



FINANCIAL MUTATIONS AND FRAGILITY OF THE TUNISIAN BANKS

Bouslimi Jihen

Associate Professor of Management Department, Faculty of Law Sciences, Economic Sciences and Management of Jendouba, Jendouba University and Faculty of Economic Sciences and Management of Sousse, Tunisia

ABSTRACT

Our study shows that financial liberalization has been followed by a profound transformation and banking system fragility. Our investigation test seeks to determine the fragility index of the Tunisian banking system over the period post liberalization. Our investigation is resulting from the study of Kibritcioglu (2002) which consist of an aggregation of three variables which reflect the symptom of a banking crisis. Our results showed a causality relation between financial liberalization and the banking systems fragility. We argued a period of high fragility starting from 1986 (date of the liberalization process adoption in Tunisia).

Keywords: Financial liberalization, Financial transformation, Fragility index, Tunisian banking system, Banking fragility, Kibritcioglu.

1. INTRODUCTION

Financial liberalization has been followed by a profound transformation of the international financial environment especially following the advent of globalization which leads to a considerable evolution of financial instruments and national and international financial activities. The stability and the solidity of the financial system in particular in the emerging countries were threatened following the modification of finance during integration of financial liberalization. These modifications, which lead to an economic growth, also generate fragility and financial instability.

The literature on banking fragility reveals that liberalization, in particular capital flows, leads to financial instability, and consequently to systemic vulnerability. The environment changes, the increase in the traditional behaviors risk or the introduction of new or inexperienced speakers, that follow this process of liberalization, were sources of the system vulnerability (Delorme, 2002)¹. In

¹ Delorme A. (2002) : « stabilité des systèmes bancaires des marchés émergents : une proposition de régulation prudentielle différenciée ».

the same way, Tornell *et al.* (2004)² showed that financial liberalization leads to financial crises, and thus to the destruction of the economic growth. Their study shows that in the presence of severe credit market imperfections, liberalization that produce financial growth also generate, as byproduct, financial fragility.

The Tunisian banking and financial system began in a movement of reorganization, modernization and liberalization of the Tunisian economy committed since 1986. It must adapt to the deep transformations which affecting the national and world financial system.

These rapid changes caused by globalization, deregulation and technical progress increase the bank vulnerability to the risks. Of such vulnerability could give rise to banking failures and consequently a systemic impact occur on the economy in general because of the central role of the banking intermediation in financing the Tunisian economy. In addition, Tunisian banks suffer from a high credit risk associated to low levels of profitability, liquidity and capitalization.

2. FROM GLOBALIZATION TO FINANCIAL CAPITALISM: REVIEW OF THE LITERATURE

Financial liberalization has been followed by major changes of the financial system. These changes which consist in particular of financial globalization, technological progress, banking system disintermediation as well as the development of financial capitalism, aimed at the financial instruments modernization and the national and international financial activities.

2.1. Financial Globalization

This globalization consists with the consolidation of national economies interdependence, the rise of private actors and with the development of new technologies of information and communication.

According to Aglietta (2000)³, “financial globalization is a transformation of the financial systems which is closely related to growth mode change in the advanced capitalism countries”. This transformation comes back to the Seventies marked by oil crises and great inflation in the OECD countries. It consists on a passage of the system from Tool Wood, characterized by the excessive governmental intervention in the financial sector, to the new system marked by a liberalization of international financial flows.

According to Artus and Cartapanis (2008)⁴, financial globalization allows capital transfers from countries which have liquidity excess to countries which need for liquidity. That leads to

² Tornell A., Westermann F. and Martinez L. (2004): « The positive link between financial liberalisation, growth and crises » NBER Working Papers.

³ Aglietta M. (2000) : « La globalisation financière », l'Economie Mondiale, pp 52 – 67.

⁴ Artus P. et Cartapanis A. (2008) : « globalisation financière et croissance dans les économies émergentes, la sous estimation des contraintes macro-économiques induites », Revue Economique, vol 59, N°6, pp 1145-1158.

investment growth and to productivity gains. In the same way, [Prasard et al. \(2003\)](#)⁵ show that financial globalization enhances economic growth through capital cost cutting, interior savings increase, the transfer of the most sophisticated technologies and the development of the interior financial sectors.

Whereas in the thirty glorious growth modes, finance contributes to capital accumulation, in the contemporary patrimonial capitalism, it stimulates the real economy ([Aglietta, 2000](#))⁶. One of the objectives of finance consists in solving this distortion between the savers needs for liquidities and the capital investments necessary to create value. The liquidity depends, therefore, on the equilibrium which is established between supply and demand, which makes the market prices fluctuating and thus stimulates participants to speculate in the future trend of the market prices. Thus, financial liberalization in the market finance framework improved return on savings. Over the period 1885-1998, the average return of the capital investment on the index standards and Poor'S 500 in the United States exceeded 20% ([Aglietta, 2000](#)).

Financial globalization stills a reversible phenomenon which is expressed by crises. In period of stock exchange expansion and when supply and total demand move in parallel and in absence of inflation, it results an expansion accompanied by financial imbalances, and consequently a financial fragility like that of the real crisis of the Nineties.

[Flandreau \(2000\)](#)⁷ stipulates that since the Seventies, “financial markets are liberalized, the free trade is propagated and the economic order imposes its law on the national policies”. The level of the international financial integration was defines by some economists as being measured by the “facility” with which a nation can access to the international capital, and this, by examining the relation between savings and investment. In a segmented world, national investment relies on its own savings whereas in an integrated world national investment can count on the international savings ([Flandreau, 2000](#)). [Flandreau and Riviere \(1999\)](#)⁸ studied a sample made up of the nations members of OECD over the period 1905-1995. Their result shows that the strongest integration levels are observed in the Nineties. Adhesion of the majority of banks to the movements of financial liberalizations and the disruption of the environment which follow had important consequences on their solidities. The credit institutions changes were beneficial, since they their make it possible to diversify their activities and to better distribute their risks. Nevertheless, commitment of the banks in these new activities, in particular that they miss experiments and of which the outputs are dependent on the market rates, enhances risks to which these establishments are exposed.

⁵ Prasard E., Rogoff K., Wei S. J. et Ayhan Kose M. (2003) : « Effet de la mondialisation financière sur les pays en développement : quelques constatations empiriques ».

⁶ Aglietta M. (2000), op.cit

⁷ Flandreau M. (2000) : «Le début de l'histoire : globalisation financière et relations internationales», Politique Etrangère, volume 65, n°3-4, pp 673-686.

⁸ Flandreau M. & Riviere M-C (1999) : « La grande Retransformation ? Intégration financière internationale et contrôles de capitaux, 1980-1997, Economie Internationale, CEPII, research center, issue 78, pages 11-58.

2.2. Technological Progress

The technological innovations constitute one of the most important changes of the financial system. They contribute to surpass, in particular, the geographical barriers between the national and international financial markets. It developed a new technology of information and communications as well as the development of the remote bank.

2.2.1. New Technologies of Information and Communications: NTIC

The development of these new technologies appears through the emergence of the Internet, the Intranet, as well as the development of new technological systems.

The Internet is a wide computer network which penetrated all the sectors and led to major transformations in the structure of the economy. Thus, any customer is likely to reach any supplier in any place. This NTIC led to a strongest growth of the services and transactions online such as the e-commerce, the virtual banks and broking online. The Internet is the materialization of the perfect market. It offers a broad distribution network to a broader level and a cost cutting.

As for the Intranet, it is a scale model of the Internet within a particular institution. In other term, it is an internal management tools which consist of a computerized system using in a simultaneous way the databases and the tools within the Internet.

In the same way, it was developed a new technological systems which consist in the capacity of banks to develop databases and software which appears in a set of programs, processes and documentations necessary to the information processing. Among these databases and software, there was the pro software, the datawarehouse, the datamining, etc

Generally, the financial markets developed due to the development of these new technologies of information and communication, creating thus a market characterized by perfect information and a suppression of the place and time constraints to allow a free transaction. These new technologies lead to the competitiveness and a better profitability of the banks. The inclusion of new technologies of information and communication was a factor of progress and of banking competitiveness.

2.2.2. Development of the Remote Bank

Due to new technologies of information and communication, bank of today became ready to provide to its customers more and more services to strong added value, diversified, of better quality and available 24 hours/24: possibility of the operations treatment in evening, during every day of the week and at any place. From where, banks must develop more and more services to satisfy their customers. [Garsuault and Priami \(1997\)](#)⁹ prove that “customers always expect from their banks a service of council, which necessarily passes by a direct contact but wish, in parallel, to profit from a strong availability of the services”.

⁹ Garsuault P. et Priami S. (1997) : «La Banque fonctionnement et stratégies», Economica, Paris, 2ème édition.

The development of this remote bank was due primarily to the developments of new tools for payments such as the bank card. Beside the traditional forms of payment, developed new forms of payment such as the credit cards, electronic carry currency and the systems of payment by Internet. Thus, developed the Automatic distributor of banknote, the Automatic tellers of Bank and the final retail outlets, which provide all services offered before by the banks by simple use of the bank card. The latter makes it possible to be protected against the fraud and theft risk. It finishes thousands of authorizations per day. This system of payment is a system “one line” which functions all the day. On a world level, a vast information network and of telecommunication was also constituted to which almost all the banks of the world are connected where they share their information. The objective of this circuit is to exchange information and operations with lower costs and to make it possible to the customers to be able to profit from the remote services allowing the knowledge of the statements of account.

2.3. The Banking Disintermediation

Financial liberalization of the Eighties generated major transformations in the financial sphere by giving the primacy to market mechanisms (opening of the money market, creation of the futures market, introduction of the negotiable evidences of indebtedness), and thus the direct finance rises to the detriment of indirect finance.

An empirical study of [Nguyen \(1998\)](#)¹⁰ on the financing by bank credits and the financing by market in France showed that since 1988, the progression of financings by market (obligations, treasury bill) was quasi constantly higher than financing by bank credits.

To ensure this passage of financing by debt from banks to the finance by market, the public authorities proceeded to the development and modernization of the existing markets (the money market and the financial market) and to an installation of new markets (such as the derived markets). The objective of modernization of the existing markets is to adapt to the international competition of the great money markets and to benefit from important flows and technological progress.

In the same way, beside the existing financial market, the public authorities place a widened money market, and this, to create a large market of capital. “A developed capital market could be competitor with the traditional intermediation of the banks” ([Ati, 2001](#))¹¹.

Lastly, to face the increasingly important risks met on the markets, settled the derived products markets.

This Transfer of financial flows from the intermediation system to the direct markets is due primarily to:

¹⁰ Nguyen The Van : « Le retour de l'intermédiation bancaire en France », Lettre de conjoncture de la BNP, mai 1998 in J-L Bailly, G. Caire A. Figliuzzi, V. Lelièvre : « Economie Monétaire et Financière », 2006.

¹¹ Ati A. (2001): « Innovations financières et dynamique de l'activité bancaire en Tunisie », Revue Tunisienne d'Economie, vol. 10, pp 51-74.

- Fixing on low level the rates on the vouchers cash and the long term accounts (which are banking resources).

- The banking savings products are imposed fiscally than the market products. This encourages the resort to the market products to the detriment of the banking placements.

The deregulation movement of financial system, which leads to development of new products and new financial functions, was the base of development of direct finance. The credit institutions lose more and more, their function of intermediation. Appear, therefore, new financial instruments and new nonbanking financial institutions which come particularly to be competitor with the banks following the abolition of the borders between the banking financial institutions and those nonbanking.

This disintermediation is relatively limited to the fact that can reach this new market only the State and the large companies. Whereas the other categories of borrowers can satisfy their needs only from financial intermediaries, from where the principal defect of this resort to direct finance and importance another time of the banking intermediation.

Generally, several studies, such as work of Tornell *et al.* (2004)¹², showed that financial liberalization, source of a considerable economic growth, are also source of a panoply of serious systemic crises, in particular in the economies which suffer from imperfect information and absence from the good governance mechanisms.

2.4. Financial Capitalism

All the definitions of financial capitalism turn around interpenetration between the banking capital and the industrial capital. The origin of this concept goes back to (Marx, 1910)¹³ who defined the financial capital as being a concentration of the capital money. It is a capital owned by the bank and invests by industrialists. Financial capitalism contributed to a strong growth of the worldwide economy during these last years, but also to an instability, which appears in a series of financial crises: crisis of the Third World countries in 1982 to the current crisis in 2007. One of the causes of the capitalism instability was the strong surpluses or strong trade deficits.

Since 1980, investors do not invest solely in a productive way, but they became actors in stock exchange. The equity holders are not any more the chiefs of companies, but the whole of the shareholders. Financial liberalization process was also followed by a disintermediation phenomenon where we passed from finance dominated by banks to finance of international market. The world of financial institutions developed and new forms of liquidities placement were created. Financial capitalism of the years 1980 allowed the emergence of speculations operations which consist in the operations of purchase and sale of goods based on anticipations of rise and fall in prices. The value of this good is determined by the market offer and demand, but also by other external factors such as climatic or political factors (war, for example). This speculation can relate to the monetary assets, the financial assets or the real assets. Speculative development was fed by

¹² Tornell A., Westermann F. and Martinez L. (2004), *op.cit*

¹³ K. Marx livre II du capital, bibl. de la pléiade, T.II, p782, cité par Hilferding R. (1910): «Le capital financier».

the increase in the debt level due to the decrease of interest rates and the removal of credit rationing. The floating and abundant overliquidities resulting from the liberalization phenomenon feed world financial instability. Financial situation of the companies is consequently dependent on the stock exchange fluctuations which are often consequence of “hazardous” forecasts. At the era of globalization, the control process became useless in front of the innovations and the continual development. The new markets and the new products became increasingly opaque and the risks cannot be evaluated any more.

The deregulation processes pushed to speak another time about financial capitalism, where the equity holders took again the strategic power.

This period was coincided with the collapse of the Brettons Wood system and the regulations restriction. A financial globalization process is implemented with an exchange flexible mode, a freedom of the capital movements as well as an independence of the central banks. Each country can be involved in debt and can fix its monetary policy freely, which induced instability. “The economic policy is permanently subjected to the markets appreciation”, (Creel *et al.*, 2009)¹⁴. Countries which trusted the market know, therefore, an influx of the capital which would lead to an exchange rates appreciation, a competitiveness losses and a trade deficit. It results from it, so a confidence crisis.

The period of deregulation was also at the origin of financial innovations such as the securitization operations and the short sales. According to Boyer (2010)¹⁵, the causes of the recent financial crises return to the effects of financial deregulation such as the strong mobility of capital, the national debt increase, the credit increase as well as the financial innovations.

The massive entry of capital supported by financial liberalization was at the origin of the increase in consumption and in public debt as well as to the speculation movements destabilizing of the exchange mode. This financial liberalization movement also promoted the technologic and financial innovations which produced a superabundance of liquidities such as the case of the United States where developed speculative bubbles being translated into a crisis subprimes. This crisis “destroyed the theoretical bases of globalized finance” (Creel *et al.*, 2009). It marked the end of financial capitalism. The introduction of such innovations into the countries subjected to regulations inherited from the past can produce speculative financial bubbles and destabilize the most dynamic modes of growth such as the case for example of Japan.

3. EVALUATION OF THE TUNISIAN BANKS FRAGILITY

The literature shows that the banking system fragility can be exacerbated by a disordered liberalization. Ben Gamra and Plihon (2008)¹⁶ stipulate that liberalization of the capital movements

¹⁴ Creel J., Mathieu C. et Sterdyniak H. (2009) : « le capitalisme financier en crise », OFCE.

¹⁵ Boyer R. (2010) : « L'économie mondiale, trente ans de turbulences », Cahiers Français, n°357.

¹⁶ Ben Gamra S. et Plihon D. (2008) : « Politique de libéralisation financière et crises bancaires », Economie Internationale, vol. 112, pp 5-28.

stimulates the entries of capital, which would lead to a fast increase in the bank credits and money supply, and thus the creation of inflation. It results from it, so the formation of the speculative bubbles as well as an appreciation of the currency which decreases exports and so the growth. This situation leads to a loss of confidence from abroad, who withdraw their capital brutally and contribute to banking failures.

3.1. Measures of the Banking Sector Fragility Index

The frequency and the gravity of the banking crises during two last decades pushed to build indicators of fragility, which alert to the first threat of crisis in order to detect it quickly and to help the decision makers to take more quickly the preventive measures. Particularly, among work which studied the banking sector fragility index, two deserve to be quoted:

- the first is that of [Hanschel and Monnin \(2003\)](#)¹⁷, where they used annual data of 8 variables for calculation of a stress index in the case of Switzerland;
- the second is that of [Kibritcioglu, 2002](#)¹⁸, where he calculated a banking sector fragility index by using a monthly data of 3 variables from 22 countries. The starting point of Kibritcioglu is that the bank is generally exposed to the various types of risks, the most important of which are the liquidity risk, the credit risk and the exchange rate risk.

It's from this second study that our empirical investigation is resulting. Therefore, our investigation test seeks to determine the fragility index of the Tunisian banking system over the period post-liberalization. Our data are collected from the World Bank and the financial statistics of the Central Bank of Tunisia (BCT) over the period 1986-2009.

3.2. Construction of the Banking Sector Fragility Index

A fragility index consists of an aggregation of three variables which reflect the symptom of a banking crisis. A banking crisis is presented under various aspects, and thus only one variable does not allow detecting the various forms of crises; thus it will be necessary to combine variables, which correspond to the various types of risks, in only one index.

The formula of the fragility index of the banking sector (BSF) arises as follows:

¹⁷ Hanschel, E. and Monnin, P. (2003), "Measuring and forecasting stress in the banking sector: evidence from Switzerland", 22, BIS Papers.

¹⁸ Kibritcioglu A. (2002): « Excessive Risk-Taking, Banking Sector Fragility, And Banking Crises»; office of Research Working Paper, Number 02-0114, 2002.

$$BSF_t = \frac{\left(\frac{CSP_t - \mu_{csp}}{\sigma_{csp}}\right) + \left(\frac{DP_t - \mu_{dp}}{\sigma_{dp}}\right) + \left(\frac{EE_t - \mu_{ee}}{\sigma_{ee}}\right)}{3}$$

3.3. Definition of the Variables

- BSF: banking sector fragility index
- CPS: bank claims on total domestic private sector: who measures the credit risk which corresponds to the incapacity of the borrowers to refund their debts. Following the financial liberalization process and the deposits guarantee scheme, a bank can be encouraged with an excessive taking risk, which would lead to an increase in the volume of the claims granted to the private sector. It results from it, so an increase in the nonperforming claims.
- DP: total of Bank Deposit: This represents the liquidity risk. When there are massive withdrawals of funds from the depositors, this reflects a loss of the depositors' confidence, and thus a decrease of the bank deposits and so a risk of the liquidity availability. This massive and unexpected withdrawal can lead to the bank fragility. This situation can be explained by:
 - "Bank runs": the bank is forced to liquidate its short-term assets, which can cause its bankruptcy.
 - "Fundamental run": a quality deterioration of the bank assets, which will be causes of this massive withdrawal from the depositors.
 - "Speculation run": the fundamental of the bank are healthy, but the depositors believe that it is insolvent. In this case each one anticipates that the other depositors will withdraw in mass their funds.
- FL: Foreign liabilities of banks" which measure the exchange risk. Increase in these commitments will be vulnerable in the case of national currency depreciation.

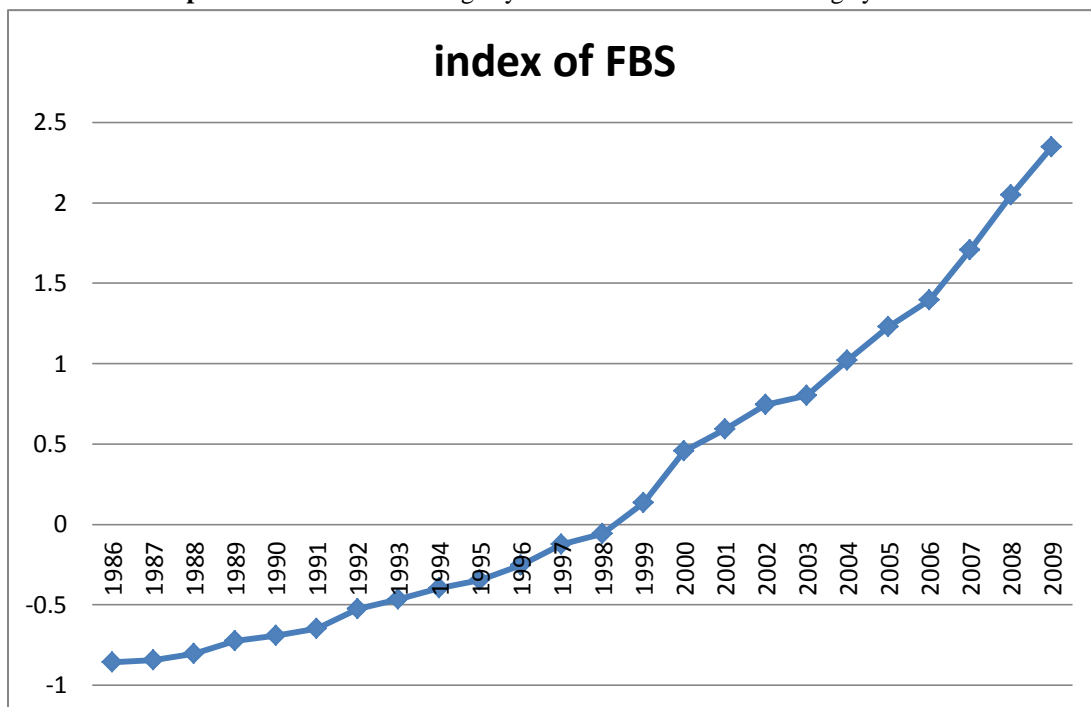
μ et σ stands, respectively for the arithmetic average and standard deviation of these three variables.

Any decrease of the fragility index is associated with a fragility growth of the banking system. However, it will be useful to note that there are two levels of fragility:

- If $-0.5 < BSF_t < 0$, the banking system is in a medium fragility period;
- If $BSF_t \leq -0.5$, the banking system is in period of high fragility, we can speak in this case about systemic crisis.

3.4. Interpretation of the Results

Graph-1. Evolution of the fragility index of the Tunisian banking system:



The results of our study arise in the following graph. This graph shows the evolution of the banking sector fragility index between 1986 and 2009, it is the period following the liberalization process adoption in Tunisia. The period 1993-1998 shows a medium fragility episode as the index value was between -0.5 and 0, whereas the period 1986-1992 shows a high fragility episode where the index value is lower than -0.5. This period was characterized by an increase in the volume of the claims granted to private sector. Indeed, following the interest rates liberalization process, Tunisian banks engaged in increasingly risky activities (moral risk). Thus banks will be confronted with a deterioration of the claims evaluation which will cause a blaze of the nonperforming claims. In the case of the borrowers' failure, they will be unable to refund their debts services; as a result banks will be exposed to the credit risk and thereafter to a fragility of their system. "The moral risk can occur when banks *take excessive risks* by granting loans to conditions which can be very lucrative *at short-term* (for example in the form of commissions *at the signature*), but *for which the* long-term refunding prospects are reduced, and that they expect that *the* possible losses will be absorbed by *a third party*, like *the* country government or *the* international financial organizations" (Gonzalez-Hermosillo, 1999)¹⁹.

On another side, banking fragility can be caused by an increase in the foreign liabilities made out in currencies; what is the case for the Tunisian banks. The capital liberalization movements and

¹⁹ Gonzalez-Hermosillo B. (1999): « Crises bancaires : se doter d'indicateurs d'alerte avancée », Journal Finances & Développement, p38.

the opening to outside stimulate the banks to increase the volume of funds obtained on the international markets in particular if they do not anticipate the depreciation of their national currency. However, in the case of domestic currency devaluation, more the volume of their external commitments is high, more their wealth will be reduced and more they will be exposed to the risks and to fragility of their systems.

Generally, the literature studying the causes of the banking crises show that these matters are due particularly to:

- Macroeconomic Fundamentals which consist to the inappropriate preconditions from the financial liberalization process.

- Microeconomic Fundamentals which return to the banking environment transformations following the liberalization and globalization process.

So the need for the institutional environment improvement is posed which can appear by introducing of a banking system of good governance.

The empirical literature shows, also, that countries having the same monetary and financial systems can have different macroeconomic performances because of the difference in their qualities of banking governance. Therefore, the success of financial liberalization in a country is conditioned by the quality of its banks management. In the same way, the disorders and the disturbances of the financial markets push to the belief in the governance.

Indeed, the economic and financial crises call into question several commonly admitted precepts, such as benefits of liberalization, the crucial role of speculation in the dynamization of the market, the opportunity of the recourse to the most sophisticated derived products. The fatal consequences of these crises fed the debate on the need for a redefinition of the financial system based on more transparency, an equal share of the risks, a co-operation for controlling the systemic risks, in short a good governance.

Financial liberalization and the various conflicts met in the firm between its partners were the main sources of banking fragility, from where the need for the implementation of a good governance system is posed. The governance mechanisms role consists to attenuate these conflicts by the alignment of the stakeholders' interests. So the role of the property structure and the council structure in the management control and thus the firm performance improvement, were largely studied in the empirical literature like internal governance mechanisms, (Belkhir, 2005)²⁰. Good governance takes place, therefore, as a crucial mechanism to ensure a rigorous management of the banking firm.

4. CONCLUSION

Financial systems knew a rather major change induced by the commitment of the financial liberalization movements. This movement was at the origin of major changes and an important reform of the national and international financial sector. Many work, such as those of [Dermirguc-](#)

²⁰ Belkhir M. (2005): «Board structure, ownership structure and firm performance: evidence from banking», Applied Financial Economics, Vol. 19, pp.1581-1593.

Kunt and Detragiache (1998)²¹ and Miotti and Plihon (2001)²², showed that financial liberalization is the main cause of the recent banking and financial crises. According to Plihon and Miotti, financial liberalization makes the banks more vulnerable to the macroeconomic shocks which could lead to their failures. These banking failures, which are the causes of crises can also, being explained by the speculative behaviors of the banks supported by financial liberalization.

To show this point, we conducted a study on the fragility index of the Tunisian banking sector over the period post-liberalization. Our results confirmed the economic literature showing a causality relation between financial liberalization and the banking systems fragility. We noticed a period of high fragility starting from 1986 (date of the liberalization process adoption in Tunisia). In addition to these factors, several studies showed that the banking bankruptcies are due, also, to the unhealthy management strategies and the fraudulent behaviors of the leaders who increase the banking opacity and facilitate his failure.

Generally, the banking system fragility is due mainly to financial liberalization and the conflicts of interests met in these banking firms, i.e. to a bad management and a bad risk control, from where is posed, the necessity, of the reinforcement of the risk management process and the implementation of a good governance system.

REFERENCES

- Aglietta, M., 2000. La globalisation financière. *l'Economie Mondiale*: 52 – 67.
- Artus, P. and A. Cartapanis, 2008. Globalisation financière et croissance dans les économies émergentes, la sous estimation des contraintes macro-économiques induites. *Revue Economique*, 59(6): 1145-1158.
- Ati, A., 2001. Innovations financières et dynamique de l'activité bancaire en Tunisie. *Revue Tunisienne d'Economie*, 10: 51-74.
- Belkhir, M., 2005. Board structure, ownership structure and firm performance: Evidence from banking. *Applied Financial Economics*, 19(19): 1581-1593.
- Ben Gamra, S. and D. Plihon, 2008. Politique de libéralisation financière et crises bancaires. *Economie Internationale*, 112: 5-28.
- Boyer, R., 2010. L'économie mondiale, trente ans de turbulences. *Cahiers Français*, (357).
- Creel, J., C. Mathieu and H. Sterdyniak, 2009. Le capitalisme financier en crise. OFCE.
- Delorme, A., 2002. Stabilité des systèmes bancaires des marchés émergents: Une proposition de régulation prudentielle différenciée.
- Dermirguc-Kunt, A. and E. Detragiache, 1998. Financial liberalisation and financial fragility. IMF Working Paper
- Flandreau, M., 2000. Le début de l'histoire: Globalisation financière et relations internationales. *Politique Etrangère*, 65(3-4): 673-686.
- Flandreau, M. and M.C. Riviere, 1999. La grande retransformation? Intégration financière internationale et contrôles de capitaux, 1980-1997, *Economie Internationale*, CEPII, Research Center, (78): 11-58.

²¹ Dermirguc-Kunt A. and Detragiache E. (1998): «Financial liberalisation and financial fragility», IMF working paper.

²² Miotti L. et Plihon D. (2001) : «Libéralisation financière, spéculation et crises bancaires» *Economie Internationale*, N°85.

- Garsuault, P. and S. Priami, 1997. *La banque fonctionnement et stratégies*. 2nd Edn., Paris: Economica.
- Gonzalez-Hermosillo, B., 1999. Crises bancaires : Se doter d'indicateurs d'alerte avancée. *Journal Finances & Développement*: 38.
- Hanschel, E. and P. Monnin, 2003. Measuring and forecasting stress in the banking sector: Evidence from Switzerland. 22, *BIS Papers*.
- Kibritcioglu, A., 2002. Excessive risk-taking, banking sector fragility, and banking crises. Office of Research Working Paper, No 02-0114.
- Marx, K., 1910. Livre II du capital, bibl. de la pléiade, T.II, cité par Hilferding R. (1910): *Le Capital Financier*: 782.
- Miotti, L. and D. Plihon, 2001. Libéralisation financière, spéculation et crises bancaires. *Economie Internationale*, (85).
- Nguyen, T.V., 1998. Le retour de l'intermédiation bancaire en France. Lettre de conjoncture de la BNP, mai 1998 in J-L Bailly, G. Caire A. Figliuzzi, V. Lelièvre : *Economie Monétaire et Financière*. 2006.
- Prasad, E., K. Rogoff, S.J. Wei and K.M. Ayhan, 2003. Effet de la mondialisation financière sur les pays en développement: Quelques constatations empiriques.
- Tornell, A., F. Westermann and L. Martinez, 2004. The positive link between financial liberalisation, growth and crises. *NBER Working Papers*.