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Financial innovation and financing of the economy: relational schema

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Résumé

Ces deux dernières années le monde est entré dans une phase de crise économique due aux effets de la pandémie Coronavirus. Pour faire face à cette crise et trouver des sources de financement pour faire relancer l'économie, un nouvel instrument financier a été introduit. Il s'agit de l'innovation financière le « coronabonds », chose qui nous a poussé à s'interroger sur l'historique de l'innovation financière. Autrement dit, sur son émergence ainsi que son développement.

Après nos investigations, nous avons constaté que l'émergence et le développement de l'innovation financière sous ses différentes formes est intimement lié à l'évolution du système de financement d'un système réprimé fondé sur la répression financière vers un système libéralisé ou bien de marché. Également, nous avons pu relever que cette innovation n'a connu un essor remarquable qu'après l'instauration des bases de la libéralisation financière notamment la déréglementation, le décloisonnement et la désintermédiation.

L'objectif donc du présent article est de traiter les différents facteurs à l'origine de l'apparition et de l'essor de l'innovation financière et d'esquisser par conséquent un schéma relationnel qui démontre que l'innovation financière est intimement liée à l'évolution du système de financement d'un système réprimé vers un système libéralisé.

Mots clés : Financement de l'économie, innovation financière, répression financière, libéralisation financière.

Abstract

Over the past two years, the world has entered a phase of economic crisis due to the effects of the Coronavirus pandemic. To deal with this crisis and find sources of financing to revive the economy, a new financial instrument has been introduced: the financial innovation called "coronabonds". The thing that leads us to wonder about the history of financial innovation, that is, its emergence as well as its development.

After our investigations, we found out that the emergence and development of financial innovation in its various forms is closely linked to the evolution of the financing system, from a repressed system based on financial repression to a liberalized system or That of the market. Also, we were able to note that this innovation only experienced remarkable growth after the establishment of the bases of financial liberalization, in particular deregulation, decompartmentalization and disintermediation.

The objective of this paper is then to deal with the various factors at the origin of the appearance and rise of financial innovation, and to outline a relational diagram that demonstrates that financial innovation is intimately linked to the evolution of the financing system, from a repressed system to a liberalized system.

Keywords: Financing the economy, financial innovation, financial repression, financial liberalization

Introduction

Faced with the economic crisis recently triggered by the effects of the Covid19 pandemic, financial innovation has been put in place for financial reasons. It is about the "Coronabonds"([1]) debt security.

This fact has prompted us to question financial innovation, its history, and the relationship that may exist between financing the economy and financial innovation.

According to our investigations, we found that the notion of financial innovation only appeared recently in relation to industrial innovation. It dates back to the work of Gurley and Shaw who first dealt with the development of the financial system.

Also, our study has shown that since the end of the 1970s, repressed financing has remained the only financing system of the economy. It is based on excessive regulation. To escape this regulation, new financial instruments have emerged hence the emergence of financial innovation.

Furthermore, the repressed financing system has had unfortunate consequences on both economic and financial development. These are essentially high inflation rates, insufficient mobilized savings, low investment, increase in external debt, etc. The combination of these monetary and financial drawbacks, as real consequences have led to the replacement of that system by a new one, based on market mechanisms.

Unlike the old system, which was based on excessive regulation, the new funding system is founded on a panoply of liberal measures. These, in turn, have enabled financial innovation to flourish.

[1] - For more informations see :
- Hadjimichalis, C. (2021). An uncertain future for the post-Brexit, post-COVID-19 European Union. *European Urban and Regional Studies*, *28*(1), 8-13.
- Yoshino, N., & Hendriyetty, N. (2020). The COVID-19 Crisis: Policy Recommendations for Japan. *The Economists' Voice*, *17*(1).
- Tesche, T. (2021). Pandemic Politics: The European Union in Times of the Coronavirus Emergency. *JCMS: Journal of Common Market Studies*.

Alongside these measures, the forms of financial innovation have also intensified under the effect of the economic changes experienced by the world around the 1970s, and the increased use of technologies in financial activities([2]), etc..

The purpose of this paper is therefore to explain the emergence and development of financial innovation. This involves, among other things, answering the following questions:

• How has financial innovation emerged?

• What are the factors behind its development?

• What is the relationship that may exist between financial innovation and the financing system of the economy?

We will deal with this problem, within the framework of an analytical approach. To do this, this article will be divided into two main parts. The first will focus on the factors behind the emergence of financial innovation. Regarding the second, it will tackle the various elements that have contributed to its development.

[2] - Arthur, K. N. A. (2017). Financial innovation and its governance: Cases of two major innovations in the financial sector. *Financial innovation*, *3*(1), p : 11.

1. The repressed financing system and the emergence of financial innovation:

This point aims to expose the crucial role of the repressed financing system in triggering financial innovation. Thus, the first point will develop the main features of this type of financing as well as the characteristics that determine it, based on the neoliberal current. The second will focus on the consequences of this financing system, consequences that have resulted in the advent of liberalized financing based on market mechanisms as an alternative system.

1.1. Repressed financing: main features and characteristics:

The repressed funding system is a system that reflects intense state intervention. This intervention is manifested by broad legislation regulating banking and credit([3]). It is a system that is essentially based firstly on excessive regulation of interest rates and credits(1), secondly on compartmentalization, concentration, and the lack of competition(2), and finally on the predominance of intermediated financing (3).

1.1.1. Funding based on excessive regulation:

The repressed financing system is based on a strong binding regulation, as mentioned elsewhere, it takes the form of an administration of interest rates, direct quantitative control of credit through the supervision and selectivity of credit, compulsory jobs, and heavy taxation. This is a set of restrictions that McKinnon calls “instruments of financial repression” ([4]). According to Reverse (2008), “This financing system (…) was largely administered, both because of the mode of transmission of interest rates and the existence of specialized circuits marked by specific interest rates” ([5]).

Thus, it seems that the repressed financing system was under heavy control as a result of the policy of financial repression based on strict regulation. This state of affairs has resulted in the appearance and advent of financial innovations to escape this regulation, hence the appearance of new financial products([6]).

[3] - Schwarcz, S.L.(2009). Regulating Complexity in Financial Markets. *Washington University Law Review*, 87(2), 211-212.
[4] - Shaw E. S. (1973). *Financial Deepening in Economic Development.* Oxford University Press. New York.
[5] - Renversez, F. (2008). De l'économie d'endettement à l'économie de marchés financiers. *Regards croisés sur l'économie*, (1), P: 54.
[6] - Camdessus, M. (2014). La régulation du secteur bancaire dans les pays en développement et les pays émergents. *Revue d'economie du developpement*, *22*(2), 9-20.
- Zelenko, I. (2009). Innovations financières pour les pays émergents. *Revue d'économie financière*, 157-171.

In addition to excessive regulation, the repressed funding system is also characterized by concentration, siloing, and lack of competition. These characteristics will be the subject of the following point.

1.1.2. Concentration, compartmentalization, and lack of competition between financial institutions:

Among the characteristics of a repressed financing system, there is also initially a high concentration, both financial and geographical, of the banking system. Secondly, a very pronounced financial compartmentalization and finally, a lack of competition between financial institutions.

Regarding banking concentration, it can manifest itself in the oligopolistic structure of the banking sector. It is a domination of the financial sector by a small number of institutions. The objective pursued lies in the will of the public authorities to set up banking establishments with sufficient financial size capable, on the one hand, of offering economic activity the necessary means of financing, and on the other, access the international market.

Alongside banking concentration, in financially repressed economies, we are also witnessing very pronounced compartmentalization between their various financial institutions. This compartmentalization is manifested by the existence of a financial system characterized by a lack of homogeneity and a certain financial dualism. The latter is revealed by the coexistence of two financial sectors, in particular private commercial banks and specialized financial organizations([7]).

It should be noted that the financing of these bodies is characterized, as their names indicate, by a certain specialization. They are interested in financing primary activities that are riskier and less profitable, but meet development objectives, whereas commercial banks are mainly concentrated in modern sectors of economic activity with low risk and high returns([8]).

Another characteristic of the repressed financing system is the absence of fair and perfect competition between financial institutions. This situation is the result of excessive regulation

[7] - Lee, C. C., Wang, C. W., & Ho, S. J. (2020). Financial innovation and bank growth: The role of institutional environments. The North American Journal of Economics and Finance, 53, 101195.

[8]- Guill, G. D. (2016). Bankers trust and the birth of modern risk management. *Journal of applied corporate finance*, *28*(1), 19-29.

which eliminates all banking competition, since it subjects all banking establishments to the same standards while reducing their possibilities for expansion, on the one hand, and on the other hand it is also the result of financial compartmentalization characterized by financial bipolarity. This is manifested by the existence, on the one hand, of private banking establishments which give priority to short-term loans and the financing of modern economic activities, and on the other, of non-banking public financial establishments which are specialized in medium and long term loans.

In fact, it is this specialization that limits competition both in the mobilization of resources and in the allocation of funds. Moreover, the oligopolistic situation allows banks to collude with each other to impose high-interest rates and high-value collateral on the economy.

1.1.3. The predominance of intermediated financing and marginalization of the financial market:

The financially repressed economies are essentially based on financial intermediation in their financing, and, on the other hand, grant only a negligible place to the financial market. The latter plays only an insignificant role and participates only residually in the financing of the economy([9]).

Companies finance themselves mainly by resorting to bank credit and not to capital increases or borrowings on the financial market. Credit is the main mode of financing productive activity, while stock markets are generally non-existent, or are limited to short-term secondary markets, whose role is considered marginal. In these economies, we are witnessing a predominance of disintermediated financing.

Moreover, for these economies, this type of financing is designed as the best means of increasing the savings rate and the investment rate by making it possible to fully exploit the incentives to save and allowing deficit agents to increase their investment. This is why this type of financing rules. Similarly, the increased taxation of investment income penalizes, in turn, savers and goes against the construction of a financial market.

[9] - Arthur, K. N. A. (2017). The emergence of financial innovation and its governance-a historical literature review. Journal of Innovation Management, 5(4), 48-73.

Finally, it should be noted that the adoption of the repressed financing system, based on the instruments of financial repression policy, surely had economic and financial consequences that we will try to deal with in the following point.

1.2. The economic and financial implications of the repressed financing system: the analysis of McKinnon and Shaw (1973):

The manipulation of all the instruments of financial repression, on which the repressed financing system is based, in particular the administered interest rates, the supervision and the selectivity of credits, compulsory jobs, and heavy taxation.

The objectives that have been targeted through this excessive regulation lie essentially in the increased mobilization of financial resources in favor of adequate financing of the economy. However, the instruments of this financing policy weighed, therefore, heavily on the behavior of economic and financial variables according to the analysis carried out by McKinnon and Shaw.

1.2.1. The economic and real consequences:

McKinnon and Shaw's analysis has shown that the instruments of financial repression tend to have economic and real consequences. This financing policy, based on capping interest rates, reduces savings and fixes investments below their optimal level.

Contrary to what is provided for in the policy of financial repression, a fall in interest rates has the effect of reducing the savings mobilized, and consequently, a reduction in investment. With interest rates set below their market equilibrium values, savers would rather keep their cash at home than lending it out at reduced rates. On the other hand, investors demand more loans to meet their financing needs, which leads to a situation of imbalance. “The situation of financial repression is therefore characterized by the imbalance and the excess of demand for credit oversupply”([10]).

Faced with this situation of imbalance, banks adopt an excessively cautious behavior, according to McKinnon and Shaw (1973), thereby rejecting the riskiest and therefore the most profitable projects. “Generally it will be traditional low-yield investments that will be favored because

[10]- Rosa, J. J., & Dietsch, M. (1981). *La répression financière*. Bonnel, P: 86.

they appear safer and easier to finance"([11]). It is therefore the allocation of resources available in the form of savings for the financing of non-optimal investments and the exclusion of profitable projects.

Indeed, Shaw (1973) argues that "effective downward ceilings on real deposit rates intensify risk aversion and the liquidity preference of intermediaries. Banks give a privileged place in their portfolios to borrowers with a well-established reputation or commercial enterprises that have enjoyed a long period of stability. There is little incentive to explore new and riskier lending opportunities" ([12]).

The policy of financial repression, based on fixing interest rates at low levels, leads according to the analysis of McKinnon and Shaw, to the reduction of savings, the fixing of investment below its optimal level, and the deterioration in the quality of the investment made([13]).

Broadly, and according to proponents of the financial repression approach, including McKinnon and Shaw, government setting of real interest rates at artificially low levels depresses, on the one hand, deposits banks reducing the amount of savings allocated to investment, and on the other hand, modifies the behavior of financial intermediaries. This affects the quality of this investment insofar as some companies do not hesitate to implement the least profitable projects. These companies "start by implementing the most profitable ones, but if the cost of credit comes down, they can generate a differential profit from projects that are less profitable than the previous ones"([14]).

Hence, it, therefore, becomes clear how financial repression, via the fixing of interest rates at low levels, discourages the expansion of deposits and consequently reduces savings, which remain insufficient for the financing of investments not optimal against profitable projects([15]).

Shaw and McKinnon then conclude that the liberalization of interest rates and more specifically the increase in the remuneration of invested savings will constitute the most effective means

[11]- Hattab-Christman, M. (1996), «Monnaie, finance et développement: une revue de la littérature», *Annales Marocaines d'Economie*, N°17, P: 18.

[12]- Shaw, ES. (1973), *Financial deepening in economic development*, Op. Cit., P: 86.

[13]- Gibson, HD & Tsakalotoss E.(1994), «The scope and limits of financial liberalization in developing countries: a critical survey», *The journal of development studies*, Vol. 30, N°3, P: 585.

[14]- Rosa J. & Dietsh (1982). *la répression financière*, Op. Cit., P: 86.

[15]- Zouari, G., & Abdelmalek, I. (2020). Financial innovation, risk management, and bank performance. *Copernican Journal of Finance & Accounting*, *9*(1), 77-100.

which will encourage savers to save more and consequently increase the level and the quality of the investment.

1.2.2. The monetary and financial consequences:

In addition to the economic consequences, there are monetary and financial consequences, among which we find essentially those linked to high inflation rates.

As already pointed out, the implementation of a policy of low-interest rates, and often negative in real terms, discourages savings and consequently leads to an increase in the demand for credit which could not be satisfied by domestic resources. Faced with this situation, and to meet its operating and investment expenses on the one hand, and to supply all these requests for credit from investors, the State finds itself obliged to resort to inflationary monetary financing.

In other words, to deal with this lack of financing resources, the public authorities have recourse to an additional and unrequited creation of money. For McKinnon and Shaw, "a policy of financial intervention (...) tends to provoke rather than combat financial repression and inflation"([16]).

Alongside the high inflation rates engendered by the policy of financial repression on which the repressed financing system is based, the monetary and financial consequences are multiple. It is essentially a question of the development of informal finance following the appearance of unstructured financial markets, the increase in external indebtedness as well as the flight of capital, etc.

The policy of financial repression, based on capping interest rates at low levels, leads to low remuneration. Faced with this weakness, savers, holders of funds, prove that it is profitable for them to seek foreign sources guaranteeing a positive real return on their deposits. The consequence is that these practices result in the outflow and flight of capital.

In these circumstances, and to compensate for the shortfalls in domestic funds caused by financial repression, the public authorities are forced to resort massively to external borrowing to meet their financing needs. However, this massive recourse to external debt exposes the economy to increased financial dependence and external vulnerability.

[16]- Galbis V. (1986). Structuralisme et libéralisation financière. *Revue finance et développement*, 10(2), P : 135.

Also, low or negative real interest rates discouraging the expansion of domestic deposits strongly encourage borrowers to seek other sources of financing to make their investments. Faced with this situation, new loan circuits will appear. Fund seekers will therefore turn to unstructured financial markets to obtain the financing possibilities they need and which they could not obtain by resorting to official markets, obviously because of financial repression.

This panoply of drawbacks of the repressed finance system, based on excessive financial regulation, has made the latter unsuitable. This is the reason why financial institutions, notably banks and credit organizations, found themselves obliged to offer new, more sophisticated financial products whose purpose was to escape this restrictive regulation, hence the appearance of financial innovation. This idea is supported by De Boissieu, who argues that “in the American context, the pace of financial innovation has increased with regulation. It would be daring to transpose this finding to all the other OECD countries” ([17]).

Moreover, the disadvantages of the repressed financing system have also favored the advent of a new alternative system called "market financing system", whose measures have favored the development of financial innovation. we will discuss this in the next point.

2. Liberalized financing system and development of financial innovation:

Following the economic and financial disadvantages of the repressed financing system, the latter gave way to another more liberalized financing system, based on the principles of financial liberalization, in particular deregulation, ‘decompartmentalization’ and disintermediation.

This state of affairs is the result of the difficulties that financial repression caused, which prompted theorists and economists, mainly McKinnon (1973) and Shaw (1973) to opt for new regulation. The latter was set up to liberalize the financing system from its restrictions, increasing the degree of competition and energizing the financial market through the promotion of disintermediated financing([18]). This has greatly encouraged the development of financial innovation.

[17]- De Boissieu, C. (1983). Les innovations financières aux Etats-Unis. *Revue de l'OFCE, 3*(1), P: 113.

[18] - Gerardi, K. S., Rosen, H. S., & Willen, P. S. (2010). The impact of deregulation and financial innovation on consumers: The case of the mortgage market. *The Journal of Finance*, *65*(1), 333-360.

Alongside the measures of financial liberalization (1), other factors, according to the followers of financial innovation, have contributed to its growth. These are the transformations that the world experienced around the 1970s; technological changes and the behavior of economic players (2).

2.1. The market financing system: the basic principles:

To free the financing system from its restrictions, new liberal measures have been adopted, which have encouraged the growth of financial innovation. These are mainly, according to McKinnon and Shaw, measures of financial liberalization, in particular deregulation, ‘decompartmentalization’, and financial disintermediation.

This financing system, based on a set of principles of the market economy, was adopted with a view to greater efficiency in the financing of the economy.

2.1.1. Financial deregulation:

As mentioned earlier, McKinnon and Shaw's approach underscored the harmful nature of the financing policy known as financial repression. Something that prompted them to opt for financial liberalization as a new effective financing policy allowing the development of banking intermediation, the promotion of savings, the accumulation of capital, and consequently better financing of the economy.

Following this approach, the improvement of the financing of the economy can be achieved, thanks to a liberalization which is based on the idea that; let market mechanisms and forces determine the laws and operating rules of the financial system for increased mobilization of savings and their investment allocation. Hence financial deregulation.

This deregulation, which consists of the relaxation of the regulations in force, has generated strong competition as well as strong capital mobility([19]). It, therefore, resulted in the establishment of a context of competition which resulted in the appearance of new financial instruments resulting from financial innovation. This policy regroups in its clauses several techniques. These are the liberalization of interest and exchange rates, the deregulation of credit, the relaxation of compulsory employment, etc.

[19]- Aglietta, M. (1991). Epargne, innovations financières et croissance. *Revue d'économie financière*, (17), P: 14.

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About the liberalization of interest and exchange rates, it consists in subjecting these rates to market mechanisms to establish, on the one hand, positive real interest rates, the objective of which is to meet the lack of funds caused by financial repression.

Neoliberal theorists claim that liberalization leads to high real interest rates, making financial capital more attractive, which in turn encourages holders of funds to make investments and seek financial capital gains.

For these theorists, positive real interest rates stimulate the accumulation of savings and, consequently, adequate financing of the economy, which in turn will allow investment and growth. On the other hand, liberalization also affected exchange rates following the abolition of exchange controls.

Nevertheless, this deregulation has resulted, on the one hand, in the volatility of rates and exchange rates leading to financial risks and, on the other, in instability of financing([20]). To manage this instability and protect against the increased variability of interest rates([21]), new instruments have emerged. They are intended in particular to hedge against new risks relating to interest rates and exchange rates such as swaps and options. Citing the example of MBS (Mortgage-Backed-Securities) and ABS (Asset-Backed-Securities), Suzuki (1986) asserts that deregulation has enabled a marked acceleration in the pace of financial innovation([22]).

Gowland (1991)( ), in turn, argues that the growing fluctuations in interest rates and exchange rates have become an interesting source of innovation and profits, because of the arbitrage possibilities they offer. This idea is supported by Rajan R. (2005), who in turn considers that deregulation is the main driver for the intensification of financial innovation([23]).

About the deregulation of credit, it means the removal of quantitative credit control. This is a new logic based on the transition from an administered mode of regulation to a mode of regulation based on market mechanisms. The supply of credits therefore must not be made by administrative decision, but according to the law of supply and demand.

[20] - Alonso, A., & Marqués, J. M. (2019). Financial innovation for a sustainable economy. *Banco de España Occasional Paper*, (1916).
[21] - De Boissieu C. (1983). Les innovations financières aux États-Unis, Op. Cit. P: 115.
[22] - Suzuki Y. & Yomo, H.(1986). *Financial innovation and monetary policy. Asia and the West*. University of Tokyo Press.
[23] - Rajan, R. G. (2006). Has finance made the world riskier?. *European financial management*, *12*(4), 499-533.

The abandonment of the credit framework, therefore, lifted the rigidities that characterized the repressed financing system, while allowing credit institutions to compete freely in the conquest of new market shares.

In addition to the liberalization of interest rates and the deregulation of credit, financial deregulation also concerned the relaxation of compulsory employment. This is the alleviation of jobs imposed on commercial banks to act on the credits granted as well as on bank liquidity, and consequently, on the money supply in circulation. The objective of this operation is to mitigate the impact of quantitative regulations on the resources intended for financing the economy.

All of these adopted techniques are part of financial deregulation. The latter "removed the institutional obstacles which hampered the mobility of capital"([24]).

At the same time as this deregulation, a panoply of new financial instruments stemming from financial innovation has been developed to enable savers and investors to deal with the risks associated with the growing uncertainty relating to the lifting of regulations and the instability of interest rates and exchange rates. In this sense, Suzuki (1986)([25]) argues that deregulation has allowed a marked acceleration in the pace of financial innovation such as MBS and ABS.

Generally, it should be noted that financial deregulation is often put forward when explaining financial innovation, however, it is only one element among others that are at the origin of the growth of innovation. financial innovation, namely financial ‘decompartmentalization’ and financial disintermediation.

2.1.2. Decompartmentalization and stimulation of competition:

Another principle of financial liberalization which, alongside deregulation, has contributed to the development of financial innovation is the ‘decompartmentalization’ of capital markets. It is about blurring the boundaries between the different capital markets, whether internally or externally.

[24]- Aglietta, M. (1991). Epargne, innovations financières et croissance, *Op. Cit.*, P:14.
[25] - Suzuki Y. & Yomo, H.(1986). *Financial innovation and monetary policy, Asia and the West*, Op., Cit.

At the internal level, it involves the removal of barriers separating both credit institutions, in particular, deposit banks and investment banks([26]) on the one hand, and capital markets, in particular the money market and the financial market, on the other. This allows easy and quick switching between the different compartments of one market and from one market to another([27]). This homogeneity of capital markets has resulted in fierce competition between intermediated finance and direct finance.

Externally, decompartmentalization can manifest itself in the integration of international financial markets. This integration is the result of the abolition of borders between these markets, hence the external liberalization of financial operations. Something that has favored a high international financial transfer, free movement of capital, free exchange of financial services, and the removal of exchange controls, such as the creation of the single capital market by the European Union.

This unification of the financial markets has resulted in the establishment of a context of increased competition between these different markets, both internally and externally.

Thus, the combination of all these elements has created a field conducive to the development of financial innovations. As a result, new financial instruments such as options, futures, or contracts have appeared to meet the needs of providers and fund seekers nationally and internationally. This remarkable growth in financial innovation is also linked to extraordinary advances in information systems, which have allowed extremely rapid capital flows.

2.1.3. Financial disintermediation:

Alongside deregulation and decompartmentalization, there is another fundamental principle of the policy of financial liberalization which has played a key role in the development of financial innovation, namely financial disintermediation. The latter “reflects a situation in which loanable resources no longer pass through financial institutions to satisfy the financing of borrowing agents”([28]), but this financing is done directly on the financial market. It is “a substitution of

[26]- Paulet, J. P. (1994). *Le libéralisme économique depuis 1945: de la doctrine aux grandes expériences*. Ellipses-Marketing.

[27] - Bourguinat, H. (1992). Maastricht et la théorie des zones monétaires optimales. *Revue française d'économie*, *7*(3), 3-27.

- Bourguinat, H.(1992). *Finance internationale*. PUF. Paris.

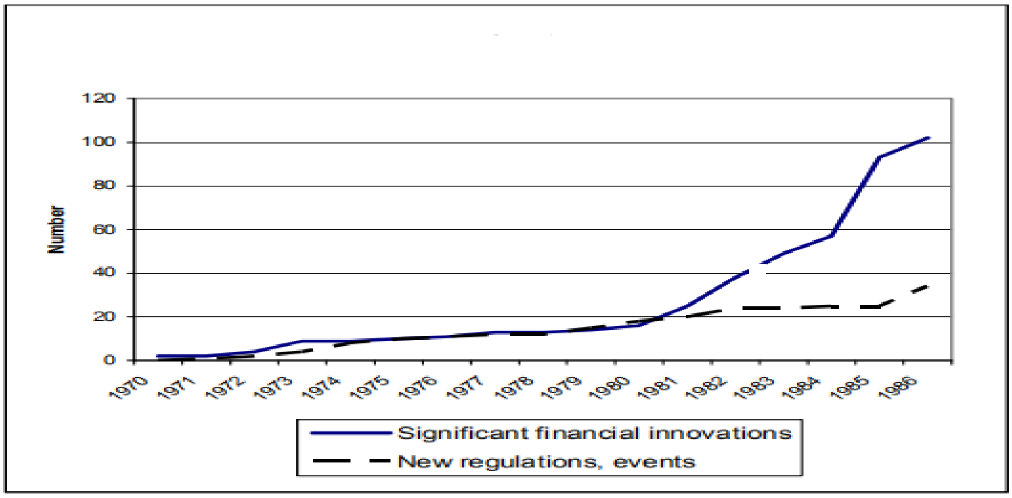
[28] - Biacabe, P. (1988). D'une intermédiation financière à une autre: le cas de la désintermédiation. *Revue d'économie financière*, P: 35.

financing and investments using securities or transferable securities for those using loans and deposits offered by financial institutions"([29]).

This state of affairs means that the share of financing provided by financial intermediaries (intermediated financing) has declined in the economy as opposed to direct financing provided by the financial market. Therefore, the financing is done by issuing securities, which allows the revitalization of the financial market([30]).

Financial disintermediation has fostered a very active process of financial innovation, mainly securitization. The latter consists of transforming assets or debts that are little or not negotiable, in particular bank loans, into securities that are easily negotiable on the secondary markets. This has made it possible to broaden the range of financial services and instruments made available to economic operators. In addition, a multiplicity of new financial products and services have been introduced thanks to the increasing sophistication of financial engineering as shown in the graph below.

Figure 1: Innovations financières entre 1970 et 1990



Source: Sveiby, K. E. (2012)([31])

[29] -Idem.

[30] - Rossignoli, B., & Arnaboldi, F. (2009). Financial innovation: theoretical issues and empirical evidence in Italy and in the UK. *International Review of Economics*, *56*(3), 275-301.

[31] - Sveiby, K. E. (2012). Innovation and the global financial crisis–systemic consequences of incompetence. *International Journal of Entrepreneurship and Innovation Management 1*, *16*(1-2), P:37.

According to this graph, it appears that financial innovation experienced a remarkable boom from the end of the 1970s. It was only following the policy of financial liberalization that financial innovation increased considerably. 'During the three most active years from 1983 to 1985, a new financial instrument was launched every two weeks([32]).

From the foregoing, it should be noted that the combination of all the financial liberalization measures has led to the encouragement of competition in the financial markets, and consequently, the creation of a field conducive to the development of financial innovation. This idea is supported by Matsushita and Greenspan (2005). These two authors argue that financial liberalization has given rise to fertile ground for financial innovation.

Alongside these measures of financial liberalization, other factors have also contributed to the development and dissemination of financial innovations that we will analyze in the following point.

2.2. Contributing factors that influence the development and diffusion of financial innovation:

Alongside the basic principles of the liberalized financing system, in particular deregulation, 'decompartmentalization' and financial disintermediation, which have played a crucial role in the development of financial innovation, other factors contribute, on their part, to the development of these innovations. These are the economic, financial, and technological factors that the world has experienced since the early 1970s. During this period, the financing system was transformed at an extremely rapid pace due to changes in economic and technology, on the one hand, and the advent of new behaviors of economic actors, on the other.

2.2.1. Transformations of the economic and financial environment:

The economic context has a definite impact on the development of the process of financial innovation. This idea is supported by most proponents of financial innovation like Silber, Frame, White, Cooper, Miler, Tufano, etc.

Silber has carried out research that analyzes new financial products and new financial practices in the United States between 1970 and 1982. He has established a set of possible "exogenous

[32] - Sveiby, KE.(2012). Innovation and the global financial crisis–systemic consequences of incompetence. Op. Cit.P: 8.

causes" of financial innovation. These are inflation, interest rate volatility, technology, government intervention, and internationalization([33]).

According to Frame and White (2002)([34]), macroeconomic instability increases financial innovation, these are macroeconomic conditions such as fluctuations in prices, interest rates, exchange rates, etc. Tufano (2003), in turn, asserts that the pace of environmental transformations is an important factor in the development of financial innovation.

Similarly, Miller (1986)([35]) and Cooper (1986)([36]) argue that changes in the conditions of the macroeconomic environment play a primary role in both the emergence and the rise of financial innovation.

Thus, during the 1970s, the economic environment was marked by intense economic transformations and large-scale structural changes. These are mainly high inflation rates, slowing growth, rising interest rate, and exchange rate risks (Silber, 1975)([37]), oil shocks, debt problems, etc.

This era was characterized by serious problems. On the financial side, the recycling of petrodollars and the financing of the US current account have contributed to the development of direct financing, to the detriment of intermediated financing([38]).

The movement of innovation was also reinforced following the acceleration of inflation during this decade. This has led to an increase in the operating costs of banks, which has encouraged these institutions to rationalize their costs while trying to adopt new technology, in particular by implementing new payment and information systems. and, consequently, financial innovations.

[33] - Silber, W. L. (1983). The process of financial innovation. *The American Economic Review*, *73*(2), 89-95.

[34] - Frame, W. S., & White, L. J. (2004). Empirical studies of financial innovation: lots of talk, little action?. *Journal of economic literature*, *42*(1), 116-144.

[35] - Miller, M. H. (1986). Financial innovation: The last twenty years and the next. *Journal of Financial and Quantitative Analysis*, *21*(4), 459-471.

[36] - Cooper, I. (1986). Innovations: New market instruments. *Oxford Review of Economic Policy*, *2*(4), 1-17.

[37] - Silber, W.L.(1975). *Financial innovation.* Lexington Book. Lexington.
- De Boissieu, C. D. (1986). Quelques réflexions sur l'analyse économique des innovations financières in Innovation et concurrence. *Economie appliquée*, *39*(3), 449-472.

[38] - Zumello, C.(2006). L'innovation et les marchés financiers aux États-Unis depuis les années 1970 : une approche contrastée. *Revue LISA/LISA e-journal*, 4(1), 307-326.

The process of financial innovation has also accelerated thanks to the instability of interest and exchange rates([39]). Following the high flexibility of these rates as well as the uncertainty it caused, financial institutions, especially banks and credit organizations, felt obliged to offer indexed and more sophisticated financial products to improve their competitiveness and capture or expand their market share.

This period was also an epoch to experience a very important event, namely the abandonment of the Bretton Woods system in favor of the system of floating changes, launched in 1971 by France and Germany and generalized in 1973([40]).

Similarly, the two oil shocks contributed to the unprecedented worsening of the balance of payments imbalances and the increased instability of relative prices. Add to this that the financial system was profoundly transformed in the late 1970s, which gave the most creative financiers the opportunity to design new financial formulas to adapt to voluntary and/or involuntary restructuring dictated by globalization([41]).

It is under the effect of all these transformations of the macroeconomic environment that financial innovations have found a favorable field for their development.

2.2.2. Technological changes:

The process of financial innovation has experienced an accelerated pace and a diversified content also under the effect of the increased use of information and telecommunications technologies in financial activities([42]). These technologies have been the main factor enabling the evolution and diffusion of financial innovation.

Moreover, the introduction of new technology in the monetary and financial field has been the main source for the development of a whole diversified range of new financial products. This idea is supported by Cadre and Blanc (2004), who points out that new types of financial instruments such as derivatives and securitized products have been developed due to advances in computer technology.

[39] - Beck, T., Chen, T., Lin, C., & Song, F. M. (2016). Financial innovation: The bright and the dark sides. *Journal of Banking & Finance*, *72*, 28-51.

[40] - Cohen, A., & Ferrandon, M. C. (1981). *Comprendre les problèmes monétaires (2): Le Système monétaire international*. FeniXX, P: 59.

[41] - Aglietta, M., & Rebérioux, A. (2010). *Dérives du capitalisme financier*. Albin Michel.

[42] - Rothwell, R. (1992). Successful industrial innovation: critical factors for the 1990s. *R&d Management*, *22*(3), 221-240.

Similarly, many authors such as Matsushita (1996), Cohen, Wesley, and Levine (1989) argue that technological advances in information and telecommunications are an important factor in the development of financial innovation([43]).

It should be noted that during the 1970s, the world experienced a technological and informational revolution. It has benefited from decisive technological innovations in the field of telecommunications and data processing, the consequences of which for the financial sector are very significant. This is what has revolutionized the financial sphere both nationally and globally([44]).

These technological innovations have made it possible to create new financial products and services and to address more effectively the financial needs of the new middle classes. According to Métais and Szymzack (1986), the new technology "facilitates the organizational development of banking establishments and allows, at the same time, the improvement of management services and means of payment and the widening of the range of services offered to customers"( ), via software specialized in the processing of banking transactions.

The scientific and technological dynamic is now one of the major pillars for the development of contemporary financial systems. It is the real driver of innovation and change.

In this sense, Cooper (2002) argues that the most important element that stimulated financial innovation was the improvement of technology. According to this author, it had not been possible for the financial markets to function in the absence of computers and telecommunications.

Alongside these information and communication technologies, which have played an important role in the rise of financial innovation, are added the innovative behaviors of economic actors which, on their part, have favored the development of these innovations.

2.2.3. Innovative behaviors of economic actors:

During the 1970s and 1980s, the financial environment was transformed at an extremely rapid pace under the effect of transformations in the economic and financial environment, giving rise

[43] - Cohen, W. M., & Levin, R. C. (1989). Empirical studies of innovation and market structure. *Handbook of industrial organization*, *2*, 1059-1107.

[44] - for more information see: Delmas-Marsalet, J. (1987). Mutation financière: Les déterminants structurels de la mutation financière récente. *Revue d'économie financière*, *2*(2), 9-24.

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to new behaviors on the part of economic actors which, on their part, favored the development of the process of financial innovation.

In addition, the profound economic and technological transformations have had a direct impact on the evolution of the behavior of banks, something that has encouraged them to adapt to them to avoid the risks that may have arisen. Thus, taking advantage of this rapidly changing context, banks have developed new fundraising formulas and set up new financial instruments for investment and payment, the aim of which is to avoid risks that may be generated by this context of instability([45]).

Alongside banks, these economic, financial, and technological changes have called on other players to participate, to a large extent, in the process of financial innovation. These are the investors. The latter began to seek new sources of investment characterized by their liquidity, yield, and security. These players, therefore, aimed to diversify their portfolios and manage them more actively to protect their savings, earn a good income and realize capital gains.

The various economic and financial transformations have also prompted public authorities to modify the regulatory and institutional framework of their financial systems. This renewal of the regulatory and institutional framework evolved gradually from the beginning of the 1980s, giving rise to a whole range of means of payment and investment, something which shows the important role of the public authorities in the evolution of the process of financial innovation([46]).

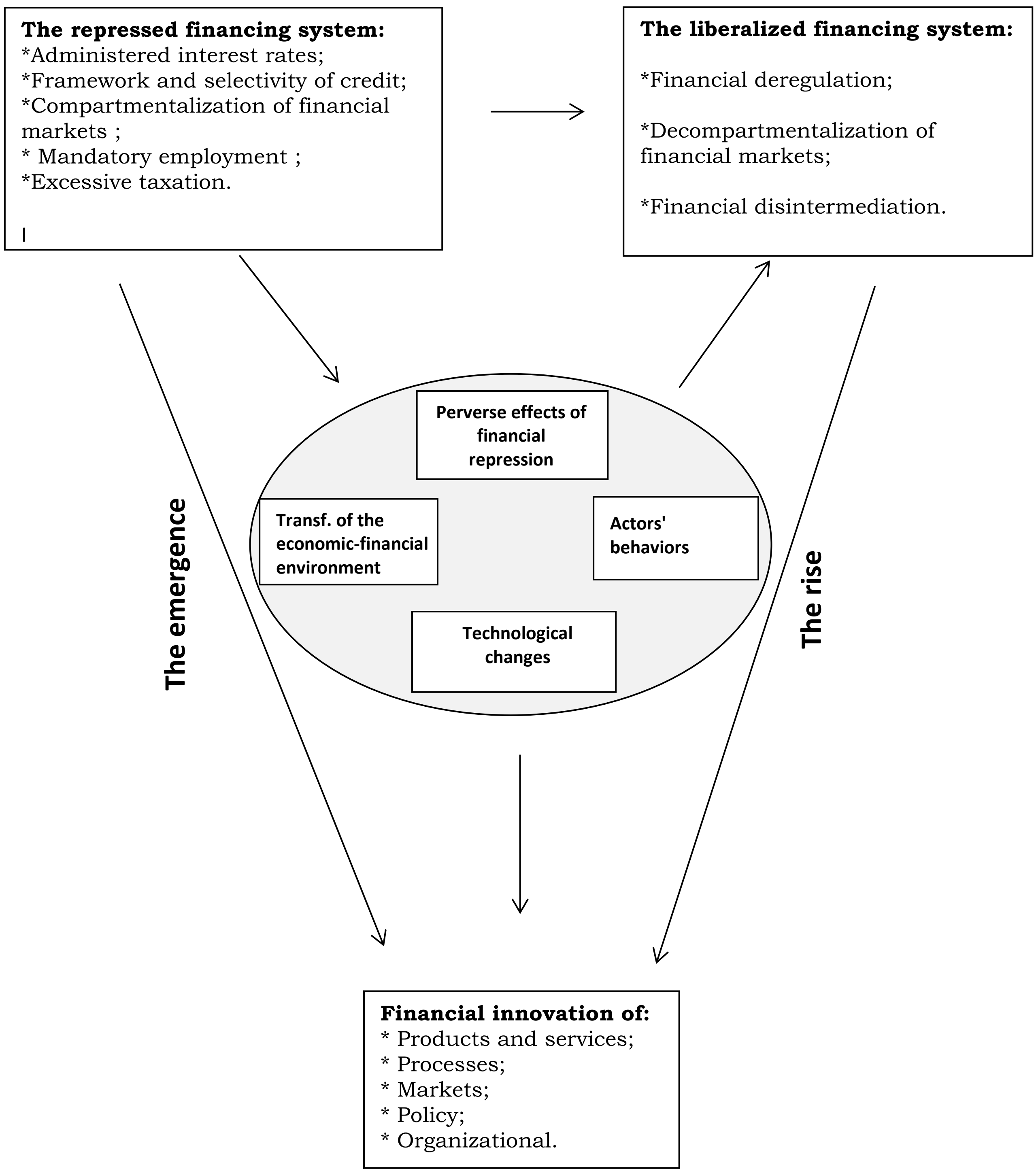
Moreover, recognizing the benefits of competition, monetary authorities believed that increased competition was likely to improve the efficiency and effectiveness of their financial systems brought about by financial innovations that benefited the public as a whole. However, to avoid any financial anarchy and establish fair competition, prudential measures were taken, measures which remained ineffective in the face of the power of market forces.

Grossomodo and, according to all the elements treated, we can schematize the process of emergence and development of financial innovation by a tripod at the center of which is the transformations of the economic-financial environment, information technologies, and the

[45] - Lerner, J., & Tufano, P. (2011). The consequences of financial innovation: a counterfactual research agenda. *Annu. Rev. Financ. Econ.*, *3*(1), 41-85.
[46] - Lerner, J. (2006). The new new financial thing: The origins of financial innovations. *Journal of Financial Economics*, *79*(2), 223-255.

behavior of the actors which connect the three ends of the triangle formed by the repressed financing system, the market financing system and financial innovation.

Figure 2: The process of emergence and development of financial innovation



Source: Author's diagram

Conclusion :

The objective of this paper is to deal with the different factors at the origin of the appearance and development of financial innovation. By way of conclusion, it should be noted that the phenomenon of financial innovation is intimately linked to the evolution of the financing system from a repressed system to a liberalized one.

The diagram was drawn up, linking the financing system and financial innovation, clearly shows that the emergence, as well as the development of financial innovation, only took place following the evolution of the financing system of the economy, from a repressed financing system, characterized by administered interest rates, the supervision and selectivity of loans, and the partitioning of financial markets, etc., to a liberalized financing system, based on market mechanisms as well than on the principles of financial liberalization, in particular deregulation, decompartmentalization, and financial disintermediation.

The implementation of these measures has paved the way for the development of financial innovation. In parallel with these measures, the forms of financial innovation have intensified under the effect of changes in the economic and financial environment, technological changes, and changes in the behavior of economic actors.

All these elements challenge us to consider in our future work the different forms of financial innovation, its characteristics, and its impact on economic growth.

BIBLIOGRAPHY :

- Aglietta, M. (1991). Epargne, innovations financières et croissance. *Revue d'économie financière*, (17), 3-31.

- Aglietta, M., & Rebérioux, A. (2010). *Dérives du capitalisme financier*. Albin Michel.

- Alonso, A., & Marqués, J. M. (2019). Financial innovation for a sustainable economy. *Banco de España Occasional Paper*, (1916).

- Arthur, K. N. A. (2017). Financial innovation and its governance: Cases of two major innovations in the financial sector. *Financial innovation*, *3*(1), p : 11.

- Arthur, K. N. A. (2017). The emergence of financial innovation and its governance-a historical literature review. Journal of Innovation Management, 5(4), 48-73.

- Beck, T., Chen, T., Lin, C., & Song, F. M. (2016). Financial innovation: The bright and the dark sides. *Journal of Banking & Finance*, *72*, 28-51.

- Biacabe, P. (1988). D'une intermédiation financière à une autre: le cas de la désintermédiation. *Revue d'économie financière*, 34-48.

- Bourguinat, H. (1992). Maastricht et la théorie des zones monétaires optimales. *Revue française d'économie*, *7*(3), 3-27.

- Bourguinat, H.(1992). *Finance internationale*. PUF. Paris.

- Camdessus, M. (2014). La régulation du secteur bancaire dans les pays en développement et les pays émergents. *Revue d'economie du developpement*, *22*(2), 9-20.

- Cohen, A., & Ferrandon, M. C. (1981). *Comprendre les problèmes monétaires (2): Le Système monétaire international*. FeniXX.

- Cohen, W. M., & Levin, R. C. (1989). Empirical studies of innovation and market structure. *Handbook of industrial organization*, *2*, 1059-1107.

- Cooper, I. (1986). Innovations: New market instruments. *Oxford Review of Economic Policy*, *2*(4), 1-17.

- De Boissieu, C. (1983). Les innovations financières aux Etats-Unis. *Revue de l'OFCE*, *3*(1), 101-119.

- De Boissieu, C. D. (1986). Quelques réflexions sur l'analyse économique des innovations financières in Innovation et concurrence. *Economie appliquée*, *39*(3), 449-472.

- Delmas-Marsalet, J. (1987). Mutation financière: Les déterminants structurels de la mutation financière récente. *Revue d'économie financière*, *2*(2), 9-24.

- Frame, W. S., & White, L. J. (2004). Empirical studies of financial innovation: lots of talk, little action?. *Journal of economic literature*, *42*(1), 116-144.

- Galbis V. (1986). Structuralisme et libéralisation financière. *Revue finance et développement*, 10(2).

- Gerardi, K. S., Rosen, H. S., & Willen, P. S. (2010). The impact of deregulation and financial innovation on consumers: The case of the mortgage market. *The Journal of Finance*, *65*(1), 333-360.

- Gibson, H. D., & Tsakalotos, E. (1994). The scope and limits of financial liberalisation in developing countries: A critical survey. *The Journal of Development Studies*, *30*(3), 578-628.

- Guill, G. D. (2016). Bankers trust and the birth of modern risk management. *Journal of applied corporate finance*, *28*(1), 19-29.

- Hadjimichalis, C. (2021). An uncertain future for the post-Brexit, post-COVID-19 European Union. *European Urban and Regional Studies*, *28*(1), 8-13.

- Hattab-Christman, M. (1996). Monnaie, finance et développement: une revue de la littérature. *Annales Marocaines d'Economie*, (17).

- Lee, C. C., Wang, C. W., & Ho, S. J. (2020). Financial innovation and bank growth: The role of institutional environments. The North American Journal of Economics and Finance, 53, 101195.

- Lerner, J., & Tufano, P. (2011). The consequences of financial innovation: a counterfactual research agenda. *Annu. Rev. Financ. Econ.*, *3*(1), 41-85.

- Lerner, J. (2006). The new new financial thing: The origins of financial innovations. *Journal of Financial Economics*, *79*(2), 223-255.

- McKinnon R. I. (1973). *Money and Capital in Economic Development.* The Brookings Institution. Washington.

- Miller, M. H. (1986). Financial innovation: The last twenty years and the next. *Journal of Financial and Quantitative Analysis*, *21*(4), 459-471.

- Paulet, J. P. (1994). *Le libéralisme économique depuis 1945: de la doctrine aux grandes expériences*. Ellipses-Marketing.

- Rajan, R. G. (2006). Has finance made the world riskier?. *European financial management*, *12*(4), 499-533.

- Renversez, F. (2008). De l'économie d'endettement à l'économie de marchés financiers. *Regards croisés sur l'économie*, (1), 54-64.

- Rosa, J. J., & Dietsch, M. (1981). *La répression financière*. Bonnel.

- Rossignoli, B., & Arnaboldi, F. (2009). Financial innovation: theoretical issues and empirical evidence in Italy and in the UK. *International Review of Economics*, *56*(3), 275-301.

- Rothwell, R. (1992). Successful industrial innovation: critical factors for the 1990s. *R&d Management*, *22*(3), 221-240.

- Schwarcz, S.L.(2009). Regulating Complexity in Financial Markets. *Washington University Law Review*, 87(2), 211-212.

- Shaw E. S. (1973). *Financial Deepening in Economic Development.* Oxford University Press. New York.

- Silber, W. L. (1983). The process of financial innovation. *The American Economic Review*, *73*(2), 89-95.

- Silber, W.L.(1975). *Financial innovation.* Lexington Book. Lexington.

- Suzuki Y. & Yomo, H.(1986). *Financial innovation and monetary policy. Asia and the West*. University of Tokyo Press.

- Sveiby, K. E. (2012). Innovation and the global financial crisis–systemic consequences of incompetence. *International Journal of Entrepreneurship and Innovation Management 1*, *16*(1-2), 30-50.

- Tesche, T. (2021). Pandemic Politics: The European Union in Times of the Coronavirus Emergency. *JCMS: Journal of Common Market Studies*.

- Yoshino, N., & Hendriyetty, N. (2020). The COVID-19 Crisis: Policy Recommendations for Japan. *The Economists' Voice*, *17*(1).

- Zelenko, I. (2009). Innovations financières pour les pays émergents. *Revue d'économie financière*, 157-171.

- Zouari, G., & Abdelmalek, I. (2020). Financial innovation, risk management, and bank performance. *Copernican Journal of Finance & Accounting*, *9*(1), 77-100.

- Zumello, C. (2006). L'innovation et les marchés financiers aux États-Unis depuis les années 1970: une approche contrastée. *Revue LISA/LISA e-journal.*, *4*(1), 307-326.