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The Challenges in Liquidity Management in Moroccan Banks

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Summary

The current paper focuses on the banking sector and banks' liquidity in the Moroccan interbank market, in particular. The volatility of liquidity was the result of an excess in the money supply within the interbank market before 2007. Right after that year, and after the subprime crises, the interbank market suddenly reached a point of zero liquidity, and the banks started to request refunding from the central bank. This demand has been increasing each week, and until this day, the Moroccan banks haven't succeeded in solving this problem, neither by satisfying the lack of liquidity, nor with the excess cash in their treasuries.

Key words: Liquidity, risk management, liquidity risk, interbank market, central bank.

JEL Classification: F33, G21

1. Introduction

The complexity and the intricacies of banking management procedures further complicate the tasks of keeping the sector performing efficiently. This management is employed to direct the activities, in spite of manipulating and supervising the different factors which have an impact on the financial market mechanisms. Every institution operating on the banking or financial market encounters difficulties and challenges, especially in managing customers' queries and their satisfaction. But the ultimate one is to maintain enough money in the treasury in order to be relevant while analysing the balance sheet, and consequently win a high ranking comparing to the competitors.

However, not all of the banks are reacting to the instructions and principles announced by the central bank or the international supervising institutions such as the Basel Bank Supervision Committee". The undirected management is directly linked to risks which drive the banks and the entire interbank market to dangerous consequences and results.

The risks might be various, and in every single risk there is a particular mechanism to suggest a plausible risk aversion. Lately, the greatest risk worrying the banking sector has been the liquidity risk. Right after the international crisis of 2008, Basel updated and set new standards and rules, to support all the financial actors and to protect their activities from the liquidity risk.

This liquidity risk has an impact on the Moroccan market and influences every agent in their financial behaviour. The liquidity volatility stated before 2008 as overflowed, where the total liquidity Ask amount increased to achieve over than 70M MAD on a weekly basis, where this deficit has been funded by the Central Bank. The latter has been providing, so far, only a liquidity injection into the interbank market and

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maintaining a high rate that makes the banks go through a vicious cycle, which means that there is no radical solution to the outlined issue. The lack of liquidity after 2008 was predictable, the reason why the introduction of Basel III is considered significant within the banking sector. It is pointed out that the solution and the key to the discontinuation of the enormous decrease in liquidity is the internal management.

To sum up, the liquidity fluctuation in the Moroccan interbank market is a warning related to the monetary policy managed by the Central Bank of Morocco. How would the Moroccan banks cope with the liquidity problem? And what are the alternative solutions to ensure that banks perform their activities presented on the balance sheets?

The aim of this paper is to highlight the guidelines established by BASEL 3 and even the proposal of Basel 4, and also the internal tools of liquidity management used by Banks to overcome the current issue. In addition to this, the aim is to show the importance of putting back some liquidity management instruments governed by the Central Bank.

2. Identifying the problem

The liquidity performance is the key to evaluating if the sector is driving a good monetary policy and leading to a healthy rate determined by the international rating agency in charge of observing such particular financial aspects. The internal management is the way how the bank supervise and control the transactions and different trades inside its organisation, for instance the liquidity management is one of the most important targets which the company focuses on, in order to balance the bottom line. The above statement explains the important use of internal tools and methods such as ALM, GAP … The external management is currently supervised by the national financial authority and the international one, allowing the institutions to have a clear vision about their tasks, but most of all what to avoid doing in order to prevent the critical situation which might lead to a systemic crisis if not considered.

Each bank challenges the client's satisfaction in addition to keeping the treasury in a comfortable balance, due to this maturity transformation that proceeds normally by converting the short and long term deposits, allowing the bank to attain the best ranking. This transformation is regularly accompanied by the liquidity management involving banks' capacity or ability to attract low-cost deposits to maximise its intermediation profit margin.

Therefore, the major issue which frightens banks is the lack of liquidity. In other words, when the banks are not able to maintain some liquidity level required by the central bank of the country, the former implements some financial instruments to manage the interbank money. What is more, banks implement their own tools to improve the performance of money management such as ALM, stress testing, REPO (Fimarkets, 2012)

The aim of this paper is to analyse the liquidity fluctuation and the banks' behaviour according to the various tools and mechanisms of liquidity management, in addition to the role of the Central Bank of Morocco in supervising and governing this issue. And to precise as well the contributions of the international supervision organisations, regarding the banking performance and risk management (liquidity).

3. Financial crisis and Basel ascription requirements

Credit institutions, like other economic agents, should be able to meet their commitments; but it is known as the alteration leading to short resources – customers' deposits - with longer maturities, thus meeting

the borrowing needs of customers. This is also the difference between the maturity of the liabilities and the assets on the balance sheet which maintains their interest margin. To deal with depositors' withdrawal to cover their current liabilities, intermediaries must be able to quickly realize the assets which they hold in their portfolios or raise funds in the interbank market or from new lenders. (Bialés, 2013)

However, several countries facing economic changes, clearly explain the problems encountered in terms of banks' liquidity management, and consequently the management in the short and long term, in an available currency or if such a need should arise. However, the adjustment of the adopted monetary policy is necessary for central banks to use the available tools and resources that have been used before, in order to redress imbalances due to decisions taken by banks in the first row. (Goodhart, 2008)

The global financial crisis has shown how important it is to ensure that the financial system has a sufficient level of liquidity to cope with adverse conditions. The pressures that surfaced in 2007 in the financial sector have underlined severe flaws in liquidity risk management practices of some financial institutions.

Faced with the considerable turbulences that followed, the authorities have no other choice but to arbitrate actively, to cover the liquidity issue and its harmful impact on the economy. Managing finance and market liquidity risk are inherent in the maturity transformation function performed by financial institutions, which is at the heart of the intermediation process between investors and debtors and contributes to the effective allocation of capital in a given economy. If they are not properly controlled, these risks might cause a devastating liquidity spiral. (Salin, 2009)

The recent subprime crisis exposed significant flaws in the framework backing up the liquidity risk management in banks. The Basel III model regarding liquidity provides numerous measures which can be implemented to raise the resilience of the interested tiers to meet short-term liquidity shocks, to improve the adjustment of funding to risks, and to promote the inclusion of liquidity risk in product evaluation.

The bank's liquidity is defined as the capacity to fund all contractual engagements and obligations when necessary. Furthermore, this could comprise loan obligations, investments and money withdrawals. That is to say, commercial banks liquidity refers to its aptitude to increase its fund assets and pay its liabilities meeting a predetermined deadline. (Mishkin, 2010)

Consistent with what Michel Aglietta (2002) (Michel Aglietta, 2002) said, the banking market is defined as a wholesale market of cash where there was the pretense of the liberalisation of the financial sector. Credit lines are alternative solutions to suspending considerable reserves to fulfil the payments demanded by creditors or bank monetary exchanges in order to tackle the threats resulting from intermediation.

The variability of liquidity movement throughout the world money markets relies on the principle of good intentions that banks illustrate towards each other, to cover the fluctuations in retail deposits. In crisis situations, referred to as "stress", banks are unaware of the competitors' strong positions.

A sudden withdrawal of deposits, resulting from an unexpected change in the movement of short term international investment may force some banks to feel some uncertainty as to renewing the credit lines, or permit lending on the condition that a premium risk is applied, thoroughly impacting huge liquidity losses within banks. (Dirk Schiereck, 2007)

For Banks, the provision is a necessity which cannot be neglected when it comes to a specific level of liquidity between banks or

towards the central bank. Because of their fundamental role in maturity transformation, banks convert the short-term deposits through long-term loans. Banks have exposure to liquidity risk, which might be distinguished as a specific risk related to the financial institution or the market risk, mainly known as general risk. (MATZ, 2011).

Banks are thus brought to rebuild their treasuries in central bank money by searching for reserves surplus offered by the best equipped institutions in cash resources or as a last resort; when these contests are insufficient; by selling financial assets at Central Bank or borrow cash which are lacking. The analysis of liquidity drives the bank to apply the appropriate technic to manage the risk coming from some difficulties that face the bank activities, in which there is a direct link with other banks in term of interbank transactions, generating, as mentioned above, either risks or being a source of managing the liquidity lake.

Each bank has a set of measurement tools and risk management. Force to clarify that the primary concern of credit institutions, nowadays, is to ensure continuous liquidity, which has been the subject of project BASEL III. (Basel, 2010)

The new Basel IV project highlights the importance of the method used to compute the capital requirement, the level of the leverage ratio, and disclosures explaining the difference between the risk weightings results showed throughout the internal models and the standardised models.

- First, restricting the advantages to banks using internal models to calculate their capital requirements. This could take the form of limits on the extent to which risk weights based on internal models could diverge from risk weights under the standardized approach; or of reducing the complexity of banks' internal models (perhaps with greater complexity allowed only in the assessment of Pillar 2 capital requirements).
- Second, requiring banks to meet a higher minimum leverage ratio. A minimum leverage ratio of substantially above 3 percent would act more as a 'front stop' for Pillar 1 minimum capital requirements than the 'back stop' role it plays in Basel 3.
- Third, greater disclosure by banks. To the extent that banks are allowed to use complex models, this would require banks to explain and justify why their risk weightings based on internal models differed from the standardized approach risk weightings. And to the extent that greater reliance was placed on a simple leverage ratio, banks would be able to explain how this differed from a more risk-sensitive approach. (KPMG, 2013)

Liquidity risk has the definition of money loss because of its failure to meet the cash supplies. Usually it is measured as "correlative" risk ", since its occurrence is attached to a strong increase in other risks. (Leonard Matz, 2007). The liquidity risk might affect either assets or liabilities, which might be caused by external factors.

It is also defined as the consequence from the incapacity to keep a relevant liquidity level. Such significant losses are ensuing from payment defaults of a third party, or the negative development of the market. (Hennie van Greuning, 2004)

4. Bank liquidity within the Moroccan financial system

4.1. Measures taken to manage excess liquidity (before 2007)

The liquidity excess in the Moroccan banking system poses problems on the money market. Indeed, given the fact that the liquidity excess situation takes precedence over national interbank market, it is interesting to refer back to the causes of bank liquidity surpluses. In this sense, the following factors may result:

i. Low investment: determined by the unfavourable business environment defined by a number of weaknesses that constitute disadvantages for risk-taking on the part of both bankers and investors. The main weaknesses are:
- The poor development of basic infrastructure
- Insufficient predictability and volatility of the macroeconomic framework

ii. Underuse of bank resources: despite the government's ambitious plan to support SMEs / SMIs development as key contributors to Morocco's economic growth, banks hardly face the SMEs/ SMIs challenges and supports the financial risk is highly related to their activities, but are often relatively most dynamic and innovative players. (Sgard, 2006)

iii. The money transfers by Moroccans living abroad to Morocco use various channels and are influenced by many objective and subjective factors. Overall, the transfers made through formal channels (banks and post) are the most important with, however, a clear predominance of transfers by post and, until the late eighties, when the movement was abruptly reversed favourably.

4.2. The lack of interbank liquidity after 2007

The investment dynamics is one of the engines of economic growth in Morocco, but this dynamic is now facing a funding problem as it was concluded from the latest study by the Observatory of entrepreneurship (www.ode.ma). A structural deficit financing has been recorded with investments moving at an accelerated pace since 2007 and insufficient savings to compensate them. Combined with the growing needs of the Treasury, the deficit can be observed in the strengthening of the liquidity tension. "This situation is characterized by a growth that has stronger impact on the loans progress as compared to deposits: the employment rate has increased to 76.5% in 2002, 87.3% in 2009 and 94% in the first quarter of 2010, " reports the same document. This under-liquidity is attributed both to lower privatization proceeds, which fuelled excess liquidity, that resulted in the increase in consumption. (Benyousef, 2010)

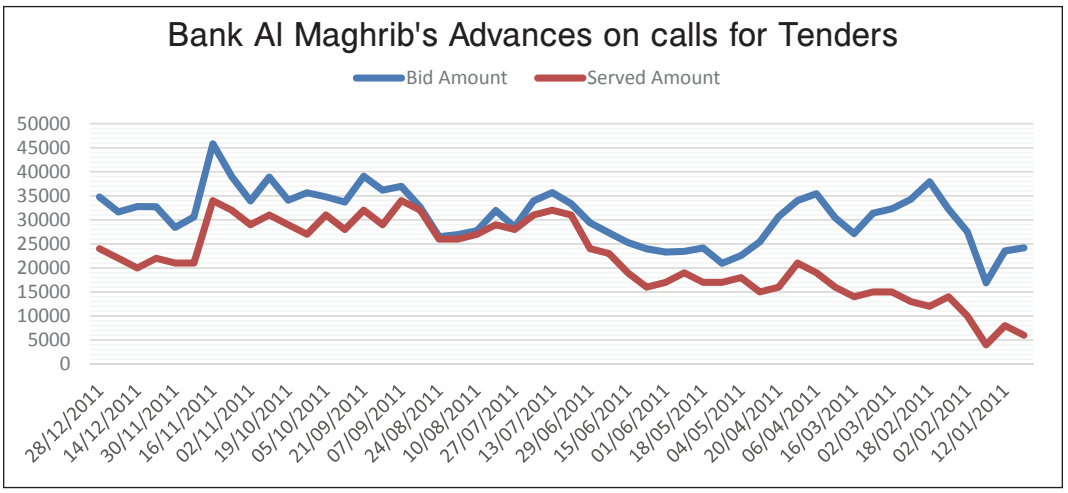
4.3. Banks faced temporary liquidity pressures in 2011.

Banks with limited access to alternative funding sources relied on BAM's expanded liquidity facilities to extend loans. The situation then improved as credit growth slowed while deposit growth stabilized. By June 2015, the deposit-to-loan ratio had strengthened to 103 percent, although liquid assets as a share of short term liabilities fell to 14 percent from 23 percent in 2009. At the end of 2014, the LCR ranged between 70 percent and 180 percent for the eight largest banks in Morocco (with two banks below 100 percent), suggesting that most banks hold sufficient high-quality assets to cover expected net cash outflows over 30 days.

Liquidity is usually correlated to some major indicators such as the size of the bank, which means that large banks are more liquid, since they rely on their own resources, than smaller ones. The latter depend essentially on the interbank market and the Central bank to solve the liquidity issue either by injecting the money into the interbank market and responding to the Bid amount requested by the banks, or absorbing the liquidity flows through the collection of fixed term deposit, (El Mehdi FERROUHI, 2013). The subsequent graph illustrates the Bid and Served amount of money during the year 2011, where it shows the large gap between the money

requested by the Moroccan banks and what the Central bank offered, except in August where the bid and the offer were meeting nearly the same amount. In the last quarter of the year the gap widened and showed a considerable difference between the asked and offered amounts.

the non-financial sector, by a decrease of loans granted to the private non-financial companies. All in all, the growth rate in banks loan moderation is combined to the retrospection of the net claims, expressed through a slowing of money stock from 5.8% to 5.3% (June2016).



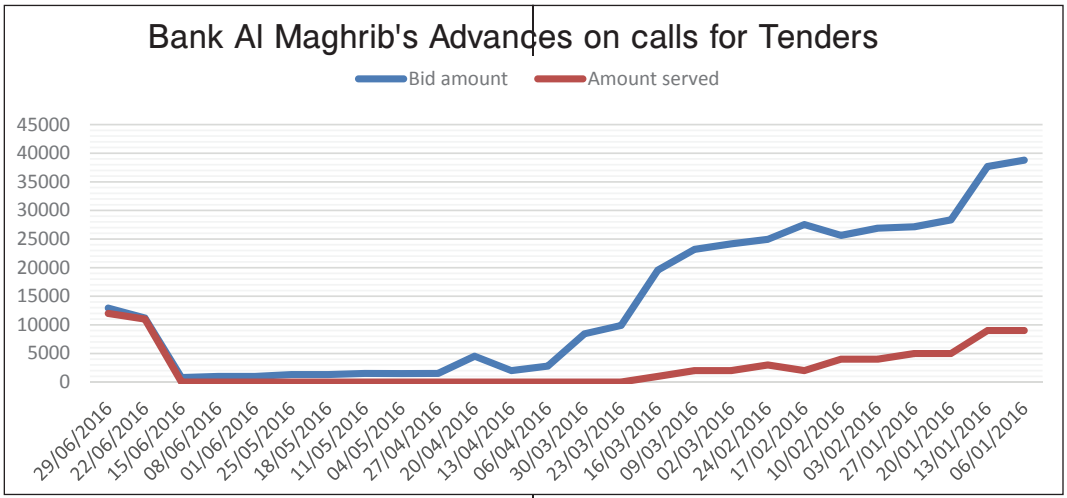
Source: (Maghrib, 2016)

4.4. Liquidity evolution - June 2016

According to the structural evolution highlighted throughout the different axis of the Moroccan external account , it is clear that the bank liquidity has marked a slight progress. The liquidity has decreased from 21 billion Dirhams from the last quarter of 2015, in contrast to 12.8 billion in the first quarter of the ongoing year. The Moroccan central bank reduced the volume of money injected to 13.3 billion Dirhams. Based on the current conditions and according to the decision made by the central bank advisory committee on the 22 of March 2016, a drop of 25 basis point of the prime rate, an obvious easing of the interest rate on various markets, was introduced. The monetary conditions were characterised, through the first quarter, by an increase of 1.7% in the effective exchange rate, and a mundane improvement of the credit growth rate in

Noting the structural improvement of the bank liquidity, the advisory committee decided to maintain the money reserve rate at 2% and 5%, in addition to reestablishing the value of this reserve in order to encourage banks to exert efforts in terms of granting loans. (Al-Maghrib, 2016)

As it is shown on the chart above, the bid amount during the first quarter of the year 2016 represented a slow demand for liquidity requested by the Moroccan banks, since in the first week of the current year it started with a Bid amount of 38.790 billion dirhams against 9.000 billion as a served amount. Starting from the end of March the amount asked has fallen to 9.900 billion dirhams to gradually reach only 0.800 billion by the end of June. While the bid amount was in constant decrease, the Central Bank suspended the money supply over a period of almost three months until the end of the second quarter, to represent almost the total amount bid by banks.



Source: (Maghrib, 2016)

4.5. Internal liquidity management techniques

This part of the analysis is looking at the internal techniques to illustration the other aspect of liquidity management, the management measurement and the disposal techniques used to equalise the liquidity level and thus, manage the risk.

i- **Correc11tive actions**

An important part of adequate risk management is the speed of response of management to unauthorized risk or poor performance. To control risk assessment activities carried out by the fund, management should investigate all significant performance differences compared to the annual business plan and to historical trends, and take steps to rectify the situation if needed. Management must also respond to any violation of board policy or regulatory requirements, or other unauthorized risk.

ii- **Insufficient liquidity**

When cash becomes insufficient, management must develop financial and marketing strategies that will tie up the liquidity levels with goals, or take defensive measures. Defensive measures to protect a cash liquidity position normally include:

- Marketing measures to improve the level of deposits;
- Judicious use of standby credit;
- Wise use of loans to support liquidity;
- The temporary suspension of lending activities;
- Selling assets to third party.

These measures are listed in a descending order from the most interesting to the least desirable. The suspension of lending is to be avoided because it may undermine the confidence of members. Though, some limits on lending might turn out to be a necessary evil in case of liquidity crisis. (AMF, 2009)

A rapid and quick reaction (with a temporary suspension or modest wingspan) can sometimes eliminate the need for more drastic measures later. Other liquidity defence strategies (overdraft, credit facilities within a federation or a chartered bank) are complete for business and financial practices are recommended.

The employment of credit margin enables a fund to exploit the value of its coverage, menacing the compensation of its negotiable tools. An aggressive strategy of money management is to use as much as possible short-term demand deposits in the money

market while allowing the current account to be overdrawn sometimes to maximize profits. (Bank, 2009)

iii- **Liquidity excess**

When a fund holds a lot of excess cash compared with regulatory requirements (due to net inflows of money not provided), management should consider the options it has at its disposal to bring liquidity to an appropriate level. Indeed, this may impact profitability because the short-term investment rate of return is generally not as high as that of loans, and the money kept in cash earns no interest. To absorb excess liquidity, management should take advantage of every opportunity to extend credit without compromising quality. (Réference, 2005)

Furthermore, the fund should undertake campaigns to stimulate demand for loans. When promoting credit is not enough to use all the excess liquidity, the fund may be invested in short-term instruments for easy conversion to new loans.

When the economy is bad or when the fund is facing a phenomenon, difficult to overcome, the board and management can decide that part of the excess liquidity will probably last longer than the financial year. In this case, management must seek safe investments with a term longer than one year with a strong performance (Mouhtadi, 2015)

iv- **Asset Liability Management**

Asset Liability Management (ALM) is known as a mechanism helping banks to face and cope with the risks mainly due to a mismatch between assets and liabilities, liquidity or changes in interest rates. Liquidity is the ability of a bank to meet its obligations or liabilities by borrowing or converting assets. The institution may cope with a mismatch engendered fluctuation and changes in interest rates as banks lean towards borrowing in the short term (fixed/floating) and lending in the long term (fixed/floating).

ALM chains the portfolio management methods (Liability, asset…) in a synchronized manner. Hence, the ultimate objective of ALM is the global management coordination of the bank's balance sheet. Though this technic is not a new planning instrument, it has developed from a starting step of asset and liability maturity-matching into a recent and advanced model such as duration matching, variable rate pricing, and the use of static and dynamic simulation. (Oracle, 2008)

v- **Stress tests**

Based on the administrative circular #2/G/10, published by the Moroccan Central Bank - Bank Al-Maghrib, as of 2010, the bank and the financial institutions are required to adopt the stress test tool as a prospective instrument to assess the solidity of the particular bank, for an outstanding risk management and governance and to dispose of a strong equity level helping to absorb foreseeable crisis and financial crashes. (Al-Maghrib, 2010)

The stress test methods have been developed by Basel II, namely in its second pillar. This instrument must be one of the supreme elements of governance and risk management as it was stated above. The core administration and all the banking departments must supervise and insure the good performance and the coherence of these tests.

The tests are applied constantly within regular intervals but not less than once a year, where it is aimed to hedge the bank's business lines and the risks related. Consequently, the resilience to the manifestation of the identified risks against the ample equity, provision and liquidity that the bank should maintain to suffer a likely loss. (Hopper, 2010)

The financial stability report of the central bank highlighted some macro-stress tests findings showing the resilience of the Moroccan banking system up to 2015. Notably, the system upholds the resilience and its solvency requirement, where the solvency ratio displays

the percentages, 12.7% in 2014 and 12.5% in 2015 respectively, even in a situation of macroeconomic risks aversion. (Mazarei, 2016).

5. Conclusion

Risk management is one of the procedures which banks are taking seriously and vigorously, in parallel to their day-to-day activities. The head office of the financial institutions is leading and supervising the activities which are at the origin of these financial risks constantly to avoid any problems that might impact their role.

To achieve good management, the organisation must be aware of different and various situations, either internal or bilateral with the competitors, and their impact on the productivity, and mostly the performance in terms of controlling the extreme cases that might lead to the critical circumstances.

This liquidity phenomenon is the result of the banks' appeal to the central bank to apply advances to rebalance their treasuries. Thus, it leads to a snowball effect in banks which increases the liquidity deficits and even to a systemic risk in an extreme situation. In addition to the above the banks have a limited orientation towards the capital market. Accordingly, banks have a refuge and premium liquidity supplier which is Bank Al Maghreb that injects the requested money and responds to their needs.

Traditional banks in the Moroccan financial sector are relying on the central bank to fund the requested liquidity, to keep the day-to-day level rate in the central bank account and also to stay away from the accusation of being insolvent and not capable of facing their commitments. This funding injection coming from Bank Al Maghreb and aiming to help the banks at all times and preventing them from improving their internal techniques to face such issues can be interpreted as a mistake.

One of the solutions is to induce the banks to develop the liquidity risk management techniques and methods internally, in addition to reuse some of the financial instruments which were abandoned few years ago, after the banking reform, such as the rediscounting instrument. It is clear that the Moroccan banks showed a remarkable evolution in terms of the international financial requirements assessments, especially during 2016.

Moreover, the reliance on the central bank to supply banks with the needed liquidity has lessened during 2016, explained through the reticence of the central bank to provide the commercial banks with cash. Subsequently, the financial institutions showed a noteworthy performance, where cash requirements dropped significantly when Bank Al-Maghrib suspended the fund. This explains that banks have deployed internal techniques of liquidity management to sustain a significant cash level.

The implementation of the exhaustive and specific prudential standards within the Moroccan banking system is an undeniable contribution to the global financial security system. Thus, it is a lengthy and highly sensitive process and still at its very start. This is the reason why it is still early to compare the financial stability in Morocco with other countries which are economically strong.

Limitations

The lack of information and data has been a big problem in answering the problematic set of questions related to this topic. The banks are reticent when it comes to their internal information. This is the reason why the econometrics study has not been included in my case study. In addition to this, the weakness of the Moroccan banking system is explained by the asymmetric nature of the information supposed to be published. That information and data must represent the transparency and the real performance of banks in the Moroccan interbank market.

Then again, as mentioned above, the slow progress of the Moroccan banking system is limiting its ability to adopt some western policies that require several similar standards and performances allowing the comparison with others robust economies.

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