary Economics*, 19/ [1985], North-Holland, p 1-24.

²⁰ - Ishan Kapur, *Interest Rate Liberalization: Some Lessons from Africa*, op-cit, p 7.

Because the increase inflationary expectations lead to the weakness credibility of the stabilization program in transition economies, suppose that the government is trying to reduce inflation but that agents attach some positive probability to a self fulfilling panic, because of self-reinforcing pessimism about expected inflation. Nominal interest rates will be raised in anticipation of expected inflation. If the panic does not occur and stabilization is in fact successful, ex post real interest rates will be high because nominal interest rates at the outset of stabilization efforts included a premium for inflation that did not materialize. The implication, as Krugman [1991] puts it, is that history and expectations together determine whether the good or bad equilibrium emerges over time.²¹

According to Calvo [1988] "The expectations may play a crucial role in the determination of equilibrium when being unstable, that the nominal interest rate is not simply a passive reflection of people's inflationary expectation, but rather that the nominal interest rate is actually one of the main determinants of inflation. Consequently, a credible anti-inflationist policy would have to implement rules to prevent nominal interest rates to become unduly high".²²

As the best example of incredibility, we refer to the Russian's stabilization program experience, in mid-1994, for example, nominal interest rates had fallen much less than inflation, which had dropped sharply. But real interest rates were too high throughout the period until October 1994. In the summer months inflation was about 6 percent a month, while nominal interest rates on interbank loans were 15 to 18 percent a month, suggesting of incredible stabilization program. As the Russian monetary authorities persisted with tight credit during 1994, the high real interest rates led to a rapid and crippling build-up of bad debts in many enterprises and banks.²³

Why have the prudential reforms already implemented in developing countries not been more effective in preventing banking crises and how

²¹ - Paul Krugman, History versus Expectations, The Quarterly Journal of Economics, Volume. 106, Number. 2. May, 1991, pp 651-667.

²² - Guillermo A. Calvo, Servicing the Public Debt: The Role of Expectations, The American Economic Review, Volume. 78, Number 4 September, 1988, p 659.

²³ - Jeffrey Sachs, Russia's Struggle with Stabilization: Conceptual Issues and Evidence, the World Bank, 1995, p 73.

can interest rate liberalization policy (financial liberalization) be made more effective?

Fry [1997] considers that there are five prerequisites for successful financial liberalization:²⁴

- ❖ Adequate prudential regulation and supervision of banks, implying some minimal levels of accounting and legal infrastructure, which aims at ensuring that banks have well diversified loan portfolios.
- ❖ A reasonable degree of price stability or macroeconomic stability.
- ❖ Fiscal discipline taking the form of a sustainable government borrowing requirement that avoids inflationary expansion of reserve money by the central bank either through direct domestic borrowing by the government or through the indirect effect of government borrowing that produces surges of capital inflows requiring large purchases of foreign exchange by the central bank to prevent exchange rate appreciation.
- ❖ Profit-maximizing, competitive behavior by the commercial banks.
- ❖ A tax system that does not impose discriminatory explicit or implicit taxes on financial intermediation.

Indeed, the interest rates liberalization is likely to be of second order importance to the development of good fiscal financial and monetary institutions in producing macroeconomic success in developing countries. Rather than treating the interest rate structure as a primary choice, a greater focus on institutional reforms like improved bank and financial sector regulation, fiscal restraint building consensus for a sustainable and predictable monetary policy. A focus on institutional reforms rather than on the interest rate liberalization may encourage developing countries to be healthier and less prone to the crises than we have seen in recent years. Moreover, interest rate liberalization requires a deep understanding of a country's economy, institutions, and political culture.

Finally, we consider "price stability, Banking Supervision, institutional environment including formal rules, informal norms and policy credibility the four key factors to successes and failures of the interest rates liberalization in developing countries".

²⁴ - Maxwell J. Fry, In Favour of Financial Liberalization, The Economic Journal, Volume. 107, Number. 442 May, 1997, p 795.

III. Interest Rate Liberalization in Algeria

The Algerian financial sector comprises a network of commercial banks and financial institutions. It has undergone a significant structural transformation since the initiation of financial liberalization in the 1990s. Before financial liberalization, since 1962 till the early 1990s, the Algerian financial system was considered as an instrument of public finance. The evolution of the Algerian financial sector in the post-independent period can be divided into three distinct periods. The first period [1962-1971] during this period the Algerian financial sector was characterized by nationalization of banks in 1966 and the banking system was reorganized. The second period [1972- mid 1980s] known as the period of financial repression, which started with the financial reform in 1971. As a result interest rate controls, directed credit programs, and the treasury directly financed investments in public enterprises. The third period, mid 1980s onwards, was characterized by consolidation and liberalization. However a more comprehensive reform program was initiated by the government of Algeria during the early 1990s. These reforms include the gradual liberalization of the financial system, including banking deregulation, interest rate liberalization and foreign exchange liberalization and foreign trade. Development of prudential regulation and banking supervision, Banking deregulation measures including abolishment of direct central bank control of bank interest rates, relaxation of the policy of directed credit, liberalization of entry of private banks, and relaxation of regulations with respect to bank business activities and the expansion of branches by existing banks. Foreign banks have also been given more freedom to do business, including setting up a branch in addition to the local headquarters. In April [1994], foreign exchange controls were removed and foreign investors were allowed to repatriate earnings.²⁵

Moves to liberalize interest rates began in 1990, when interest rates for the private and the public sector were unified and commercial paper from both sectors was made subject to the same eligibility criteria for refinancing. In May 1990 the ceilings on savings deposit rates for commercial banks were progressively raised, while commercial banks' lending rates still remained subject to a 20 percent ceiling a year.

²⁵ - Louis Kasekende et al, Restructuring for Competitiveness: The Financial Services Sector in Africa's Four Largest Economies, the World Bank and the African Development Bank, World Economic Forum 2009, p 58.

An important step taken under the 1994 reform program was, therefore, the abolition of the ceiling on commercial banks' lending rates to the public, so that the effective rates on loans could exceed stipulated ceilings. It was accompanied by the temporary imposition of a cap of 5 percent on commercial bank interest rates spread, with a view to preventing an excessive increase of lending rates as a result of possible collusion among the five commercial banks. This cap on banks' spreads was eliminated in December 1995.²⁶

After the liberalization of interest rates, banks were able to vary rates charged to borrowers according to their cost of funds and according to the creditworthiness of different borrowers. Although the monetary authorities expected interest rates to be positive in real terms after their deregulation, they generally remained negative in real terms. This was largely due to the high inflationary pressures during the 1990s. It was not until the mid 1990s that a distinct positive interest rate was attained. After 1995, the rates remained fairly and consistently positive over and above inflation. Hence, the deregulation of interest rates, together with the deceleration of inflation brought about by tighter demand management policies, eventually led to the emergence of positive real interest rates since the beginning of 1996.

The rationale for interest rates liberalization was to allow banks greater flexibility and to encourage competition with the following objectives:

First, to keep the general level of interest rates positive in real terms in order to encourage savings and to use the interest rates as a tool to promote monetary stability and economic growth.

Second, to allow for greater flexibility and encourage greater competition among the banks and non-bank financial institutions to enhance efficient allocation of financial resources.

Third, to reduce the differential to maximize lending for banks, the interest rate liberalization aimed to harmonize the competitiveness among the commercial banks by removing the differential that had existed for maximum lending rates to allow for greater flexibility and encourage greater competition in interest rate determination so that the needs of both borrowers and lenders could be better met through the cooperation

²⁶ - Karim Nashashibi et al, Algeria: Stabilization and Transition to the Market, International Monetary Fund, Occasional paper 165, 1998, P 33.

of market forces. Also, it was aimed at making interest rates responsive to changes in international markets to provide protection against adverse movements of funds internationally.

Interest rates liberalization was accompanied by other reforms including the floating of the exchange rate and trade liberalization. In the financial sector, there was a move toward the use of indirect monetary policy instruments, including reserve ratios, variable liquidity ratios and liberalized market based interest rates. The government took measures to remove the policy and institutional constraints in the operations of Treasury bill and Treasury bond markets, including the attraction of auction, reforms in the lending mechanism and issue of a broader range of treasury bills, aimed at regulating the liquidity in banking institutions. [See Table 1]

Table 1. Financial Liberalization Program in Algeria

Monetary policy and financial sector reform	Date
❖ Removal of ceilings on savings deposit rates.	[1990]
❖ Elimination of ceilings on bank lending rates while imposing a limit of 5 percent point on banks' spreads.	[1994]
❖ Introduction of minimum reserve requirement of 3 percent on bank deposits remunerated at 11% a year.	[1994]
❖ Financial restructuring and recapitalization of public commercial banks, through both cash injections and debt conversion operations.	[1994-96]
❖ Audit of the state-owned commercial banks in collaboration with the World Bank.	[1994-96]
❖ Financial restructuring and recapitalization of public commercial banks.	[1994-96]
❖ Development of the money market;	
- Introduction of an auction system for bank credit.	[1995]
- Introduction of an auction system for treasury bills.	[1995]
- Introduction of open-market operation.	[1995]
❖ Imposing a capital adequacy ratio of 4 percent, it was increased to the bank of international settlement standard of 8 percent by 1999.	[1995]
❖ Elimination of the 5 percent point limit on banks' interest rate spreads.	1996]
❖ Making preparation for the introduction of a capital market.	[1996-98]
❖ Introduction of a deposit insurance scheme.	[1997]

Source; Karim Nashashibi et al, Algeria: Stabilization and Transition to the Market, op-cit, p 10.

This made it possible for the central bank to use the Rediscount rate to influence the level of other short-term interest rates. However, with the high inflationary conditions, after the liberalization of most price controls and following the steep devaluation kept real interest rates negative until 1995. A tight monetary policy was adopted to mop up the excess liquidity through the decline in credit to the non government sector. Rediscount rates increased, pushing up the interest rates. Commercial banks increased their deposit rates to as they competed for deposits from the non-banking sector and then decreased with low inflation.

The bank of Algeria felt that it was only logical for the lending rates to come down to reflect change in inflation and the downward trend in rediscount rates. In particular, the average Rediscount rate has fallen from 14 percent in 1995 to 8.5 percent in 1999 over the reform period. The lending interest rate was also reduced by from 20 percent in 1994 to 9 percent in 1997, while the deposit rates decreased from 16 to 8.5 percent within the same period. [See Table 2]

Table 2. Structure of interest rates 1991-1999 [In percent per year]

	1991-94	1995	1996	1997	1998	1999
CB rediscount	11.5	14	13	11	9.5	8.5
Deposit rate	12-16	16-18	16-18	8.5-12	8.5-12	8-10
Lending rate	15-20	19-24	17-21	9-13	8-12.5	8-11
CN d'épargne						
Deposits rate						
Savings	8	16	16	16	12	7.5-9
Housing	5	12	12	12	10	7-9
Lending rate						
Individuals	7-14	12-22	12-22	10-17	8.5-10	8.5-10
Developers	14	16-20	16-20	10-17	8.5-10	8.5-10
Inflation	26	30	18.7	5.7	5	2.6

Source: Algeria: Selected Issues and Statistical Appendix, IMF, 1998, 2003.

In the area of banking supervision and prudential rules have been tightening gradually. The specific areas of reform have included the introduction of capital adequacy requirement and in particular by improving on-site and off-site supervision of the large public banks, asset classification and provisioning norms and strictly enforcing prudential rules.²⁷ Staff IMF also encouraged the authorities to enhance Bank of Algeria's supervisory capacities, speed-up the implementation of the new information system for reporting bank data, and undertake risk-based surveillance that ensures effective early warning.

The Algerian authorities have endeavored to follow up on the financial Sector reform Program for strengthening financial intermediation. Key actions would include:

²⁷ - International Monetary Fund, Algeria: 2004 Article IV Consultation, IMF Country Report No. 05/50, February 2005, p 21.

Table 3. Financial Sector Stability Assessment recommendations**Recommendations and Actions**

- ❖ Privatize public banks over the medium term;
 - Quickly sell the two healthiest public banks. Give remaining banks five years to prepare for privatization; curtail operations if no bidders.
 - Make shareholder control of managers much tougher and fully finance unviable public enterprises.
 - Programs through budget appropriations; pursue public enterprise reform.
- ❖ Improve the bank operating environment to cut intermediation costs;
 - Improve accounting and audit.
 - Make supervision proactive.
 - Strictly enforce provisioning rules.
 - Modernize payment system.
- ❖ Modulate hydrocarbon induced liquidity and credit cycles that curtail banks' risk-taking;
 - Increase domestic debt issuance to manage liquidity.
 - Prepay some foreign debt.
 - Create legal infrastructure for repo market.
- ❖ Support the modernization of the financial system;
 - Clarifying the role of the public banks.
 - Improving further the operational environment.
 - Developing nonbank financing through the bond market.
 - Improve the assessment, management, and control of credit risk.

Source: International Monetary Fund, Algeria: 2004 Article IV Consultation, IMF Country Report No. 05/50, February 2005, p 20. International Monetary Fund, Algeria: 2010 Article IV Consultation, IMF Country Report No. 11/39, February 2011, p 14.

Significantly intensify efforts to strengthen banking supervision and support the modernization of the financial system, however, banking supervision remains weak and functioning of the financial system remains relatively low.

Since 1990's, there has been spectacular growth of the Algerian banking sector. Several variables like net foreign assets, total deposit, total credit and net profit has been analyzed to study the relative progress of the Algerian banking sector. In terms of asset, all bank groups have recorded

higher asset growth after the financial reforms. During financial reforms the total asset of the Algerian banking sector recorded higher growth and since 2001 net foreign assets of the banking sector has grown significantly. During 2001, the total commercial bank net foreign assets were 1310.7 billion of dinars, which increased to 11996.9 billion of dinars in 2010. Total deposits of the commercial banks have gone up significantly since 2001. All bank groups recorded higher deposit especially after 2001. Total deposit of all banks increased to 5565.6 billion of dinars in 2010, which was 1792.8 billion of dinars in 2001.²⁸

But, the expected main objective of interest rates liberalization is that the financial sector will grow and become efficient as information flows improve, while the low cost of intermediation leads to a narrowing of the spread between the lending and deposit rates, as efficiency improves and competition increases.

Table 4. Interest Rates on Deposits, Loans and Spread

	[In percent per year]					
	Nominal deposit rate	Nominal loan rate	Inflation	Real deposit rate	Real loan Rate	Nominal Spread
2000	7.5	10	0.34	7.16	9.64	2.5
2001	6.25	9.5	4.2	2	5.2	3.25
2002	5.25	8.5	1.4	3.8	7	3.25
2003	5.25	8	2.6	2.7	5.4	2.75
2004	2.5	8	3.5	-1	4.4	5.5
2005	1.75	8	1.6	0.1	6.3	6.25
2006	1.8	8	2.3	0.2	6	6.2
2007	1.8	8	3.6	-1.7	3.5	6.2
2008	2	8.1	4.8	-2.8	3.3	5.9
2009	1.8	8	5.7	-3.9	2.3	6.2
2010	1.8	8	3.9	-2.1	4.1	6.2
2011	1.8	8	4.5	-2.7	3.5	6.2

Source: IMF and Database World Bank,

So far, after two decades of interest rates liberalization, the results demonstrate a non achievement of efficiency in banking intermediation. Despite the efforts to introduce competitiveness, the banking sector

²⁸ - International Monetary Fund, Algeria: Statistical Appendix, 2006 and 2012, pp 25-27.

seemed to gain an oligopolistic structure, with only a few institutions controlling the sector. Six state major commercial banks continued to dominate, with more than 93 percent of the total deposit liabilities and a similar share of the loans market.²⁹ (At end-2004, the six public banks accounted for 84 percent of bank deposits and 86 percent of bank credits). Most of the banking sector in Algeria is in public hands, while that although the private banks in Algeria are well capitalized and profitable but they only represent 10 percent of financial system assets. With such a structure it is difficult for interest rates of the banking system to respond to changes in other price indicators.

Overall, the Algerian banking sector is still dominated by the public sector banks in terms of number and asset share. The banking sector comprises of 6 public sector banks with majority government ownership and 14 private banks. the number of public sector commercial banks has almost remained the same over the last two decades. And in terms of asset share, the public sector banks constitute about 90 percent of the total commercial banking asset in 2011.³⁰ On the other hand, even though the number of private and foreign banks has gone up significantly, their asset share has not increased in that way.

Notwithstanding the declining interbank rates and surplus of funds in the banking system, the interest rates structure of commercial banks showed high lending rates. The average lending rate increased slightly to 8 percent in 2010 from 6 percent in 2006. In addition, deposit rates declined from an average 2 percent in 2006 to an average 1.8 percent in 2010. Thus, the spread between the average lending rate and the average deposit rate widened in 2010 reflecting inefficiencies in cost management, and unrealistic profit expectations and targets in commercial banks. [See Table 5]

After deregulation, lending surged in Algeria. The ratio of loans to GDP increased from 25 percent to close to 27 percent within ten years, with regard the credit to the private sector remains small by international standards (about 22 percent of GDP in 2011), despite its recent rapid growth, reflecting the difficult access to financing for both businesses and

²⁹ - Amor Tahari et al, Financial Sector Reforms and Prospects for Financial Integration in Maghreb Countries, IMF Working Paper 125, May 2007, p 12.

³⁰ - International Monetary Fund, Algeria: 2010 Article IV Consultation, IMF Country Report No. 11/39, February 2011, p 14.

households. Notably, credit to households was low and accounted for only 8 percent of credit to the economy, hindered by the ban on consumer credit decided in 2009.³¹ Lack of capital has constrained the banks in developing credit to the private sector. The public banks' capital is only 4 percent of non hydrocarbon GDP. This small capital allows low overall credit because of capital adequacy rules. Since a significant share of credit still goes to public enterprises, the scope for private sector credit is small, because more credit to public enterprises may distract banks from developing the practices and products to finance private sector activity. Overall, the ratio of loans to total loans remains very small by international standards. [See Table 5]

Table 5. Financial Indicators after interest rates liberalization

[In percent per year]

	M2 ¹	GDP _R	CPS ²	CPS ³	NPLs ⁴	CE ⁵
2000	58.1	2.2	70.6	29.4	27.4	-13.5
2001	58.6	2.6	68.6	31.3	26.1	8.5
2002	63.9	4.7	56.5	43.5	-	17.5
2003	63.7	6.9	57.4	42.6	37.1	8.9
2004	61.0	5.2	56.0	44.0	37.4	11.2
2005	55.2	5.1	49.6	50.4	19.0	15.8
2006	56.7	2.0	44.5	55.5	18.0	7.1
2007	63.7	3.0	44.8	55.1	22.0	15.7
2008	63.0	2.4	46.0	54.0	17.5	18.6
2009	72.9	2.4	48.1	51.9	21.1	18.0
2010	68.8	3.3	44.7	55.3	18.3	5.1
2011	68.6	2.6	46.7	53.2	14.4	13.5

Source: Bank of Algeria, IMF and database world bank,

1/ M2/GDP, 2/ Credit to public sector, 3/ Credit to private sector, 4/ Nonperforming Loans, 5/ Credit to the economy,

The non-performing loans are still very high by international standards, for example, in 2005, the ratio of non-performing loans to total loans about 32 percent while in Morocco and Mexico about 10 and 1.2 percent respectively, the cost of the government's taking over of public banks' non-performing loans has been about 3 percent of GDP annually from 1991–2001. The ministry of finance estimated public banks' remaining non-

³¹ - International Monetary Fund, Algeria: 2012 Article IV Consultation, IMF Country Report No. 13/47, February 2013, p 6.

performing loans to public enterprises at 4 percent of GDP at end-October 2006. [See Table 5]

Although the financial sector in Algeria is relatively deep when compared with Maghreb Countries, the M2/GDP ratio maintained after the liberalization of interest rates in 1990 is slightly lower than the average M2/GDP ratio maintained before the liberalization. For example, during the period 1970 to 1989, the average M2/GDP ratio was 0.65³². Between 1990 and 2000, the average M2/GDP decreased to 46 percent. In 1996, the M2/GDP ratio reached about 36 percent, the lowest since 1970. However, since then the ratio increased phenomenally. The ratio was 40 in 1997 and 56 percent in 1999. In 2001, the M2/GDP ratio increased to 58 percent and in 2009 the M2/GDP ratio reached 72.9 percent, the highest since 1990. [See Table 5]

Although in Algeria financial depth has improved considerably since 1997, economic growth has consistently shown a mixed trend since the 2001. For example, during the period 2000 to 2011, the country recorded a record high GDP growth rate to about 6.9 percent in 2003 from about 2.1 in 2001. However, the rate later declined in 2006 and 2007 to 2 and 3 percent respectively. Despite dwindling economic growth, has maintained Algeria on a modest recovery in economic growth during the period [2000-2011], on average, 3.5 percent.

The major challenges are still in the Algerian banking system, low credit growth to the private sector, high lending rates to the public sector and a widening interest rate spread despite declining interbank rates and a relative surplus liquidity in the banking system.

Finally Algerian public banks still need more financial restructuring, but the key challenge lies in restructuring their operations to make them attractive to private buyers. The healthiest public bank should be privatized rapidly.

³² - Naas Abdelkrim, Le Système Bancaire Algérien ; de la décolonisation à l'économie de marché, éditions INAS, 2003, p 86.

Conclusion

The main conclusion of this paper can be summarized as follows:

- ❖ The higher interest rates after financial liberalization will lead to increased savings and financial intermediation as well as to improvements in the efficiency of using savings, thus, the rate of economic growth.
- ❖ However, the excessively high interest rates after the financial liberalization will have unfavorable economic effects. Such a situation can be avoided if the liberalization of the banking system takes place under appropriate conditions, including monetary stability and the government supervision on banks.
- ❖ The interest rate liberalization policy must be accompanied by other economic reforms including fiscal reform aimed at ensuring that the government debt will not explode in the aftermath of the liberalization, as well as sound prudential supervision and regulation of the financial system, because the financial institutions and banks play a key role in evaluating prospective entrepreneurs and improve the probability of successful innovation and thereby accelerate economic growth.

During the past two decades, the financial system in Algeria has been undergoing a process of liberalization. Bank deposit and lending rates have been deregulated, reserve requirements have been reduced and regulations on competition, credit allocation and prudential supervision have been reformed. However, the strong expansion of credit to the economy remains a cause for concern in light of the very large share of nonperforming loans in the public banks. Several major structural reforms were accomplished, but much remains to be done to achieve the transition to a market economy.

The key challenge for Algeria is to strengthen the prospects for sustainable growth in the non hydrocarbon sector in an increasingly open environment. With greater competition resulting from the financial liberalization, it is imperative to speed up priority reforms in particular institutional reforms aimed at encouraging private investment and creating jobs.

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