The French financial system, from past to present

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# TABLE OF CONTENTS

*Executive summary*  ........................................................................................................................................... 1

*Introduction* .................................................................................................................................................. 7

**PART I. The French financial system since 1980** .................................................................................. 12

1. Historical, political economic and international background .................................................. 12

1. Changes in the French banking and financial system up to 1980 ........................................... 12

2. The 1980s: a period of banking reform and profound change in the French financial system .. 14

3. Changes in the French banking and financial system from 1990 to today .................................. 22

2. Growth of finance in an era of financialisation and structure of the financial sector by forms of organisation ......................................................................................................................... 30

1. The size and scope of the banking industry in retrospect ................................................................. 30

2. The size and scope of capital markets ................................................................................................. 48

3. France and the international markets ................................................................................................ 72

1. Long-run empirical development of the integration of France in international financial markets .. 72

2. Institutional changes that affect the integration of France in international financial markets .... 84

3. Interpretation of the integration of France into international financial markets .......................... 85

4. Conclusion ........................................................................................................................................... 86

4. The impact of the processes of European integration on the French financial systems ........... 88

1. Organization of banking and financial services .............................................................................. 88

2. Development of financial markets ..................................................................................................... 91

3. Payment systems ............................................................................................................................... 92

5. The present regulatory framework and the key changes in financial regulation and liberalisation since 1980.......................................................................................................................... 92

1. The key changes in French financial regulation and liberalisation since 1980 ........................... 93

2. The current regulatory framework and authorities in France ...................................................... 97

3. Financial crisis and reform of financial regulation ........................................................................ 102

4. Conclusion ........................................................................................................................................... 108

6. The nature and degree of competition between financial institutions ...................................... 112

1. The nature and degree of competition in the French financial sector ........................................... 113

2. Concentration and consolidation in the French financial sector .................................................. 120
3. Conclusion

7. The profitability of the French financial sector and sub-sectors and the proximate causes of changes in profitability

1. Profitability analysis

2. Proximate causes of profitability evolution

3. Conclusion

8. The Insurance sector in France

1. General presentation

2. The financial activity of insurance companies

3. Conclusion: the French insurance sector within Solvency 2

9. Availability and sources of funds: the banking and shadow banking sectors

1. Bank balance sheets, or the growing size of market sources of funds

2. Shadow banking in France

3. Conclusion

PART II. Relation of French financial to non-financial sector

10. Survey of previous research on efficiency of the financial sector

1. Concepts and methods of efficiency calculation in the financial sector and sub-sectors

2. French banking sector efficiency and comparisons with other European countries

3. Conclusion

11. The sources of funds for business investment

1. Introduction

2. The sources of funds for business investments in France since the 1970s

3. The specific case of French SMEs

4. Conclusion

12. Culture and norms of the financial system

1. Introduction

2. Financial culture and finance in everyday life

3. Demand for credits and indebtedness in France

4. The French culture of solidarity: the struggle against financial exclusion and over-indebtedness

5. Conclusion

13. Real estate sector and housing finance

1. Long-run empirical development of the real estate market

2. Institutional changes in the real estate market
3. The real estate market and its consequences for the economy .............................................. 258
4. Conclusion................................................................................................................................. 262
14. Inequality and the financial system ......................................................................................... 263
   1. Introduction............................................................................................................................. 263
   2. Quantifying inequality in the French financial sector .............................................................. 264
   3. The main reasons behind the rise in inequalities ................................................................. 271
   4. Solutions to reduce inequalities in the French financial sector ......................................... 276
   5. Conclusion............................................................................................................................. 279
15. The monetary transmission mechanism: the French case .................................................... 280
   1. Introduction............................................................................................................................. 280
   2. Literature review..................................................................................................................... 281
   3. Some results deriving from Hubert and Viennot [2012] .................................................... 283
   4. Conclusion............................................................................................................................. 285
PART III. Recent developments and conclusions ....................................................................... 287
16. The macroeconomic consequences of the financial crisis in France ................................... 287
   1. Four shocks ............................................................................................................................ 288
   2. ...and a crisis... ....................................................................................................................... 294
   3. ... partly dampened by the fiscal policy.................................................................................. 301
   Conclusion ............................................................................................................................... 303
Bibliography.................................................................................................................................. 306
Websites.......................................................................................................................................... 328
EXECUTIVE SUMMARY

In this Report, we describe extensively the evolution of the French financial sector since the 1980s. New developments in financial systems have taken place in all advanced economies and beyond and they have profoundly modified the scope of activities of banks in France, the liquidity on financial markets, the financing of real estate and housing, the scope of insurance activities and the channels of transmission of monetary policy. The process has been intrinsically dependent on European integration, with roundtrips between enhanced competition, via the incidence of internationalisation of the French banking sector, and improved regulations. It has permitted wide access to new savings instruments and new financing device for investment. The consequences of these financial developments on the French economy are yet unsettled: they brought lower long term interest rates but they also brought more risk which led to a crisis of confidence that materialized initially on interbank markets. The French banking sector has certainly not been immune to the world financial crisis.

Beyond the description of long term trends in the banking and finance industry, the Report highlights several key elements:

1. France has gone through an extended process of globalisation and has conformed to the process of European integration. The French financial system is no exception to these trends, though the State has long tried to limit the incidence of globalisation on the nature of French capitalism via cross-shareholdings.

2. France is among the countries which have been financialised early. Along the 1980s, the French economy has opened its capital markets to foreign capital while French companies were starting expanding abroad. Under the “Franc fort” policy, a commitment to stabilize the value of the French Franc vis-à-vis the German Mark within the EMS, France escaped the issue of foreign-currency denominated external debt: France was able to issue its own public debt in French francs because its commitment was credible. Since 1999, the adoption of the euro has not changed the
currency denomination of the French public debt: it is entirely issued in domestic currency, hence euros.

3. The disintermediation process in the French financial system has been relatively mild: the amounts of credit to households and non-financial corporations have kept on increasing despite the surge in stocks and bonds markets capitalization. Another reason behind the mild disintermediation process lies in the surge of market-related activities by banks themselves. Moreover, the inclusion of France in the growing size of the shadow banking sector also testifies for the strong influence of bank-like activities in the financialisation of the French economy.

4. With national supervisory bodies vs. European and international rules, the French financial regulation is becoming less and less national. The only specificity that France tries to keep is its banking model which self-regulation and risk management appear to have allowed French banks to resist rather well to the global financial crisis.

5. The regulatory process under the aegis of the Basel Committee that followed this crisis and urged French banks to increase their equity ratio in order to diminish credit risk could have some adverse effects. Indeed, with a high leverage effect, French banks have retained a certain hedge against credit risk. With regulations forcing banks to increase their capital and reserves, French banks sold some of their assets (loan portfolios) in order to receive stable capital. On the other hand, banks face incentive to take more risk on new assets in order to increase their profitability. All in all, with these prudential rules, banks are prompt to take risk that will increase profitability and to sell it via securitization in order to toe the line relatively to Basel III principles, which leads to more aggregated risk. If this policy would have a short-term positive effect on profitability, financial stability could be affected in the long run.

6. Regarding competition since 1990, the French banking sector has experienced two waves: it was highly concentrated in the 1980s, underwent a first wave of consolidation that lowered a bit further its level of competition at the end of
the 1980s-beginning of the 1990s, then a second wave of mergers and acquisitions in the mid-1990s that attained a (temporary?) end with the creation of BPCE in 2009. Despite the weakening of entry barriers that followed EU agreements, that mainly took the form of an increase in banks’ equity held by foreign investors, the effects on the level of competition have been mild, except in the retail banking sector. France has had a low concentrated banking sector in the 1990s as regards the Netherlands or Norway for instance but a relatively highly concentrated one as regards Germany. The deregulation and disintermediation processes cut the French banking sector in two sub-sectors: investment banking in which competition is quite low but concentration high (five major groups), and retail banking in which competition is quite harsh but concentration low. All in all, the French banking sector has experienced a contrasted evolution in its competition according to its sub-sectors.

7. In 2011 the French insurance sector ranked fourth worldwide with 6.5% of the world market share. The total turnover of the insurance companies was an estimated 216.2 billion Euros in 2011 (approx. 280 billion US $) with an average annual 10% growth rate since 1992. Beyond bank regulations, Solvency 2 denotes the financial regulation of the insurance sector aimed at increasing risk assessment and management. It is scheduled to come into effect on 1 January 2014 in the European Union. According to a Quantitative Impact Study (QIS5) requested by the European Commission to assess the impact of the new regulatory framework on the sector’s activity, the French insurance sector has been considered robust.

8. The existing literature applied to the French financial sector show that bank efficiency has been increasing since the 1990s; especially for cooperative banks (their efficiency remains indeed superior to commercial banks’). Cooperative banks have not taken risky strategies over the period 1990s-2000s and it has enabled them to improve their efficiency, whereas commercial banks have increased their profitability with risky strategies at the expense of their efficiency. France is below the European average for technical efficiency (70% for France, 78% for the European average). These differences come from some determinants that lower specifically
the French banking sector efficiency: a high leverage effect, a quite small retail banking sector in comparison with investment banking sector, a high competition in the retail sector which leads to a low concentration, diseconomies of scale for large institutions, and too few mergers and acquisitions.

9. Financialization has affected French daily lives in an equivocal way. First, the French have a strong preference for credit cards, which are a pure product of financialization, modernization and internationalization of the French banking system. However, they retain a certain caution against new risks that arise from these changes: consumer credits and cash loans are mildly developed, and most public services are still under the aegis of the State. Above all, legislation against financial exclusion and the struggle against over-indebtedness are quite advanced and solidarity seems to be still deeply rooted in the French financial culture through microcredit and solidarity savings. This diagnosis should not be viewed as downsizing the consequences of financialization on individual behaviours, but it should be kept in minds that despite financialization, French public authorities implement collective actions to try to curb over-indebtedness and unequal access to banking services.

10. The current situation of the French real estate market appears by no way critical, with no strong sign of bust in the near future. Consequently, the risks – for the banks – coming directly from the real estate sector seem quite limited. The French authorities of regulation and supervision have recommended that banks continue to follow prudent and safe rules when providing credit to households, though. Indeed, problems may arise indirectly, from other spheres of the real economy. If the problems of competitiveness of the French economy were to persist, the resulting loss of jobs and incomes could have harmful consequences on the real estate market as some (over-)indebted households might face difficulties to honor their reimbursements. The impact on banks and on the stability of banking sector could be only indirect, not direct. More generally, the real estate market in France is sustained by intrinsic forces, in particular a strong demographic growth which fuels
demand for homes. As the attractiveness of main cities or regions will continue in the future [in first instance, Paris for young workers and South of France for young retirees], a large fall in real estate prices cannot be reasonably expected.

11. The worldwide financial crisis has revealed the growing inequalities in the French financial sector. The shock of realizing the notorious income inequality in this sector and the uneven distribution of property rights allow to detect a class structure within French finance. The unequal mechanism of wealth sharing is rooted in the financial work organization. Though France has made a great leap forward by being the first to crack down on bonus, the recent “Kerviel affair” – Jerome Kerviel was prosecuted for having lost 5 billion € on behalf of his employer, Société Générale – shows that work remains to be done in terms of reducing incentives and risk-appetite which lead to excessive risk taking. Corporate governance in French financial firms remains an open issue.

12. The analysis of the French interest rate pass-through has shown that it was quite high and significant for money market rates, government debt rates and lending rates to non-financial corporations and that it has been quite doubled since the crisis. The effect of a shift in the ECB interest rate could be either immediate or delayed, depending on the different rates’ categories. The bank lending channel appears to be far less important than the interest rate channel but still significant for loan supply to households. This supply has experienced a drop since the crisis. If the interest rate channel is largely effective, the bank lending channel seems not to be: the banks have indeed lowered their rates in the aftermath of a drop in the ECB rate but do not have increased their loan supply so far. This conclusion supports the hypothesis that banks have recently reconstituted their capital ratio and reduced access to credit.

13. The exercise of estimating precisely the cost of financial crisis is still a tricky issue and the recent crisis offers a new illustration. It remains that the French economy has been strongly hit by the financial turmoil that followed the subprime crisis and the collapse of Lehman Brothers. Three years after the technical end of
the recession, the GDP had still not recovered its pre-crisis level and massive unemployment had not been curtailed.
INTRODUCTION

In this Report, we describe extensively the evolution of the French financial sector since the 1980s. New developments in financial systems have taken place in all advanced economies and beyond and they have profoundly modified the scope of activities of banks in France, the liquidity on financial markets, the financing of real estate and housing, the scope of insurance activities and the channels of transmission of monetary policy. The process has been intrinsically dependent on European integration, with roundtrips between enhanced competition, via the incidence of internationalisation of the French banking sector, and improved regulations. It has permitted wide access to new savings instruments and new financing device for investment. The consequences of these financial developments on the French economy are yet unsettled: they brought lower long term interest rates but they also brought more risk which led to a crisis of confidence that materialized initially on interbank markets. The French banking sector has certainly not been immune to the world financial crisis. A simple example will immediately make it clear. This crisis was triggered after several investment funds of BNP-Paribas, a French bank, were temporarily shut down in August 2007, hence one year before Lehman Brothers’ bankruptcy.

In the important literature that has devoted attention to the forms or varieties of capitalism (see, e.g., Hall and Soskice, 2001), the paper by Deeg (2010) fits very well in circumscribing the main features of financial sector changes. According to Deeg, there are nine main common features of current financial systems: bank disintermediation, growth of securities markets, securitisation, financial centre deregulation and stock exchange consolidation, changing content and process of financial regulation, weakening of relational banking, structural change in the finance industry, financial internationalisation, and the risk revolution.

Bank disintermediation refers to the empirical fact that investors are increasingly directly holding assets in bonds, equities and other investments. The
growth of securities markets complements disintermediation and has been promoted on the demand-side (households and institutional investors which collect savings) and on the supply-side via deregulation, with an incidence on market liquidity, product innovations like derivatives, interest rates and shifts in the employment structure from the manufactured industry to the service (financial) industry. Securitisation refers to the process of transformation of liabilities, like loans and mortgages, into tradable securities. Financial centre deregulation and stock exchange consolidation were meant to attract foreign capital and reduce the cost of capital. Changing content and process of financial regulation refers to state supervision that dampens somewhat markets self-regulation. Weakening of relational banking refers to the development of investment banking at the expense of traditional commercial banking; this feature is a consequence of big firms’ shift from bank borrowing to external finance. Structural change in the finance industry refers to increased competition, deregulation and privatisation of the finance industry which has paved the way for widespread universal banking. Financial internationalisation refers to the growth of cross-border flows of capital and mergers and acquisitions. The risk revolution refers to the development of derivatives markets which made it possible to dilute and externalize risk.

We will draw on most these features to illustrate the transition of the French economy from a dirigiste (State-controlled) bank-based economy to a market economy with large and liquid financial markets; we will therefore mention the consequences of such a shift on French capitalism.

France has been involved, like all other European countries, the US and Japan, in a deregulation movement in the early 1980s. It is worth noticing that in France, this movement developed at the instigation of public authorities. The measures which were taken helped to promote competition in the banking and financial markets by standardizing the rules that govern all the market players. This has resulted in an attenuation of the institutional differences between the players, with financing and payment activities now assumed, to varying degrees depending on
the country, by banks, other financial intermediaries or, in some cases, agents with no financial status [see Capelle-Blancard and Couppey-Soubeyran, 2003], *i.e.* companies or households with surplus funds that subscribe to primary securities; this was the beginning of what is called “direct financing”. Similarly, the financial changes now underway have largely rendered obsolete the distinction frequently made in earlier times between bank-oriented financial systems (in which bank lending plays a special role) and market-oriented ones. Since then the functions of the various types of intermediaries have tended to become intermingled, such that an analysis of the financing of the French economy can no longer rely solely on a study of the banks, but rather needs to take into account the entire financial environment.

Nevertheless, and in contrast with Deeg [2010]´s classification, France has some own features. Most importantly, bank disintermediation has been somewhat lessened by the development of investment banking, hence universal banking. In this sense, banks have continued to play an important role in financing the French economy. Moreover, bank competition in France has been lowered by mergers and acquisitions; hence a lower number of market players in the field of banking have now to compete with foreign banks. Finally, despite developments on derivatives markets, the process of securitization has not developed. Despite some political will from time to time – Nicolas Sarkozy, then a Minister of economic affairs, had once praised the mortgage securitization process in the US and wished that France would adopt a similar policy; that was before the financial crisis started -, loans and mortgages have not been securitized in France to an extent comparable to what happened in the US, UK or Spain, for instance. However, French banks have been involved in securitization abroad. Securitization or so-called innovative financial products have also had a substantial negative impact on the budget of State territorial subdivisions (cities, departments, regions) that, e.g. tried to reduce their debt with currency swaps upon the guidance of Dexia, a former Belgian bank and the main insurance company for French State-related entities.
Since 2008, the deterioration of the financial environment and the resulting impact on the real economy have severely tested the strength of the French financial system. The financial turmoil arising from the subprime crisis and from its spread to all segments of the financial market made for a more difficult operating environment for the banks, which also faced a generalized crisis of confidence. The failure of Lehman Brothers overseas was both a direct consequence of these developments and the cause of a sharp aggravation in the drying up of liquidity in the interbank market, which was symptomatic of a crisis of confidence that was relieved only by the interventions of the central banks. The financial crisis primarily affected the finance and investment banks through losses on their assets and increases in refinancing costs. The French banks that made public the amount of their risk on investment banking and asset management had an exposure of 1.3 billion euros (see the report of the Commission bancaire, 2009). However, these direct effects of the financial crisis were compounded by the impact of the ensuing economic crisis, which caused a contraction in income from retail banking in particular as well as a loss in the quality of loans to indebted businesses.

The macroeconomic environment did not spare the French banks, as their profitability for 2008 fell sharply from their 2007 level. However, despite the losses suffered by certain groups, the fact that the French banking sector was based on a comfortable level of assets enabled it to cope with the shock of the crisis. The measures taken by the French government to promote medium and long-term refinancing and to strengthen the banks’ capital afforded them some manoeuvring room for their lending activities. More generally, these measures, which were part of enhanced European coordination under the French presidency of the EU, helped to create the conditions needed to re-establish normal operating conditions for the banking system. Nevertheless, other sources of potential losses gradually came to light, including from activities associated with alternative management (hedge funds) and with exposure to East European countries, whose economies had been hit
particularly hard by the crisis. In many respects, the current crisis has highlighted the unprecedented scale and nature of the challenges facing the banking system.

The rest of the Report will be organized as follows. The first part will describe and analyse the French financial system’s main features since the early 1980s, including historical and political backgrounds and the influence of financial globalisation. The second part will investigate the relations between the financial and non-financial sectors, shedding light on the sources of funds for business investment, the efficiency of the French financial sector and the reaction of market interest rates and loans to monetary policy decisions. The third part will outline the world financial crisis and its impact on the French financial sector and the French economy. Part four will conclude.
PART I. THE FRENCH FINANCIAL SYSTEM SINCE 1980

1. HISTORICAL, POLITICAL ECONOMIC AND INTERNATIONAL BACKGROUND

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1. Changes in the French banking and financial system up to 1980

The French regulations prompted by the crisis of the 1930s were not radical. The original legislation that set up the structure of the banking network in 1885 with the establishment of savings banks was further strengthened in 1941 with the adoption of the first banking law. In 1945, the banks were separated into three categories: deposit banks, investment banks and medium and long-term lending banks; this specialization put strong limits on competition. In addition to this, from the 1970s regulated interest rates and monetary controls were overseen in the main by government supervisors. The major concern of the French monetary authorities was to insulate the stakeholders [banks, businesses, households] from the risk of instability and to ensure direct control of the supply of bank money, to the possible detriment of free competition and the efficiency of the financial systems. Following the Second World War, driven by the need to finance reconstruction, the authorities took a growing interest in the organization of these systems, which took the form of nationalizations in the banking sector. While leaving intact the regulations from the 1930s, the public authorities multiplied the incentives for non-financial agents [households in particular] to increase their savings and tried to steer these, through the specialization and supervision of financial intermediaries, towards certain areas — e.g. housing and the productive investment of resident companies. France’s financial systems were relatively closed and highly regulated and compartmentalized, and thus not very competitive.
Indeed, one of the typical characteristics of the French financial system up through the 1980s was the significant role played by State intervention. This took the form of the organization of influence within privatized companies (the State retains shares in the companies), the creation of new futures markets (in particular during the wave of Socialist reforms in 1985), the rescue of troubled banks and the supervision of the institutions monitoring the markets. During the post-war period, the unique feature of the French financial system was thus the role of the central State, and concomitantly the difficulty it faced in disengaging starting in the 1980s.

Two phenomena arose in the early 1980s that posed a simultaneous challenge to the French system. Firstly, the need for international openness facing the economy at that time pushed the French authorities to make fundamental changes to the structure of the country’s financial system. In the 1970s, global interest rates rose more than French rates, meaning that exchange controls became increasingly indispensable to the maintenance of low interest rates in France. This intensified the contradiction between the tighter controls needed to maintain the financial system and the openness required by European and global economic integration. Secondly, the French banking system was facing a serious crisis in this period. This crisis was due firstly to international developments (with US disinflation policy leading to higher real interest rates, along with the international debt crisis of the developing countries and the first Mexican crisis) and secondly to the unrestrained growth of the banks and to a serious crisis in the structure and profitability of the banking system. The model of universal banking (recommended by the Mayoux report in 1979) had not yet been fully incorporated into French banking practice, and it was not until the 1984 Banking Act and a wave of deregulation that France’s banking and financial sector underwent a major transformation.
2. The 1980s: a period of banking reform and profound change in the French financial system

The French financial system went through a profound transformation in the 1980s, following a wave of deregulation that, having originated in the United States in the mid-1970s, modified both its structure and its operating conditions. Two types of deregulation can be distinguished: the organization of the systems ("structural deregulation") and the way they operated ("conduct deregulation").

The transformation of the French banking landscape

The nationalizations of 1982 represented the first step in the State’s effort to radically overhaul the French banking system to deal with financial globalization. These nationalizations, part of a more sweeping reform by the Socialist government\(^1\) of the financial and banking system, were intended to finance priority investments, to improve the control of credit and to reduce the cost of bank loans. The French State thus nationalized 36 deposit banks, including the CIC, Crédit du Nord and Paribas (whose investment bank or compagnie financière would also be nationalized, like that of Suez). This gave the State control of virtually the entire banking sector, meaning that it could now steer investment and reform the financial system.

The reforms introduced by Finance Minister Pierre Bérégovoy starting in 1984 aimed at establishing a unified monetary and financial market where interest rates were set freely (subject to the intervention of the Banque de France). In contrast to past policies that sought to avoid arbitrage and competition between different market segments, these reforms created markets that facilitated the rapid and effective establishment of arbitrage activities. In 1983, the creation of the monthly settlement market unified the stock exchange quotations, and the creation of a second market (second marché) gave smaller companies, mainly family firms, access to the stock market. The Banking Act of 1984 was aimed at “unifying,

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\(^1\) Appendix 1 traces the key dates in the modifications that took place in the French finance system, in relation to the political cycles. Appendix 2 includes an exhaustive list of France’s governments and their political colours since 1981.
renovating and streamlining the laws and regulations governing the banking industry, promoting competition within the banking sector and making banking a more widespread activity”. Credit controls were eliminated, and all financial institutions were now subject to the same regulatory and supervisory authorities [the Commission bancaire, the Comité de réglementation bancaire and the Comité des établissements de crédit]. French banks were finally in full accord with the model of universal banking. In 1985, certificates of deposits were created, i.e. debt securities primarily intended for professional investors as very short-term investments (between 1 day and 1 year), and the money market was opened to non-banks. The MATIF futures market was created to allow trading in futures instruments, and then the MONEP exchange for trading options.

The State now played a greater role in the banking sector than it had in the previous four decades. However, the arrival of a conservative RPR government in 19862 and the growth of the international capital markets led to the private sector playing a greater role in the financing system. Société Générale, Compagnie Paribas, Compagnie Suez and Crédit commercial de France were then privatized, which made it possible to turn over a large share of the banks’ capital to private shareholders through subsidiaries. Despite this wave of privatizations, in 1988 the French State, still under a Socialist President, retained control of nearly 69% of the commercial banks and 42% of the banking sector. Indeed, while this wave of privatizations began during the period of “cohabitation” (Paribas and Société Générale in 1987), it continued with the return to power of a Socialist government in 1988 (partial opening of the capital of Crédit local de France in 1991). This ambivalence on the part of the Socialist government (a wave of nationalizations in the early 1980s, then continuation of the privatizations initiated by the RPR) was due both to the pressure of European Union’s policy on competition and to fiscal pressure (the revenue from privatization

2 Appendix 2 provides a table of successive French governments and Presidents, including the periods of so-called “cohabitation” when the President and the Prime Minister were from opposing political parties.
was a way of immediately reducing the public debt). In addition, the Socialist governments were precocious in foreseeing how to take advantage of the benefits of the market economy, confirming their determination to make Paris an important financial centre. The Socialists’ willingness to privatize must, however, be nuanced by the fact that most of these operations were partial: opening up the capital of formerly fully public companies ended up with the State continuing to be the majority shareholder.

Concentration was a necessity for the banks because of the need to generate productivity gains and streamline both their structures and activities. This continued in the 1980s, driven by an intensification of restructurings, with a sector heavily dominated by a handful of institutions. This wave of restructurings gained strength in the mutual and cooperative networks (Crédit agricole), but also among financial firms as a whole, as 104 establishments disappeared between 1991 and 1992. This restructuring was accompanied by the regrouping of a large portion of the banks into several powerful credit institutions: at the start of 1992, out of the 462 licensed banks, 106 belonged to one of the seven major non-mutualist groups (BNP, Crédit Lyonnais, Société générale, Compagnie de Paribas, Compagnie de Suez, Compagnie financière du CIC et de l’Union européenne, CCF). These restructurings favoured the concentration of the overall activity of the credit institutions, as well as of their more specific activities such as their deposits and loans.

Another illustration of the desire for the total integration of the financial sector was the interpenetration between banking and insurance. Bancassurance, a banking diversification strategy that consists of a credit institution engaging in insurance activities, has developed in France since the early 1980s either through the simple distribution of insurance products or through a more aggressive approach involving the acquisition or creation of insurance subsidiaries. In the first case, the bank simply provides its network to the insurance company so that it can distribute its services. In the second case, the bank conducts a more autonomous but riskier policy by engaging in activities that are not traditionally its own province,
such as life insurance and capitalization, or property and casualty insurance. By the late 1980s, credit institutions had a 40% share of the market for insurance products, up from virtually nil at the beginning of the decade. Numerous mergers also took place between banks and insurance companies (Crédit agricole and Prédica, Société générale and Sogécap, etc.). These differed, however, from cross-shareholdings between banks and insurance companies (e.g. direct holdings between BNP and UAP, or between CIC and GAN).

The rise of non-bank competition and of the financial markets led to some overcapacity among French banks, as competitive strategies gave preference to the goal of market conquest over network efficiency (see Geoffron and Saidane, 1996). This overcapacity was now making it difficult to create any new bank as a means of developing or entering new markets. Mergers and acquisitions (M&A) and alliances therefore became the best way for banks to develop their external growth strategies. M&A in the banking sector, including operations involving insurance companies, represented 42 billion francs in 1987; credit institutions occupied 51% of the M&A market, ahead of insurance. Between 1986 and 1988, the number of M&A in France multiplied by seven. This acceleration can be explained by several factors, including the wave of privatizations, an economic environment that was favourable to the formation of large treasuries, the liberalization of the economy and the preparation of the single European market. At the impetus of the traditional major banks with their concentration in deposit and loan activities, the commercial banks were moving more towards lucrative financial engineering (trading, actuarial activities, risk hedging, investment calculations). To this end, they opened M&A departments within their organizations or created specialized subsidiaries. Relatively small banks (total assets of between 1.5 and 8 billion francs, workforces of between 50 and 350) were then purchased by large establishments (for instance, Banque Courtois by Crédit du Nord and Majorel bank by the CIC). In the field of M&A, the two most important players were Suez and Paribas. The first pursued a non-diversified logic, hence finance-related logic, and tried to provide M&A services by reinforcing its role as an
investor in financial groups where its interests were relatively weak, while taking into account a search for short-term profitability. Compagnie Suez, whose policy focused more on long-term stability, gave greater emphasis to links with the industrial sector. Although distinct, both of these strategies were nevertheless profitable [in terms of financial returns, i.e. the relationship between the result obtained and the resources used to achieve it], and the intense rivalry between the two main private financial centres in France distinguished capitalism à la française, characterized by its multinationals, its family ownerships, and consumption and distribution as engines of growth. The French banking sector, which was keen to strengthen its ties with its European partners, including Germany, henceforth promoted cross-shareholdings that gave it an international dimension and enabled it to consolidate its capital funds.

The internationalization of the French financial system

Little by little, the French financial system opened up internationally. In 1989, the Commission des Operations de Bourse [COB – France’s stock exchange watchdog] saw its power and independence strengthened, which enhanced its credibility and therefore the attractiveness of the Paris markets in the eyes of international investors. The dismantling of foreign exchange controls took place gradually between 1985 and 1989, allowing the full integration of the French financial market into the world market.

Regulations governing the entry of foreign banks onto the domestic financial markets were relaxed [lifting controls on capital movements in 1989], although candidates for entry were required to have a minimum amount of capital, and a thorough investigation had to be conducted in advance by the host country. The second type of regulation concerned key variables on the banking and financial markets: interest rates, commissions and credits, as well as the control and monitoring of financial systems by the regulators, deposit insurance and statutory reserves. Indeed, in the early 1980s, interest rates and commissions on stock exchange transactions were tightly regulated, and freedom on remuneration was
strictly limited to certain term deposits and short-term securities. Overall, the changes in the 1980s in the regulatory field led to profound transformations in the competitive conditions on the banking and financial markets. For instance, the opening of the domestic markets to foreign banks, of the money markets to non-banks and of the financial markets to all non-financial agents increased the number of participants in these markets: Barclays created its life insurance subsidiary in France in 1992, the Crédit Suisse Group bought the French operations of the Hottinguer bank in 1997, and Deutsche Bank, which has operated on French territory since 1977, developed its investment activities in Paris since 1992. In 1996, investments by foreign banks in France expressed in terms of flows represented 14.9% of all foreign direct investment in the country. In terms of stocks, their assets represented 9.2% of FDI in France, according to data from 1995. The opening up of markets and the increasing number of products offered by financial intermediaries helped to create a seamless environment accessible to all.

These structural changes in the French banking and financial landscape had relatively rapid impacts on the trend towards securitization, on capital flows and on FDI into France. Driven by the wave of privatizations, the stock market rose sharply between 1986 and 1987. The crash of 1987 was quickly followed by a recovery, and prices hit record highs in 1989, as the CAC 40 exceeded 2000 points for the first time in its history. The issue of new securities also picked up pace, in particular equities (the case of bonds is more difficult, as it is necessary to take into account the still significant role of institutions in new issues, as well as the increasing role of State issues), in both price and amount, which then experienced large fluctuations. Trading volumes increased more rapidly than prices and new issues, at around 30% per year on average, reflecting the emergence of market-based financial management. The MONEP options market alone had transactions involving 9,000,000 contracts in 1995, and the number of individual holders of securities also rose massively, to about 14 million in the early 1990s.
Banking disintermediation was also taking place, and the role of the market was growing. Companies were financing themselves increasingly through financial instruments and less and less through intermediated bank loans, even if they frequently continued to buy securities. Likewise, the behaviour of the banks increasingly resembled that of the market, as their liabilities were largely composed of securities. Finally, lower levels of investment and higher profits (the share of profits in value added increased from 22% in the early 1980s to over 30% in the early 1990s) promoted business self-financing, which rose sharply during the 1980s (from 59% in 1982 to 92% in 1987).

**Rate of self-financing by French companies (1949 – 1989)**

![Rate of self-financing by French companies (1949 – 1989)](image)


The strengthening of their equity capital through equity issues (which enabled companies to shed significant debt) was a new gauge of firms’ stability and investment capacity. French companies were in effect able to increase their equity capital by ten percentage points, from 26% in 1987 to 37% in 1995.
Structure of liabilities of French companies in 1998

Source: SAUVE Annie and Manfred SCHEUER, 1999: "Modes de financement des entreprises allemandes et françaises", Projet de recherche commun de la Deutsche Bundesbank et de la Banque de France.

The consequences of the changes

What were the consequences for French companies of this new system of financing? The changes in the structure of corporate financing described above were accompanied by a more contrasting situation for SMEs, which suffered from the end of the subsidized loans and government guarantees that protected them from rising interest rates on loans. The banking system itself suffered from the direct recourse by corporations to the money and bond markets, with some large industrial groups taking advantage of the absence of regulations to engage in sophisticated financial transactions in order to deal with considerable losses. The development of SICAVs (Sociétés d’Investissement à Capital Variable, similar to US mutual funds) reduced the free resources of financial institutions (demand deposits in banks, deposits in savings banks), which meant an increase in the cost of resources. The banks were therefore obliged to convert partially from the lending business to financial services, an obligation that was even more difficult to handle in a situation marked by both the debt crisis of the developing countries, in which French banks were heavily involved,
and stiffer competition from the older specialized networks created by the State and previously intended to segment the market (Crédit Agricole, La Poste, savings banks), but whose privileges were still maintained. For example, La Poste, which retained exclusive rights to *livret d'épargne* savings accounts, had broadly diversified its financial activities, including into bancassurance, thereby competing directly with the business of the banks. These financial difficulties led French banks to take risks in activities in which they had insufficient experience (e.g. real estate) during periods of speculation (including the late 1980s), leading some into bankruptcy or requiring State bail-outs (e.g. Crédit Lyonnais).

It is more difficult to determine the long-term consequences of this new system of financing. On the one hand, the operating costs of the financial system *per se* fell sharply, the allocation of capital was facilitated and businesses were no longer constrained in their quantitative funding requirements, since integration with the international capital markets now enabled them to seek outside funding.

On the other hand, economic fluctuations originating abroad were no longer cushioned in the way they could be earlier, which was reflected in particular in the greater intensity of financial and economic crises (1993). The French financial system thus became more vulnerable to the changing international environment, to the multiplicity of international investors and to interactions with subsidiaries in order to provide itself self-financing, meaning that the system was more tightly linked to international financial fluctuations. Cross-shareholdings among the large corporations and the subsistence of family-style capitalism did not give the system a strong enough foundation to deal with this vulnerability.

3. Changes in the French banking and financial system from 1990 to today

*The structural crisis of the 1990s*

The 1990s crystallized the fears that had emerged in the late 1980s in the face of the turmoil facing the French financing system and plunged it into a deep, unprecedented crisis. Provisions and losses on bad debts reached 127 billion francs
in 1993\(^3\), and in 1994 net banking income decreased in volume for the first time in its history. Although the position of France’s banks improved in 1996, they were less profitable (in terms of financial profitability, \(i.e\). the ratio between net income and equity) than their international competitors. This relative weakness had three major consequences: a handicap for growth; a downgrading in ratings by the international agencies, which translated into higher refinancing costs; and a situation of a “permanent technical takeover possibility” (where the majority of a company’s capital is held by public shareholders and not by its traditional investors) for the commercial banks: with two years of profits, the Hong Kong and Shanghai Bank of China (HSBC) could buy Paribas or BNP. Concern was growing over the introduction of the euro, \(i.e\). that it might lead to a competitive shock that overwhelmed the credit institutions (see Senate Report, 1996).

This crisis was structural in origin and not at all a result of distortions in competition. Indeed, the structural reforms implemented during the 1980s (market deregulation, expanded range of intermediaries, internationalization) resulted in a significant increase in competitive pressure, but the adjustments needed to deal with these pressures, especially within the banks’ structures and operations, but also from the regulatory point of view, failed to take place (see Lambert, Le Cacheux and Mahuet, 1997). Facing this competitive pressure and unable to adjust, the banks then committed both tactical errors (collective blindness on real estate) and strategic errors, including blind faith in the universal banking model. Three exogenous factors, however, played the role of a catalyst, transforming what had been difficulties into a crisis: the downturn in the housing market; the inversion of the interest yield curve between 1989 and 1994 (which prevented the banks from realizing gains on conversion, \(i.e\). using interest rates to make a profit on the conversion of a portion of their assets into shorter-term maturities); and the over-

\(^3\) At the conversion rate of French Francs to euros (1 €=6.57 FF), provisions and losses amounted to almost 20 billion euros, a fairly unprecedented amount.
taxation of the banking sector (in particular the payroll tax in lieu of VAT, which represented 9 billion francs in 1994).

The role of the State, described as an ambivalent shareholder and poor manager, was roundly condemned: the 1996 Senate report on the health of the French banking system called into question both its handling of the banking crises by the systematic recapitalization of unviable lending institutions and the system for the prevention of banking risk. This led to debate over reforms to pull the State out of the private sector.

The impact of the transition to the single currency

Starting in 1997, French banks benefited from a resumption of growth and renewed dynamism in the financial markets, and thus built up their international activities by expanding their presence abroad, especially as they wanted to establish their position on the larger market in 1998 by adopting a policy of winning new market share (see the reports of the Commission Bancaire, 1997 and 1998). Moreover, their cost-control policies allowed them to deal with the transition to the euro in relatively good conditions.

These developments set the framework for the restructuring of the banking sector at the turn of the Millennium. Firstly, the advent of the euro accelerated the trend towards concentration, in particular in the field of investment banking. With the preparation of the changeover to the euro, an unprecedented movement towards concentration affected the entirety of the banking industry. This took the form of acquisitions of holdings in certain subsidiaries (acquisition of Crédit du Nord by Société Générale, acquisition of about 25% of Natixis by Caisse centrale des banques populaires) and of external growth operations (acquisition by Société Générale of the English bank Hambros and of the American investment bank Cowen Securities). The expansion of the potential market of the credit institutions provoked a search for an optimal size as well as for economies of scale to generate higher levels of profitability. Moreover, the modernization and liberalization of capital movements associated with the deregulation of financial and banking activities resulted in
widening the institutions’ field of action in a context of more harmonized regulatory and prudential standards. The banking landscape, which had long remained fragmented, changed accordingly. The result was more intense international competition on the French market, leading the country’s banks to diversify into other regions and into the major foreign financial centres.

After the transition to the euro, French banks showed some resilience in the face of the harsh international economic and financial environment. In fact, while geopolitical factors and sectoral problems in the early 2000s (impact of the bursting of the Internet bubble; persistent difficulties in telecommunications, transport and energy; risks in Latin America; increased international tensions in the Middle East) created an uncertain environment and held back growth, and while the rate of business failures reached high levels and the overall demand for financing from credit institutions slowed, the annual results of France’s credit institutions highlighted their ability to face up to the deteriorating economic situation. How can this be explained? With the active encouragement of French, European and international prudential supervisors, not only had the credit institutions diversified and chosen their risks more carefully but they had also improved their operating profitability, which helped to reduce their overall exposure to cyclical risks. Indeed, the major French banking groups had tier one capital ratios (a measure of a bank’s ability to pay its debts, or the gross operating surplus) that were well above the regulatory minima; the overall immediate credit risk facing French credit institutions fell by 4.8% in 2005, and the market risks as calculated by France’s Commission bancaire declined by 11% in the same year (see Report of the Commission bancaire, 2006).

**The overall situation today**

Up to 2008, French banks saw a steady increase in business that was related to a period of sustained global economic growth and a good situation on the financial markets. At end 2004, fifty French banks were operating in 85 countries or regions,
and the foreign subsidiaries of the three main groups accounted for between 17% and 25% of their total assets (see Bulletin of the Bank of France, 2006).

The 2000s saw the large corporations relying on abundant, cheap funding. In this respect, French banks played a role in the development of a strong syndicated loan market, especially in Europe, and the share of leveraged loans (LBO) experienced unprecedented growth. In a context of heightened competition, French banks were forced to accept lower margins on their most important counterparties, highlighting how syndicated loans were increasingly resembling tendered products. LBO funds were themselves accompanied by an increase in leverage and a reduction in debt quality, posing a medium-term threat of a possible downturn in the credit cycle. In addition, the 2000s saw the emergence of a strong recovery in commercial property and sustained growth in the housing business. Foreign markets served as a source of growth for the major French banking groups, which were often engaged in increasingly diversifying their risks. Similarly, while outstanding consumer credit fluctuated to some extent, the banks increased their investments in local government. Finally, the 2000s saw a renewed interest from major French banking groups in the emerging economies like Russia. The Russian market is becoming the second-largest market after the French market for the Société Générale Group. Société Générale, which acquired Rosbank in 2008, has nearly 25,000 employees and three million individual customers, 6000 SMEs and 2000 large corporations.

Since 2008, the deterioration of the financial environment and the resulting impact on the real economy have severely tested the strength of the French financial system. The financial turmoil arising from the subprime crisis and from its spread to all segments of the financial market made for a more difficult operating environment for the banks, which also faced a generalized crisis of confidence. The macroeconomic environment did not spare the French banks, as their profitability for 2008 fell sharply from their 2007 level.
Appendix 1 – Summary of the key events in the development of the French financial system, including political events

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>1885</td>
<td>Establishment of the Caisses d’Epargne (savings banks)</td>
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<tr>
<td>1945</td>
<td>Separation of banks into deposit banks, investment banks and lending banks</td>
</tr>
<tr>
<td>1981</td>
<td>Election of François Mitterrand (PS) as President of the Republic, first Socialist president of the Fifth Republic</td>
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<tr>
<td>1982</td>
<td>Wave of nationalizations in the banking sector</td>
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<tr>
<td>1984</td>
<td>Banking Act</td>
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<td>1985</td>
<td>Creation of certificates of deposit, of the MATIF and the MONEP</td>
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<tr>
<td>1986</td>
<td>First cohabitation of François Mitterrand with an RPR government led by Jacques Chirac</td>
</tr>
<tr>
<td></td>
<td>Development of mergers &amp; acquisitions in the banking sector, wave of privatizations</td>
</tr>
<tr>
<td>1987</td>
<td>Privatization of Société Générale, Compagnie Suez, Compagnie Paribas</td>
</tr>
<tr>
<td>1988</td>
<td>Re-election of François Mitterrand, Socialist government</td>
</tr>
<tr>
<td>1989</td>
<td>Creation of the Commission des Opérations de Bourse (COB)</td>
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<td></td>
<td>Dismantling of exchange controls</td>
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<td></td>
<td>Lifting of controls on capital movements</td>
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<td>1990</td>
<td>Opening of the domestic market to foreign banks</td>
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<td>1991</td>
<td>Restructuring and regrouping of the banking sector</td>
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<tr>
<td></td>
<td>Collapse of the property market</td>
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<tr>
<td>1993</td>
<td>Crisis in the European Monetary System</td>
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<tr>
<td></td>
<td>Second cohabitation of François Mitterrand with an RPR government led by Edouard Balladur</td>
</tr>
<tr>
<td></td>
<td>Second wave of privatizations</td>
</tr>
<tr>
<td>1995</td>
<td>Election of Jacques Chirac (RPR) as President of the Republic</td>
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<tr>
<td>1996</td>
<td>Law on the modernization of financial activities</td>
</tr>
<tr>
<td>1997</td>
<td>Dissolution of the Assemblée Nationale and cohabitation of Jacques</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>1999</td>
<td>- Transition to the euro on the financial markets</td>
</tr>
<tr>
<td>2002</td>
<td>- Re-election of Jacques Chirac as President of the Republic</td>
</tr>
<tr>
<td>2006</td>
<td>- Implementation in the European Union of the Basel II international standards on 31 December</td>
</tr>
</tbody>
</table>
| 2007 | - Election of Nicolas Sarkozy (UMP) as President of the Republic  
- François Fillon (UMP) as the Prime Minister.  
- Onset of the subprime crisis  
- Tax rebates under the “tax shield” (*bouclier fiscal*) |
| 2008 | - Collapse of Lehman Brothers  
- Bail-out plan for the French banks (through guarantees on loans and loans at interest rates granted by the State to the banks)  
- Implementation of Basel II standards in France |
| 2009 | - Reimbursement by a majority of French banks of State loans granted as part of the bail-out plan |
| 2010 | - Publication of the Basel III recommendations |
| 2011 | - Suppression of the “tax shield” |
| 2012 | - Election of François Hollande (PS) as President of the Republic  
- Jean-Marc Ayrault (PS) as the Prime Minister |
| 2013 | - Phased implementation into the European Union of the Basel III standards, from 1 January 2013 to 1 January 2019 |

Abbreviations of political parties:
- EELV: Europe-Ecologie-Les Verts (the Greens)  
- MDC: Mouvement Des Citoyens  
- MDR: Mouvement Des Réformateurs  
- MRG: Mouvement des Radicaux de Gauche  
- NC: Nouveau Centre  
- PCF: Parti Communiste Français  
- PRG: Parti Radical de Gauche  
- PS: Parti Socialiste  
- RPR: Rassemblement Pour la République  
- UDF: Union pour la Démocratie Française  
- UMP: Union pour un Mouvement Populaire
### Appendix 2 – Summary of successive French governments since 1980

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>Election of François Mitterrand (PS) as President of the Republic Government (PS-PCF-MRG) of Pierre Mauroy</td>
</tr>
<tr>
<td>1984</td>
<td>Government (PS-PCF-MRG) of Laurent Fabius</td>
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<tr>
<td>1986</td>
<td>Government (RPR-UDF) of Jacques Chirac, “First cohabitation”</td>
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<tr>
<td>1988</td>
<td>Re-election of François Mitterrand (PS) as President of the Republic Government (PS-MRG) of Michel Rocard</td>
</tr>
<tr>
<td>1991</td>
<td>Government (PS-MRG-MDR) of Edith Cresson</td>
</tr>
<tr>
<td>1992</td>
<td>Government (PS-MRG-MDR) of Pierre Bérégovoy</td>
</tr>
<tr>
<td>1995</td>
<td>Election of Jacques Chirac (RPR) as President of the Republic Government (RPR-UDF) of Alain Juppé</td>
</tr>
<tr>
<td>2002</td>
<td>Re-election of Jacques Chirac (UMP) as President of the Republic Government (UMP) of Jean-Pierre Raffarin</td>
</tr>
<tr>
<td>2005</td>
<td>Government (UMP) of Dominique de Villepin</td>
</tr>
<tr>
<td>2007</td>
<td>Election of Nicolas Sarkozy (UMP) as President of the Republic Government (UMP-NC) of François Fillon</td>
</tr>
<tr>
<td>2012</td>
<td>Election of François Hollande (PS) as President of the Republic Government (PS-PRG-EELV) of Jean-Marc Ayrault</td>
</tr>
</tbody>
</table>
2. **Growth of finance in an era of financialisation and structure of the financial sector by forms of organisation**

Jérôme Creel (OFCE & ESCP Europe)

Kevin Durand (Université de Pau & OFCE)

Aude Gallois (Université Paris-Dauphine & OFCE)

1. **The size and scope of the banking industry in retrospect**

   According to the French Banking Federation, there were in France in 2011, 400 banking companies, 400,000 employees and nearly 39,000 banking branches. Thus, France has one of the largest banking networks among the 27 EU member states. Its financial sector is also one of the largest private sectors in France. It has a good position in front of the catering sector, the food industry, the production and distribution of energy, pharmaceutical and automobile industry. The added value of financial and insurance companies represented almost 5% of GDP in 2011, hence it had turned back to its peak of the late 1980s (figure 1). Despite apparent variability in the share of these two sectors in the French economy, it has remained between 4 and 5% from the 1980s onwards. It shifted upwards in the mid-1980s after the deregulation impetus then it declined after each economic and/or financial crisis: 1993, 2001 and 2008. Years of (mild) recovery (2010 and 2011) finally saw a strong increase in the share of the banking and finance industry in total output, almost reaching its peak of the late 1980s.

   The financial sector also appears as one of the largest employers in the private sector. Indeed, using a broad definition of finance encompassing real estate, rental and business activity, the sector in 2008 represented 18% of total employment, to be compared with less than 14% eighteen years ago (see figure 2). The process of financialisation has therefore spread to the French economy: one employee out of five works and earns one’s living in this sector. Figure 2 also reveals that the contribution of finance (under this broad definition) to employment is quite
sensitive to economic activity: after each crisis since 1993, this contribution has staggered before climbing again.

**Figure 1**

Share of the banking and finance sector in GDP, %, constant price

Source: INSEE

Excluding the real estate and rental and business activity, the share of finance per se (central bank, commercial and mutual banks, financial corporations and other financial institutions) in total employment is not very large: it has been in a range of 1.6-1.8% since the mid-1990s. Hence it is substantially less than sectors like the real estate, though it must be kept in mind that the latter depends extensively on the financial sector for funding.
Within the financial sector *per se*, commercial and mutual banks appear as the main job providers (see figure 3). Both sub-sectors represented 86% of total employment in the financial sector in 1995, and 90% in 2009.
a. The different types of banking and financial institutions

In France, banking and financial institutions are restricted to those which receive an approval (and a license) and which are subject to the control of supervision authorities [this point will be developed more extensively below]. There are 678 institutions\textsuperscript{4} of this kind in France.

Among these 678 institutions, 370 are credit institutions [établissement de crédits à vocation générale]. They represent banks that can be of any statute, even mutual or cooperative banks. Mutual and cooperative banks represent about one quarter of these credit institutions. Their main tasks are receiving public funds

\textsuperscript{4} Organisation du système bancaire français, Fédération Bancaire Française, 2011
without limitation, distributing credits, providing and managing means of payment, realizing some operations on the foreign exchange market. We can also identify 308 specialized credit institutions (établissements de crédits spécialisés); some have an exclusive control on the attribution of pawn broking (caisses de crédit municipal, there are 18 of them in France); other financial institutions offer multiple services like consumer credits, lease purchase, factoring, guarantees and warranties, whereas some specialized financial institutions have a permanent mission of public interest (e.g., regional development, financing corporations or real estate, etc.). Finally, there are a few institutions (Prestataires de services d’investissement) dedicated to investment services which provide both banking and financial activities. Their main operations are receiving and transmitting orders, executing orders for personal account, negotiating for own account, making portfolio management, offering services referring to the administration of financial instruments.

A specificity of the French banking sector refers to Monaco, a small Principauté. In Monaco, there are 24 credit institutions with an approval from French authorities (Autorité de contrôle prudentiel).

The French banking system is mainly made up of credit institutions, hence commercial and investment banks⁵. The commercial bank has a variety of missions such as collecting savings, deposits management, issuing means of payment, credit activities and the offer of numerous investment products to various customers (individuals, professionals, Small and Middle Enterprises ...). The investment bank is an important banking actor that helps major customers to finance themselves on financial markets. We can define it as the financial partner:

- of large and exporting companies through structured finance [that permits to better match risk];

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⁵ There are also so-called “business banks” that are very similar to investment banks, because they represent intermediaries in financial transactions: listing on the Stock Exchange, loans investments, the increase in capital etc. They can be considered as Prestataires de services d’investissement.
that assists companies and states to raise capital, to be listed on the
Stock exchange or to issue debts;
- that advises on mergers and acquisitions, purchasing, selling and trading
on financial markets.

The investment bank can also intervene with the retail banks to manage
savings or offer fixed-rate loans. So, it has numerous and sophisticated services
(activities on equity derivatives markets, structured finance, securitization ...) that
could often be adaptable. This is particularly true for derivatives, which are
individually negotiated and structured by banks with the aim of meeting the
expectations of a particular customer. We will explain further the reasons that
prompted banks to develop this type of financial instruments.

Changes in the French banking system during the last 30 years have
witnessed the disappearance of traditional banking and the lack of strict separation
among all these activities. One single bank may have different lines of work and ever
more so since the enactment and implementation of the 1984 Banking Act. It has
characterized a new model in France, namely universal banking. This model is now
prevalent in France. We can define it as the association of retail banking activities
with those of investment and assets management. This model allows banks to offer
many different services and to expand their business. It is interesting to note that the
model of universal bank during the 2008 crisis has been discussed a lot. Defined as
the place where activities of deposits and speculation are closely related, the
universal bank may amplify the phenomenon of speculation and endanger savers’
deposits. This question has also been widely debated internationally since the
financial and economic crisis and the idea of a turning back to a separation between
the activities of deposit and speculation has been mentioned in numerous reports:
Turner [2009]6 and Vickers [2011]7 among others. However, the universal bank has

crisis”.
7 Independent Commission on Banking, [2011], “Final Report Recommendations”.

35
finally seemed resilient: the cushion of deposits associated with a drastic measure of equity capital (through Basel II, then Basel III) has allowed coping with economic and financial shocks.

The deregulation of financial markets has also led to the creation of 630 portfolio management companies with a license from the AMF (Autorité des marchés financiers).

In parallel with the development of investment bank activities, the French economy has also seen the development of the European market for leverage acquisitions (LBO - Leveraged Buy Out) which involved many actors. The LBO market has developed before the financial crisis thanks to financial innovation, intense competition among credit institutions, favourable market conditions with a low firms’ bankruptcy rate, high level of liquidity and low price volatility. The most influential actors in this market are banks but also non-banking institutions such as private equity funds, institutional funds and hedge funds. Banks have a central role as they select and implement the financing of LBO. They are also in charge of the arrangement of debt origination\(^8\) and syndication of securities (including debt outstanding resulting from LBOs operations). Banks tend to focus on financing LBOs rather than on supporting credit risk, hence they transfer a part of the credit risk to other non-banking institutions. Private equity funds are involved in the origination and the management of buyouts, while hedge funds are responsible for the purchase of debt securities issued after syndication.

It appears that French banks have a wide array of forms and organisation, from relatively small entities involved in pawn broking, to larger ones distributing credit, investing in securities and advising and implementing LBOs.

\subsection*{b. The different forms of ownership}

At the end of 2010, 70\% of credits institutions in France depended on French capital, whereas the remaining 30\% were in the hands of foreign capital. Over the

\(^8\) Origination consists of advising an issuer about financial instruments corresponding to its needs and to ensure the development and introduction of these instruments on the market.
total number of credit institutions in France, 74% are owned by banking groups (38% are French cooperative/mutual groups), and 25% are under the direct control of stockholders from other economic sectors (9% owned by industrial, commercial and services sectors, 3% by insurance companies, 7% by other financial groups, 4% by individual stockholders and 3% by the public sector). This last feature is very typical of the French banking sector. Among the 479 credit institutions owned by French capital, there are 25 public banks, and 35 credit institutions owned by the corporate sector.

It remains that after a gradual withdrawal from the State (characterized by the three Ds: Deregulation, Decompartmentalization and Disintermediation) and a series of changes (privatization, reorganization, mergers and takeovers, for private, cooperative, mutual or retail banks) within the banking system in the 1980s and 1990s, the banking sector has become increasingly concentrated. In 2012, 7 banking groups make the bulk of banking activity in France: Crédit Agricole, BNP Paribas, Société Générale, the group BPCE (Banque Populaire - Caisse d'Epargne), Credit Mutuel CIC, la Banque Postale and HSBC France. They are all universal banks except la Banque Postale.

Thus, the banking landscape is mostly represented by one public bank (Banque Postale), 3 mutual and cooperative banks (Crédit Agricole, Banque Populaire-Caisse d’Epargne and Credit Mutuel CIC) and 3 networks of private banks (Société Générale, BNP Paribas and HSBC France). The mutual aspect assumes that customers are members of the bank and have a right to vote. The Banque Populaire and BPCE’s banking network is composed of regional banks and has also two cooperative banks, the CASDEN reserved for employees of the National Education, Research and Culture, and the Crédit Cooperatif that holds the NEF, la Nouvelle Economie Fraternelle.
c. The banking field of action

Despite a growing involvement of financial markets in the economy [see infra], the French system is still intermediated. Compared to American non-financial agents that can easily search for financing on the Stock exchange or financial markets, French private agents continue to appeal to banks. Thus, domestic credits represent a very significant share of GDP, nearly 134% in 2010 (Figure 4). Despite the deregulation of 1984-1985, domestic credit in proportion to GDP has increased rather steeply until the early 1990s, then it stabilized close to 100% of GDP, before it resumed its increase after 2005. The latest increase was been exponential.

The high intermediation of the French system can be explained by high density of its banking network and, therefore, a good proximity of banks with their customers throughout the territory. 99% of French people have bank accounts9. France can enjoy 600 banking branches per 1 million inhabitants10, 56,243 ATMs (Automatic Teller Machines) and counters11, 1.15 million acceptance locations for credit cards in late 201012 and many varied banking services.

Hardie and Howarth (2009) in their table 1 (reprinted below) report the trading activity of French and German banks. They show that the five most important French banks have substantially increased their exposure to trading assets since 2002 and they have been involved in derivatives. BNP Paribas and Société Générale offer contrasted pictures though: the former has seen its exposure to trading assets increase steeply until 2007 (3.6 more than in 2002), whereas its implication in derivatives trading has been reduced since 2003, while the latter has reduced its exposure to trading assets whereas it has increased its exposure to derivatives trading until 2007, hence around the starting period of the financial crisis.

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9 Rapport Credoc 2010, FBF
10 ECB Payment Statistics, octobre 2011, FBF
11 Rapport d’activité du GIE CB, 2010, FBF
12 GIE CB, 2010, FBF
Figure 4

Domestic credit provided by banking sector (% of GDP)

Source: World Bank

The banking sector is made up of monetary authorities, deposits banks, banking institutions that do not accept transferable deposits and institutions which provide housing loans. Data for 1999 is not available.
Table 1: Increased Bank Trading Activity

<table>
<thead>
<tr>
<th>Bank</th>
<th>Activity Description</th>
<th>Derivatives Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerzbank</td>
<td>Trading assets peaked at 24.0 per cent in 2004 and fell thereafter. Notional derivatives volume* 10.9 times total assets in 2007 (9.6 times in 2003).</td>
<td>10.9 times total assets</td>
</tr>
<tr>
<td>Deutsche</td>
<td>Trading assets 45.9 per cent of total assets in 2006 (38.9 per cent in 2000). Notional derivatives volume 24.3 times total assets in 2007 (35.4 times in 2006, 19.3 times in 2002).</td>
<td>24.3 times total assets</td>
</tr>
<tr>
<td>Drescher</td>
<td>Trading assets 32.0 per cent of total assets in 2007 (21.4 per cent in 2000). Notional derivatives volume 13.4 times total assets in 2007 (7.7 times in 2003).</td>
<td>13.4 times total assets</td>
</tr>
<tr>
<td>Bayernsche LB</td>
<td>93.7 per cent of derivatives activity for trading purposes in 2007 (76.4 per cent in 2005). Notional derivatives volume 3.2 times total assets in 2007 (3.5 times in 2002).</td>
<td>3.2 times total assets</td>
</tr>
<tr>
<td>Helaba</td>
<td>Notional derivatives volume 3.4 times total assets in 2007 (3.1 times in 2003).</td>
<td>3.4 times total assets</td>
</tr>
<tr>
<td>HSH Nordbank</td>
<td>Proportion of securities held for trading purposes 35.7 per cent in 2002. Trading assets 15.4 per cent of total assets in 2006. Notional derivatives volume 3.7 times total assets in 2007 (1.5 times in 2002).</td>
<td>3.7 times total assets</td>
</tr>
<tr>
<td>LBBW</td>
<td>Proportion of securities held for trading purposes 39.9 per cent in 2006 (12.5 per cent in 2002). Notional derivatives volume 4.4 times total assets in 2007 (2.1 times in 2002).</td>
<td>4.4 times total assets</td>
</tr>
<tr>
<td>LB Sachsen</td>
<td>Proportion of securities held for trading purposes 15.3 per cent in 2007, more than triple 2003 figure. Notional derivatives volume 0.7 times total assets in 2007 (1.1 times in 2003). Derivatives mostly to hedge.</td>
<td>0.7 times total assets</td>
</tr>
<tr>
<td>NordLB</td>
<td>Notional derivatives volume 1.7 times total assets in 2007 (1.7 times in 2002).</td>
<td>1.7 times total assets</td>
</tr>
<tr>
<td>WestLB</td>
<td>Proportion of securities held for trading purposes 41.7 per cent in 2006 (28.4 per cent in 2000). Trading assets 32.5 per cent of total assets in 2007. Securities held for trading purposes peaked in 2002 at 51.3 per cent. Notional derivatives volume 9.0 times total assets in 2007 (8.5 times in 2002). Peak 10.3 times in 2005.</td>
<td>9.0 times total assets</td>
</tr>
<tr>
<td>DZ Bank</td>
<td>Proportion of securities held for trading purposes 58.0 per cent in 2007 (21.2 per cent in 2002). Trading assets 30.1 per cent of total assets in 2007. Notional derivatives volume 3.2 times total assets in 2008 (2.0 times in 2002).</td>
<td>3.2 times total assets</td>
</tr>
<tr>
<td>Hypo Real Estate</td>
<td>Notional derivatives volume 2.8 times total assets in 2007 (1.6 times in 2003).</td>
<td>2.8 times total assets</td>
</tr>
<tr>
<td>IKB</td>
<td>Notional derivatives volume 1.0 times total assets in 2007 (0.8 times in 2004).</td>
<td>1.0 times total assets</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>Trading assets 5.4 per cent of total assets in 2007. Notional derivatives volume 17.4 times total assets in 2007 (23.4 times in 2003).</td>
<td>17.4 times total assets</td>
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<tr>
<td>Société Générale</td>
<td>Trading assets peaked at 31.9 per cent of total assets in 2006 (more than double 2002). Fall to 28.6 per cent in 2007. Notional derivatives volume 15.0 times total assets in 2007 (10.4 times in 2002).</td>
<td>15.0 times total assets</td>
</tr>
<tr>
<td>Crédit Agricole</td>
<td>Trading assets 30.2 per cent of total assets in 2007. Notional derivatives volume 11.1 times total assets in 2007 (7.8 times in 2002).</td>
<td>11.1 times total assets</td>
</tr>
<tr>
<td>Caisse d’Epargne</td>
<td>Trading assets 10.5 per cent of total assets in 2007. Notional derivatives volume 5.3 times total assets in 2007.</td>
<td>5.3 times total assets</td>
</tr>
<tr>
<td>Crédit Mutuel</td>
<td>Trading assets 13.8 per cent of total assets in 2008 (3.1 times total assets in 2007). Notional derivatives volume 1.5 times total assets in 2007 (3.6 times in 2004).</td>
<td>1.5 times total assets</td>
</tr>
</tbody>
</table>

Source: Bank annual reports.
Note: * Notional volumes indicate only the absolute volume of derivative transactions undertaken. They do not represent risk taken. The positive value of derivative contracts appears in the bank's assets, and, where they have been entered into for trading purposes, this positive value will be included in trading assets (see Banking Commission, 2007, p. 56).

Source: Hardie and Howarth (2009)

**d. The international opening of the French banking system**

In late 2007, the French Banking Federation could estimate at 996 (530 in Europe and 466 in the rest of the world), the number of French establishments in 87 different countries (to be exact, 760 subsidiaries and 236 branches). There are 166
French bank branches that have settled in the EEA. The main locations of these branches are Italy, the UK, Belgium, Germany, and Spain for credit institutions, and Belgium, the Netherlands, the UK, Germany and Italy for investment companies. The main reason for this European opening of French banks draws on the European financial integration since 2001 which has accelerated the creation of subsidiaries and branches in Europe, and the development of remote services via the Free Provision of Services, which came into force in 1993. The FPS allows a European bank from the country where it works, to offer its services to a client who lives in a country of the European Union. So, the latter measure allows an expansion of the banking customer base. For example, at the end of 2008, 1,117 FPS had been registered for 149 credit institutions in France.

Likewise, France attracts many foreign banks on its territory. In 2008, the Banking Commission observed that 10.8% of total assets of credit institutions in France came from foreign banks. In 2010, there were 204 foreign bank branches and subsidiaries in France (equivalent to 30% of total credit institutions working in France), including 125 from Europe. Most of them are from the UK, Germany, Belgium, the Netherlands and Italy. The other settlements are essentially from the USA. There also 76 foreign investment companies, that represent 10% of the total number of investment companies in France.

According to the ECB and among European countries, France has the largest European banking settlements on its territory and is the second largest in terms of the number of foreign banking institutions.

The table below (in French) highlights the foreign implication in the banking and financial sector. Over a period of 10 years, the foreign involvement has been modified: there are fewer [foreign] banks of French common law [they have been halved] but thanks to the disappearance of capital barriers and control at the end of the 1980s-beginning of the 1990s, the number of French branches of foreign banks has increased, mainly originating in member states of the European economic area.
Table 1. Foreign institutions in the French banking and financial system

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<td><strong>C - Institutions financières spécialisées</strong></td>
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</tbody>
</table>

*Hors sociétés de gestion de portefeuille.
Source : Secrétariat général de l'Autorité de contrôle prudentiel

Hardie and Howarth (2009) in their table 2 (reprinted below) report the internationalization of French and German bank activities. Two groups of French banks emerge: A first group of 3 banks [BNP Paribas, Société générale and Crédit agricole] is very much exposed to foreign risk, having close to half of their commitments outside France, and a quarter outside of Europe. The second group of large French banks [Banque populaire, Caisses d’épargne – now making a single
conglomerate -, and Crédit mutuel] have the bulk of their activity in France, hence facing a very low risk on foreign assets and foreign activity. Though such a disparity also appears in Germany, French banks exposure to foreign risk has been lower on average than it has been in Germany, still according to Hardie and Howarth [2009].

Table 2: Bank Internationalization

<table>
<thead>
<tr>
<th>Bank</th>
<th>International Exposure Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerzbank</td>
<td>25.3 per cent of international exposure outside Europe in 2004 (with Turkey included in Europe). Later figures not available.</td>
</tr>
<tr>
<td>Deutsche</td>
<td>Exposure outside western Europe from 25.8 per cent in 2000 to 44.7 per cent in 2007.</td>
</tr>
<tr>
<td>Dresdner</td>
<td>18 per cent loan portfolio outside Europe in 2004. Later figures not available.</td>
</tr>
<tr>
<td>Bayerische LB</td>
<td>International exposure 50.4 per cent of total in 2007 (exposure outside Europe 34.9 per cent of international).</td>
</tr>
<tr>
<td>Helaba</td>
<td>International exposure 52.2 per cent of total in 2007.</td>
</tr>
<tr>
<td>HSH Nordbank</td>
<td>Country exposure outside western Europe from 32.7 per cent in 2002 to 41.0 per cent in 2007.</td>
</tr>
<tr>
<td>LBBW</td>
<td>Exposure outside Europe 29.9 per cent of total in 2006, before falling significantly.</td>
</tr>
<tr>
<td>LB Berlin</td>
<td>Credit risk outside Germany 41.2 per cent of total in 2006, up from 31.7 per cent in 2002.</td>
</tr>
<tr>
<td>LB Sachsen</td>
<td>2004–07 on balance sheet credit exposure to its ‘home’ Land of Saxony never exceeded 16.9 per cent of total exposure.</td>
</tr>
<tr>
<td>NordLB</td>
<td>Exposure outside western Europe 15.0 per cent of total in 2007 (8.7 per cent in 2003).</td>
</tr>
<tr>
<td>WestLB</td>
<td>In 2007 71.3 per cent of exposure outside Germany, 20.3 per cent to ‘industrialized America’.</td>
</tr>
<tr>
<td>DZ Bank</td>
<td>In 2007 exposure outside Germany 46.2 per cent of total.</td>
</tr>
<tr>
<td>Hypo Real Estate</td>
<td>In 2007, country risk outside Germany 76.9 per cent of total. In 2003, 38 per cent of loan portfolio outside Germany.</td>
</tr>
<tr>
<td>IKB</td>
<td>In 2005 exposure outside Germany 67 per cent of total.</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>57.2 per cent of assets in France in 2007, 20.9 per cent outside Europe.</td>
</tr>
<tr>
<td>Société Générale</td>
<td>Commitments in France 30 per cent of total in 2007 (65 per cent in 2003). Exposure outside Europe from 10 per cent in 2002 to 19 per cent of total in 2007.</td>
</tr>
<tr>
<td>Crédit Agricole</td>
<td>In 2007, 48 per cent of commercial lending exposure in France, 24 per cent outside western Europe. In 2002, 84.8 per cent in France, and 10.1 per cent outside EU.</td>
</tr>
<tr>
<td>Banque Populaire</td>
<td>83.6 per cent of assets in France in 2007.</td>
</tr>
<tr>
<td>Caisse d’Epargne</td>
<td>Over 90 per cent of customer risks in France in 2007.</td>
</tr>
<tr>
<td>Crédit Mutuel</td>
<td>95 per cent of customer risks in France in 2007.</td>
</tr>
</tbody>
</table>

Source: Bank annual reports.

Source: Hardie and Howarth [2009]
e. The relationship of financial institutions with the State and the central bank

As we stated above, to participate in banking and financial activities, establishments must obtain as a prerequisite an approval from an appropriate public authority that will detail all the activities they may undertake under their license.

In addition, all credit institutions, investment companies and branches of institutions (whose head of office is outside the European Economic Area) based and authorized in France must adhere to the Deposit and Securities Guarantee Fund. This fund implemented at the request of the Prudential Control Authority (ACP), is supposed to compensate customers in case of failure of their banks.

Then, any registered establishment shall also adhere to a professional or central institution affiliated to the French Association of Credit Institutions and Investment Firms that should represent them in front of public authorities.

The adequate public authorities to which we referred above for licensing, supervision and regulation are the ACP, the Financial Markets Authority (AMF) and the Ministry of Economy and Finance:

- the Ministry of Economy with the general committee of the Treasury is responsible for drafting the Monetary and Financial Code. The Treasury Department establishes regulations for mutual, insurance and credit institutions.

- The Prudential Control Authority (ACP) takes individual decisions for approval of credit institutions, mutual, insurance, market and investment firms after an authorization of the Financial Markets Authority (AMF), except for decisions referring to portfolio management companies that depend only on the AMF. It also has a double function of control and punishment: it supervises compliance with legislation or regulations and penalizes infractions. The ACP has a look on the quality of the financial situation of credit and investment institutions, especially in terms of solvency and liquidity. Finally, the ACP is responsible for the protection of customers of mutual insurance and credit institution.
- The Financial Markets Authority (AMF) is an independent administrative authority which regulates and supervises all financial transactions that involve listed companies. It delivers the approvals for portfolio management companies and controls the exercise of activities of investment services and market structures.

Besides these authorities, there are advisory bodies like the Advisory Committee of the legislation and financial regulation (CCLRF), the Advisory Committee of the Financial Sector (CCSF) and the Higher Council of mutuality (CSM):

- the Minister of Economy and Finance appeals to the Advisory Committee of Financial Legislation and Regulation in order to deliver an opinion about projects on normative acts with a general purpose in the banking, financial and insurance sector. There can be some exceptions for some normative acts that depend solely on the Financial Markets Authority.

- The Advisory Committee of the Financial Sector is responsible for studying issues referring to relations between financial institutions and their customers. It can refer a matter itself, be seized by the Ministry of Economy and Finance or representative organizations for professionals and consumers.

- The Higher Council of Mutuality is in charge of Mutual Insurance Company.

The Prudential Control Authority, the Advisory Committee of Financial Legislation and Regulation and the Advisory Committee of the Financial Sector are all affiliated to the Banque de France. The chart below helps to summarize the role of these different institutions.13

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13 All the missions of these institutions will be developed further in item 6 dealing with the regulation.
At the community level, after the crisis, 2010 was the year of the creation of the European System of Financial Supervisors (ESFS) [see chart below] with:

- first, the strengthening of macro-prudential supervision throughout the European financial system via the implementation of the European Systemic Risk Board (ESRB). It is responsible for monitoring and analyzing risks which could occur in the financial system in its entirety. To achieve this mission, the ESRB has to warn early against systemic risk, and if necessary makes recommendations for corrective actions and warnings to Member States, national and European supervisory authorities, which must comply with recommendations or explain why they did/could not. The President and vice-president of the European Central Bank (ECB), governors of national central banks, a member of the Commission and the heads of the European regulatory authorities and national supervisory authorities take part in the ESRB.
- Second, the strengthening of micro-prudential supervision through the establishment of European Supervisory Authorities. These authorities are supposed to intervene rapidly with national supervisors. They enact technical standards on the implementation of the Community legislation. European Supervisory Authorities are made up of:
  - The European Banking Authority (EBA), which is responsible for harmonizing the prudential rules, for ensuring coordination between national supervisory authorities and for playing a mediating role.
  - The European Insurance and Occupational Pensions Authority (EIOPA), which is an independent advisory body for the European Parliament and the European Union Council. The EIOPA’s mission is to support the financial system stability, the markets and financial products transparency and the protection of those who benefit from insurance and pension schemes.
  - The European Securities and Markets Authority (ESMA) which is an independent authority from the European Union; it ensures the smooth functioning of integrity, transparency and efficiency of markets as well as the investor protection.

This reform aims to implement the report of Jacques de Larosière (2009)\textsuperscript{14}, a former governor of Bank de France.

\textsuperscript{14} European Commission Report, “The High-Level group on financial supervision in the EU”.

47
In France, the Committee on financial regulation and systemic risk (COREFRIS) aims to ensure the coordination of the various institutions concerned with financial stability. It is made up of the Banque de France (BDF), the General Committee of the Treasury, the Accounting Standards Authority (ANC), the Financial Markets Authority (AMF) and the Prudential control Authority (ACP).

2. The size and scope of capital markets

Following the deregulation years of 1984-1985, and the European impetus towards free movements of capital all over Europe, France has witnessed a period of fast development of financial markets. External market finance surged, but as we recalled earlier, disintermediation has been somewhat dampened by the shift from retail banking to universal banking.
a. Typology and organization of capital markets

The primary purpose of markets is to allow an efficient allocation of resources in terms of transaction cost and information. In order to try to reach this goal, France has a comprehensive array of capital markets, from the money market, to the financial market per se, the foreign exchange market and the derivatives market.

The money market represents the market for short term (less than one year) operations. The actors who intervene on this market are banks, corporations, insurance companies, investment companies with variable capital and other institutional investors. The money market uses instruments such as debt securities, certificates of deposits, commercial papers, Treasury and negotiable medium-term bills. The money market is a channel of transmission between the monetary policy and banks and real economy. The ability or need for liquidity is concentrated in banks, and the central bank allows banks to refinance themselves by fixing interest rates on the money market. The interbank market rates are close to the rates of the central bank, except when a market failure appears, as was the case in August 2007 onwards. These rates are important in determining the short term capital inflows and outflows of the domestic country vis-à-vis the rest of the world.

In France, before the reforms of 1984-1985, the money market was reserved only to financial intermediaries. Today, it is open to companies and individuals through investment companies: unit trusts and mutual funds. However, the money market relies essentially on the interbank component. Since 1999 with the creation of the euro area, money markets are fully integrated: the French money market is only a part of the European money market. In that case, the ECB sets the interest rate.

By financial market per se, we mean the medium to long term money market. With the arrival of the Euro in 1999, European Financial Markets began trading in Euro. The European markets are gradually integrating thanks to increased coordination in the design and implementation of banking and financial laws.
Different kinds of financial markets exist, which can broadly be divided into organized and Over-the-counter (OTC). Organized markets offer standardized contracts, which can be readily bought and their signatures secured through a clearance house. These markets are highly liquid and give high importance to security of contracts. France’s Euronext can be cited as an example of such markets. Since 2007, Euronext has become NYSE Euronext, hence a common holding company regrouping the New York Stock Exchange, and the stock exchange markets of Amsterdam, Brussels, Lisbon and Paris. According to the company’s website, NYSE Euronext trades equities, futures, options, fixed-income, and exchange-traded products. With approximately 8,000 listed issues (excluding European Structured Products) from more than 55 countries, NYSE Euronext’s equities markets represent one-third of the world’s equities trading and the most liquidity of any global exchange group. According to French Ministry of Economy, Finance and Industry (joint with DATAR, CAS, and AFII), market capitalization of NYSE Euronext Europe was the 4th largest in the world at the end of 2009, behind NYSE Euronext US, Tokyo stock exchange and Nasdaq.

OTC markets are opposite to organized markets, as contracts there are taylor-made; liquidity can be a major problem in such markets when one actor does not find a counterpart to the transaction he/she wishes to realize. Moreover, until 2012, there was no clearing house on these markets, hence introducing uncertainty on trading activities: it was impossible without information on volumes of trade to extract information on the fundamentals of the markets. Since January 2012, OTC transactions in France have had to be declared. However, at the moment, we are far from having a secured OTC market (OTC Plus) with a private formal clearance house. The derivatives market originates in the type of markets discussed above. A particular feature of this market is that on this market, what is exchanged is not capital or money in itself, but risk. Risk is exchanged between agents who want to get rid of it and those who want to make profit from it.
Tables 3 and 4 report the structure of OTC derivatives markets in France. It is noteworthy that the amounts of notional contracts and their market values have substantially increased since 1998: they were multiplied by 7. Between 2007 and 2010, hence during the financial crisis, the rate of increase has been relatively rapid [+11.6%] for the amounts of notional contracts, where it has been extremely rapid for market value [+77.8%]. It illustrates the growing risk associated with financial markets.

Most of derivatives contracts are related to interest rates as they represent more than ¾ of total notional contracts, but the size of derivatives contracts on credit, including credit default swaps (CDS) has considerably grown since 2004. In 2010, almost 10% of notional contracts were based on credit.

In terms of market values, it is noteworthy that derivatives contracts on stocks and raw materials make a much higher share on the derivatives markets than their share in total notional contracts. In 2007, their share reached a peak of 27% of total market value for OTC derivatives in France, although their share in total notional contracts was 4.5%. It is not surprising that the market value of derivatives contracts on stocks – the market value measures the replacement cost of a contract – has a much higher return on notional contracts than the average return (table 5). Also noteworthy, the ratio of market value on notional contracts for credit derivatives has increased quite substantially between 2007 and 2010: it has quadrupled since 2007. It appears that the financial crisis has spread to stock and credit derivatives markets of France.

### Table 3. Derivatives: share of each market as a percentage of total notional contracts

<table>
<thead>
<tr>
<th></th>
<th>FX</th>
<th>Interest rate</th>
<th>Stocks*</th>
<th>Credit</th>
<th>Total notional contracts**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>22.6</td>
<td>74.2</td>
<td>3.1</td>
<td>0.1</td>
<td>10786</td>
</tr>
<tr>
<td>2001</td>
<td>13.7</td>
<td>82.4</td>
<td>3.4</td>
<td>0.4</td>
<td>14445</td>
</tr>
<tr>
<td>2004</td>
<td>11.8</td>
<td>83.8</td>
<td>2.9</td>
<td>1.4</td>
<td>32947</td>
</tr>
<tr>
<td>2007</td>
<td>9.4</td>
<td>76.1</td>
<td>4.5</td>
<td>9.9</td>
<td>65373</td>
</tr>
<tr>
<td>2010</td>
<td>11.1</td>
<td>76.4</td>
<td>3.4</td>
<td>9.1</td>
<td>71908</td>
</tr>
</tbody>
</table>

*: including raw materials
**: billion $

Sources: BIS, authors’ computations
Table 4. Derivatives: share of each market as a percentage of total market value

<table>
<thead>
<tr>
<th>Year</th>
<th>FX</th>
<th>Interest rate</th>
<th>Stocks*</th>
<th>Credit</th>
<th>Total market value**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>20.8</td>
<td>63.1</td>
<td>16.1</td>
<td>0.1</td>
<td>342</td>
</tr>
<tr>
<td>2001</td>
<td>26.6</td>
<td>58.4</td>
<td>14.9</td>
<td>0.2</td>
<td>399</td>
</tr>
<tr>
<td>2004</td>
<td>14.6</td>
<td>72.5</td>
<td>12.2</td>
<td>0.7</td>
<td>710</td>
</tr>
<tr>
<td>2007</td>
<td>11.2</td>
<td>57.0</td>
<td>27.0</td>
<td>4.8</td>
<td>1419</td>
</tr>
<tr>
<td>2010</td>
<td>15.3</td>
<td>62.8</td>
<td>10.0</td>
<td>11.9</td>
<td>2522</td>
</tr>
</tbody>
</table>

*: including raw materials  
**: billion $

Sources: BIS, authors' computations

Table 5. Derivatives: market value as a percentage of notional contracts

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>FX</th>
<th>Interest rate</th>
<th>Stocks*</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>3.2</td>
<td>2.9</td>
<td>2.7</td>
<td>16.4</td>
<td>1.7</td>
</tr>
<tr>
<td>2001</td>
<td>2.8</td>
<td>5.3</td>
<td>2.0</td>
<td>12.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2004</td>
<td>2.2</td>
<td>2.7</td>
<td>1.9</td>
<td>8.9</td>
<td>1.0</td>
</tr>
<tr>
<td>2007</td>
<td>2.2</td>
<td>2.6</td>
<td>1.6</td>
<td>12.9</td>
<td>1.1</td>
</tr>
<tr>
<td>2010</td>
<td>3.5</td>
<td>4.8</td>
<td>2.9</td>
<td>10.2</td>
<td>4.6</td>
</tr>
</tbody>
</table>

*: including raw materials

Sources: BIS, authors' computations

Last, the exchange rate (ER) market developments shed light on globalization. The ER market is an illustration of financial globalization, as it is a single world-wide market that is open 24 hours a day, 7 days a week. One can exchange currencies from anywhere in the world regardless of the time difference. Exchange operations as a result keep on going continuously. This market resembles an OTC market without any private clearance house. Major actors on this market are banks: commercial banks or banking subsidiaries of major industrial groups; households and companies do not have direct access to the market. Note that we will return to the discussion of this market in point 18.

b. Financialization of the French economy

The development of French financial markets since the mid-1980s have affected the French economy, through new financing sources, but also French capitalism, as the new financing opportunities facilitated mergers and acquisitions (see also chapter 11 of the Report).
The development of French financial markets is clearly apparent in data pertaining to total capitalization. As shown in table 6, stock and bond market capitalization rose from 27 percent of the GDP in 1975 to 186 percent in 2001 (O’Sullivan M., 2007).

In contrast, the importance of the banking sector in France for external financing declined during the 1990s and 2000s. The rate of banking intermediation, for instance, fell from 71 percent in 1978 to 42 percent in 2000 (O’Sullivan M., 2007). This can only be considered a relative disintermediation, as the amounts lent by the banking sector to the French economy continued to grow during this period (1979 – 2001, table 3). Banks still supply a sizeable chunk of the economy’s financing. The difference is mainly due to the explosive growth of financial markets. Total market capitalization between 1975 and 2001 was multiplied by 7 in France, to be compared by a factor 3 on average for Germany, the UK and the US. It is noteworthy that France and the UK show opposite pictures: in the UK, bank loans to the private sector (expressed in terms of GDP) were multiplied by 5 between 1979 and 2001, whereas they rose by less than 30% in France.

Updating O’Sullivan’s data in table 7, one can confirm the upward trend of the importance of financial markets in financing the economy, though still observing the substantial part taken by the banking sector. In 2009, bank loans to the private sector represented 113% of GDP, hence a further 30%-jump but that time within 8 years! As for total market capitalization, it skyrocketed at 242% of GDP. Between 1979 and 2009, it was multiplied by a factor close to 10!
### Table 6

<table>
<thead>
<tr>
<th>Country</th>
<th>Bank loans to private sector</th>
<th>Total market capitalization</th>
<th>Stock market capitalization</th>
<th>Bond market capitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>67</td>
<td>85</td>
<td>27</td>
<td>186</td>
</tr>
<tr>
<td>Germany</td>
<td>83</td>
<td>117</td>
<td>43</td>
<td>151</td>
</tr>
<tr>
<td>Italy</td>
<td>57</td>
<td>77</td>
<td>72</td>
<td>183</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>58</td>
<td>138</td>
<td>44</td>
<td>238</td>
</tr>
<tr>
<td>Sweden</td>
<td>40</td>
<td>72</td>
<td>74</td>
<td>212</td>
</tr>
<tr>
<td>UK</td>
<td>25</td>
<td>132</td>
<td>84</td>
<td>218</td>
</tr>
<tr>
<td>USA</td>
<td>32</td>
<td>42</td>
<td>102</td>
<td>295</td>
</tr>
<tr>
<td>Japan</td>
<td>82</td>
<td>113</td>
<td>70</td>
<td>202</td>
</tr>
</tbody>
</table>


### Table 7

<table>
<thead>
<tr>
<th>Country</th>
<th>Bank loans to private sector</th>
<th>Total market capitalization</th>
<th>Stock market capitalization</th>
<th>Bond market capitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>67</td>
<td>85</td>
<td>113</td>
<td>27</td>
</tr>
</tbody>
</table>

*Sources: Datastream, Eurostat, authors’ computations*
On a period of 20 years, figure 7 testifies for two period of bank intermediation. After the recession of 1993, a relative disintermediation era has been under way: the amount of bank loans relatively to GDP has shrunk, at a moment when stock and bond market capitalization was at worst steady [see figures 8 to 10]. Then after the dot com bubble’s burst, loans to GDP have started increasing again, and rather steeply as shown on figure 7. Hence, disintermediation in France has not been extraordinarily strong.
Figure 8

Total market capitalization

Source: Eurostat
Figure 9

Stock market capitalization

Source: Eurostat

Figure 10

Bond market capitalization
As shown in figure 11, reprinted from O’Sullivan (2007), French banking and financial sectors witnessed a peculiar evolution: French companies, which were mainly relying on banks in the period 1978 – 1984, increasingly began exploring other financing sources, notably the financial markets, though the importance of the latter as a source of external financing took a long time to arise.

Bank loans formed the bulk of external financing between 1978 and 1984, but by the end of the 1980s, market sources reached a peak. Nevertheless, the reduction of bank loans as a financing source in 1985 led to a decrease in financing for the whole economy. As shown in figure 11, until the early 1990s, external financing came primarily from bank loans. The situation changed dramatically in the mid-1990s,
when markets sources went prominent in French corporate sector’s external financing. However, by the end of the 1990s, the share of bank loans in external financing increased again, neutralizing part of the former disintermediation. Moreover, financial institutions do not only offer loans, they also hold securities. According to Banque de France, during the first semester of 2011, the financial intermediation rate – hence the share of financing flows to non-financial agents (loans and securities) that financial institutions hold – was equal to 54.5%.

c. The French touch! A long-standing State-managed bank-based economy

Grossman and Leblond (2011) highlight the ambivalence of French authorities as regards European financial integration. They report that French authorities first adopted a strategy of delay in designing further steps towards financial integration: they showed reluctance at the establishment of the Single Market. However, once the Single Market was established, French authorities became the main promoters of the financial Services Action Plan that was intended to foster the single market for financial services. To Grossman and Leblond (2011), such ambivalence can be explained by the fact that French governments have a long history of intervention in the economy and public ownership in finance. Since the 1980s, following the shift towards full capital mobility, successive French governments have finally encouraged the development of financial markets and, meanwhile, they have favored consolidation of the banking and financial services in order to have them competitive at the European and international level. So doing, French governments have continued, from time to time, to interfere with the banking sector. For example, the merger between Banques Populaires and Caisse d’épargne was highly political: the nomination of the CEO was viewed by some observators as a direct influence from political circles.

It is certainly worth recalling at this stage, though some of the following arguments are present in earlier parts of the Report, that the French system during the 1960s and 1970s was characterized by a dependency on debt by French firms, which relied heavily on bank intermediation to cover their low capacity of self-
financing, whereas competition among financial institutions was low (collection of savings for financing was segmented and specialized), and French monetary authorities were strongly controlling flows of credits and financial operations involving the outside world. Government was therefore omnipresent in the financing of the country’s economic activity. This feature was an integral part of the country’s capitalist system. The French government had its say in the allocation of loans by banks and financial institutions, through its control over Banque de France, and that planned allocation was inhibiting flows of credits to the point of slowing down the lending activity of banks. According to Loriaux (1991), only 20 percent of total loans in the early 1970s were not controlled directly by Banque de France.

Government had also put in place numerous government and semi-government agencies to facilitate subsidized lending to specific sectors and enterprises. Loans allocated within this subsidized system represented approximately 60 percent of the total medium to long-term loans allocated to French companies during the 1970s [Loriaux, 1991]. During this period, financial markets were not an important actor on the French economic stage, because of the presence of State-owned banks. The share of financial markets in the economy’s financing, as a result, was far lower than that in the United States or United Kingdom [O’Sullivan M., 2007]. In terms of importance of banks in the economy, the French capitalist system resembled that of Japan, which was also based on debt reliance as far as country’s financing needs were concerned.

This financing mode had certain drawbacks, including the possibility of inducing inflation if interest rates were set at low levels over a long time-period, excessive cost of bank intermediation, and an inefficient allocation of financial resources. The financial market was too narrow to respond to the growing financing needs of French firms. Need was felt, therefore, to relax and open the financial markets and enter into the globalization era.
In order to mark a break from the previous system, it was decided in the 1980s to fight inflation trends and conduct a more independent monetary policy. Multiple monetary reforms were carried out, some related to deepening European integration: anchoring of French Franc at parity with the German Mark, adopting new monetary regulatory techniques based on interest rate, and development of new financial instruments. The starting point of these reforms was, it must be remembered, the end of fixed exchange rate regime associated with the fall of Bretton-Woods system in the 1970s. Other major steps promoting competition among financial institutions and instruments followed: end of government controls on loans in 1987 and exchange restrictions in 1990. In the context of credit market unification, it now became possible for French banks, especially through the law of 1984, to propose tax-free products to their clients (Codevi, savings accounts), and to cumulate different activities (universal banking).

Quite interestingly, though financial markets started being liberalized and opened to foreign banks and investors, the State remained a prominent actor through debt issuance (O’Sullivan, 2007, Clift, 2012). The objective of the government through issuance of securities was to finance the budget deficit, and to control the cost of management of debt which was causing higher interest rates. Hence, government remained the principal issuer of obligations in France during the 1980s and early 1990s.

According to O’Sullivan (2007) and Coriat (2008), this public policy along with massive privatization carried out during the 1980s significantly contributed to the development of financial markets.

Clift (2012) also recalls the implication of the French State in market reforms, denominating it “Post-dirigisme”, because public implications in the market economy are now more indirect than direct, except maybe during a financial crisis like that beginning in 2007. The following quotation from the abstract of Clift (2012) is enlightening: “understanding the evolution of French capitalism requires recognition of the ongoing market-making role of the French State, in combination
with the French conception of the market and its embedding within a social context characterised by the interpenetration of public and private elitist networks of France’s ‘financial network economy’ which remains substantially intact.” Most CEOs of French companies and authorities are certainly interconnected, via elitists schools like the engineering school Polytechnique, the administrative school ENA (and its stepping stone Sciences Po) and the business school HEC. These connections, hence “Post-dirigisme” help explain French state responses to the financial crisis like the banks bailout; beyond that, Clift [2012] also asserts that State actors, in concert with the banking elites, actively facilitated dominant market positions of French international champions.

d. **New capitalism? End of cross-shareholding system and appearance of new corporate governance and new actors**

In addition to the regulatory changes mentioned above, other reasons have also been proposed to explain the development of French financial markets. A prominent argument revolves around French firms and their strategies. French firms required financing from financial markets to pursue growth abroad through cross-border acquisitions. This was in large part the consequence of the presence of foreign competitors on the French territory resulting from the dismantling of cross-participation system. This point needs to be detailed. During the 1990s, French firm ownership structure was characterized by large scale cross-participation of shareholders, which were meant to guard against foreign unwelcome competition. At the macro level, finance was in the hands of a group of actors, which through a system of long term inter-firm alliances, sought to promote the group’s interests.

In principle, the system relied on leading teams of managers which were assigned the task of controlling and managing concerned companies. This system got a boost in 1986 when government shrank its role in the financing of economic activities.
The drawback with such a system is that it limits the capital stocks to a narrow circle of financial participation. The intrications were of the following kind: internal control, in which two companies held each other’s capital along with voting rights as shareholders. In this regard, examples of cross-participation are Société Générale with Alcatel, Alcatel with Générale des eaux, Havas with Canal Plus, Paribas with Axa-UAP, BNP with Axa-UAP, Suez-Lyonnaise with Saint-Gobain etc. Most of CAC 40 firms were involved in such cross-participation arrangements. In 1997, Goyer (2001) reported 33 such arrangements of a French major firm with at least one other firm.

This system, which was supposed to protect French firms against foreign predatory behavior (hostile takeovers), was nevertheless doomed to failure. Locking up capital in “hard-core” ownership can encourage a long term view. However, the interconnections between the State and the managers resulted in a “network of tacit corporate alliances that put effective control in the hands of management” (Harbula, 2007); they were made at the expense of “extra-shareholders”, i.e. those who are not part of the network. According to the testimony of some top managers in 2000, this “lock-in” system had lost focus on the fact that the main objective of capital investment is to maximize financial returns. The system was abandoned in late 1990s at the initiative of various French enterprises.

A notable example, reported by O’Sullivan (2007), is certainly the merger in 1997 in the insurance sector between Axa and its domestic rival UAP. The merger brought forth common share holding in several major French companies. As a result, the newly formed Axa-UAP controlled financial resources on a large scale and could coordinate activities which were hitherto impossible. The group had thus become a key player on the country’s financial scene and the linchpin of financial network. The ramifications of this development were numerous for major French corporations.

So far, the group had followed a strategy in line with the German or the Japanese models. The group however decided to change its direction. The group’s
president Claude Bébéar announced shortly after the merger that the group was going to sell a big proportion of its financial participations, particularly in the firms Crédit National, Schneider and Suez, while keeping its participation in BNP and Paribas for strategic reasons.

The group, it was said, would henceforth concentrate on its core competencies with the aim to become world leader in asset management. Morin (2000) and Harbula (2007) graphically illustrate the system of cross-shareholdings in the late 1990s in France (figure 12), just after Axa’s merger with UAP and shortly before the system’s radical change. The cross-shareholdings system was very huge; it created a network of French big companies that led capital to be stuck in the hands of a few.

The decision of Axa-UAP was quickly followed by other major French groups, which dismantled their respective cross-participation structures and refocused their activity, such as Alcatel that specialized in telecommunications and became Alcatel-Lucent, and Suez that became a pure utility and merged with GDF. Formerly a piece of Alcatel’s conglomerate, Alstom became a French champion in transportation. These shifts improved French corporate governance, opening the door to foreign investors.
Figure 12. Cross-holdings in the French corporate governance structure [% as of Dec., 1997]

Source: Harbula (2007)

The chain of events that led to this shift in French corporate governance shows that there were endogenous factors involved in the evolution of the French financial system. President Bébéar’s announcement to sell Axa-UAP’s numerous shares in other companies was therefore the act that set the ball rolling and turned the system upside down.
Within this new system, foreign institutional investors’ implication in French companies has been strong and large inflows of foreign investments arrived in France rather rapidly. According to Banque de France, the share of foreigners in stock market capitalization jumped from 10% to 35% between 1985 and 1997. According to the same source, the share of foreign controlled firms in the stock market rose to 44% in 2003 as a result of privatization. The penetration of foreign capital in France has thus reached levels which have been much higher than in comparable countries. In this regard, France’s stock market was viewed as the most attractive market to foreign investors in the late 1990s (Morin, 2000). More than 50 percent of the market value of firms listed at CAC40, i.e. companies like Alcatel, AGF, Elf, Générale des Eaux, Société Générale were held by foreign investors (Morin, 2000). As shown in table 3 of Morin (2000), by 1997, foreign investors dominated the scene, their capital holdings exceeding those of the members of cross-shareholdings system: there was then early exposure of French firms to foreign capital. According to Banque de France, the share of French stock market capitalization held by non-residents equalled 42.4% by the end of 2010, hence an amount of 395.5 billion euros (against 44.6% by the end of 2009). Banque de France explained this sharp decrease (-2.2 points) by stocks sellings (-1.4 point), lower stock prices [-0.4] and change in the composition of CAC40 [-0.4].

Authors like Goyer (2001) highlighted the growing influence of these foreign institutional investors, acting as shareholders, in the governance of French firms. Defined as the system by which firms are governed and controlled, it determines the distribution of rights and responsibilities among various actors in the firm: President, members of administrative council, managers, shareholders and other stakeholders. Foreign investors include Anglo-Saxon Mutual Investment Funds like Fidelity. Among these funds, there is strong competition for higher financial returns, characterized by shareholders-oriented management of funds. It leads these funds to get involved in high risk-high return strategies. To them, it is essential that the firms in which they invest achieve good financial performance. They hence target
companies but expected strong potential financial results. As active shareholders, these funds manage to get their voice heard in order to influence the firm’s strategic direction and management style.

French firms have had to adapt to the preferences and demands of foreign investors, and according to Morin (2000), to follow the dictates of financial markets, as shareholder value was now a necessity and not a choice. It must certainly be asserted here that, though change came from abroad – from foreign investors –, the financialisation of the French economy has permitted to rely heavily on stocks to finance recapitalisations, privatisations, mergers and acquisitions (see O’Sullivan, 2007, and the list of such financial needs in her tables 2 and 3).

The fall of cross-shareholding system in the late 1990s came with a revolution in management style, with change in values inspired from the American shareholder value model. As a result of pressure from foreign investors, French firms had to finance themselves on financial markets. Following Goyer (2001), strategy today is an intermediate variable, between governance of the company and the system of innovation. Innovation therefore emerges from within the firm, which depends on institutional environment. Two forms of innovation can be realized: incremental innovation and radical innovation. Incremental innovation, which particularly characterizes the German system, corresponds to gradual growth of a firm’s assets in the hands of a highly skilled labour, thus guaranteeing autonomy of work. This innovation is coupled with concentrated ownership of the firm which reinforces the trust and commitment with the firm (co-determination, presence of company committees, centralized trade unions etc.). Radical innovation, which comes from the American system, includes the concept of rapid innovation and rapid development of products, based on strong research and development activity. Capital ownership in this kind of firm is dispersed, and the firm is characterized by the existence of highly risky capital, flexibility of hiring and firing, and a relative marginalization of stakeholders. This kind of structure encourages companies to be highly reactive.
Under the influence of American and British investors, French firms have increasingly adopted Anglo-Saxon models of firm management, increasing the share of elected managers who are independent from administrative councils. They often maintain specialized management committees, and have frequently relied on Stock Options in order to link managers’ incomes to the firm’s performance. Besides, French firms have, since the end of cross-participation system, tended to choose the dispersed ownership structure in order to promote radical innovation and put in place measures to improve returns on investment.

As far as assets management is concerned, France ranks pretty well in the EU: in December 2010, the French market share was 19% of net assets traded in EU markets. Between 2004 and 2010, this share increased continuously. The high liquidity that such a high and growing share reveals has been favorable to the attractiveness of French financial markets to foreign investment funds.

Growth of financial markets in France went hand in hand with changes in the behavior of all the economic actors involved, whether on the demand or the supply side. So far, we have discussed extensively the demand side of the story with French firms. The role of households, who transformed part of their bank deposits into stocks (Sicav monétaires) or savings accounts which benefit the public real estate sector ([Livret A, Codevi], has also developed. Households have been influenced by two different types of incentives from governments, through tax exemptions, or from banks with the creation of financial products which risk is managed at a relatively low level. *Livret A* and *Codevi* (savings accounts) gather a liquid savings, for which interest and capital are not taxed, but the amounts are limited and returns are set by the government at a very low rate. *Sicav monétaires* are offered by banks, and they can be based on a basket of stocks and bonds which are considered by the bank as relatively non-risky, to protect households’ savings from stock prices volatility.

With the development of financial markets in France, incentives to households and the increase in their average income directly led to an increase in the demand for stocks. The capital held by households was therefore collected by institutional
investors (insurance companies, banks, investment funds etc.) and invested in financial markets.

The new involvement of households in the financial development of France has been fostered by banks, which turned into intermediaries between their clients and financial markets. This is particularly the case with universal banks, which combine the activities of deposit collection and market activities, and which rely on financial innovation for proposing new financial products and services that could be easily negotiated on financial markets. Thanks to this financial innovation, financial products and services multiplied and led to so-called sophisticated instruments of securitization.

Before 1980, credit risk used to be written in the balance sheet of the issuer of classic financial instruments: ownership obligations and issuances such as stocks and bonds. Innovation in financial markets was limited by strict regulations on products exchanged in a dirigiste economy.

Deregulation in the 1980s, with the end of credit supervision and control and exchange controls (see also chapter 5 of the Report), let emerge new financial products in France: the floating-rate debt security, equity securities, certificates of deposits, and French commercial paper. Collective management products have also emerged: UCITS (Undertakings for Collective Investment in Transferable Securities), money-marked funds and mutual funds. All of these products have enriched the financial resources of the French economy. A major financial innovation is of course the securitization by which debts of borrowers which are claims for banks, are transformed in negotiable instruments, hence providing additional products to the markets. Most of these negotiable instruments originate in banks. The Law 88-1201 of 23 December 1988 on the creation of debt securitisation fund and securitisation vehicle finally enabled the development of securitization in France. Initially, the law limited the scope of securitization to financial institutions and to mortgage credit. Over the years, the number of instruments which were allowed for securitization has increased: leasing assets in 1997 (Décret 97-919), firms’ assets in 1998 (Law 98-
546), meaning that non-financial institutions were now allowed to contribute to securitization, and future assets also in 1998 (Décret 98-1015). In 2003 and 2004 (Law 2003-706 and Décret 2004-1225), the funds dedicated to securitization (Fonds communs de créances) were allowed to issue whatever type of financial instruments, from bonds to derivatives.

Despite this legislative impetus, France has not transformed into a leader in the European market of debt securities. In 2006, before the financial crisis, the total flows of debt securities in France amounted less than 8 billion €, hence far from the UK and even Spain which flows were respectively 25 and 5 times higher (AFIC, 2007). France ranked fifth in Europe in terms of debt securities’ issuance. Since 2010, although a relative financial recovery took place with the rebound of the French stock markets between March 2009 and April 2011, the issuance of debt securities remained low (figure 13). An exception arose during the second semester of 2011 (figure 13), though the amounts remained very low in comparison with European markets.
Financial vehicle corporations liabilities, France, Debt securities issued

Source: ECB.
3. FRANCE AND THE INTERNATIONAL MARKETS

Christophe Blot [OFCE]
Jérôme Creel [OFCE & ESCP Europe]

France had a long history of foreign capital controls that limited access of
foreign [domestic] investors to domestic [foreign] capital markets, but since at least
the late 1980s, France has become well integrated in world capital markets.

During the twentieth century, controls were set between 1931 and
approximately 1989. In 1931, capital controls were a response to the Great
Depression and to the threat that French capital might flee abroad. Until 1939,
capital control agreements were not driven by a central authority, but generally by
Paris’ Chamber of Industry. Capital controls went hand in hand with the return of
import quotas. Between 1939 and 1959, capital controls were managed by the Office
des changes - a desk which centralized the conversion of domestic currency into
foreign ones -; Office des changes was suppressed shortly after full convertibility of
European currencies was achieved in 1958.

Despite full convertibility, capital controls were maintained, although to a
lower extent after France decided to liberalize its financial sector in 1984. Officially,
they remained in place at least until capital controls were fully abolished in 1989,
hence at the time of the EU-wide impetus for full capital mobility within the entire

1. Long-run empirical development of the integration of France in international
financial markets

It is certainly very important to acknowledge that the movement of France
towards a better integration in world capital markets made possible a steep
decrease in nominal interest rates in the early 1980s. In 1981, when the new
Socialist President, M. François Mitterrand, took office, long term interest rates in
France were above 16% while short run ones were above 15% (figure 1). In sharp
contrast with the 1970s, real interest rates, both long and short, went positive at the
very moment of President Mitterrand’s arrival. Five years later, nominal interest rates were below 10%, though real rates remained relatively high. One interpretation of these diverging patterns of nominal and real interest rates can be that the expected gains from deeper European integration – they materialized in lower nominal rates – were partly offset by a sustained tighter monetary policy which aimed at disinflation – real rates remained high because inflation rates decreased faster than nominal rates.

Meanwhile, the implication of the State in nationalizing French banks permitted to reorganize the banking sector and to improve its productivity, leading to lower requested nominal interest rates. However, disinflation policies that started being implemented in 1983 led to an increase in real rates, at least until the early 1990s.

The impact of disinflation policies on French unemployment was the cornerstone of Fitoussi’s “Forbidden debate” [1995] where he opposed the relevance of fighting inflation without paying due attention to the social costs that created 1-million more jobless people. Figure 1 makes it straightforward that the focus on inflation, at a time of widespread financial globalization and more intense bank competition, was accompanied by a longstanding rise in real short- and long-run interest rates. In 1992, real short-run interest rates were equal to 8% whereas long term ones were equal to 6% in real terms.
Figure 1. Interest rates, in %

Source: OECD.

The decrease in real rates was achieved in France at the eve of the Single Market, and long term rates finally stabilized close to 2% in real terms from 2002 onwards.

A look at figure 2 confirms the negative macroeconomic view that has been associated with the French episode of disinflation policies during the 1980s. It is obvious that the improvement in French competitiveness was not so successful beyond 1984, hence beyond the time of frequent devaluations of 1981, 1982 and 1983. The devaluations are clearly apparent in data pertaining to the nominal effective exchange rate (NEER) – an index of the variation in the exchanges rates vis-à-vis the currencies of main [24] French trade partners -, between 1982 and 1984. However, shortly afterwards, the so-called policy of “Franc fort” led to a long-lasting nominal appreciation of the French currency: the French NEER increased by 1.5% per year over 25 years. After the very sharp decrease in the NEER of the early 1980s, the real effective exchange rate (REER) – an index of competitiveness vis-à-vis the main [24] French trade partners -, also decreased between 1982 and 1984, hence evidencing a
strong improvement in price competitiveness. Nevertheless, this improvement was relatively short-lived. France had to wait for the late 1990s and the creation of the euro to retrieve new gains of competitiveness that were finally lost less than 10 years after: in 2009, the REER index had returned to its value of 1994.

Source: Eurostat.

The impact of exchange-rate policy and disinflation policies on the French current account has certainly been substantial, despite the non-linearities in the evolution of price competitiveness. In 1982, France had still a large current account deficit of 2% of GDP that was transformed into a surplus in 1986: higher price competitiveness proved fruitful on external trade. Despite some years of deficit between 1987 and 1991, there was a much improved external trade situation for France until the mid-2000s. However, on the eve of the worldwide financial crisis which started in 2007, France underwent a relatively rapid surge in its current account deficits, culminating to almost 2% of GDP in 2008 and 2010 like 20 years before.
The overall net private savings position of France has been positive since 1981, with no exception (figure 3). When public deficits decreased, hence between 1994 and 1999, the large net private savings position was obtained by the increase in the current account surplus: France was a net provider of capital to the rest of the world. During the late 2000s, the large net private savings position was obtained by large and growing public deficits. The slowdown in worldwide activity, that more than compensated the relative improvement in price competitiveness between 2008 and 2010, fostered current account imbalances and paved the way for larger required public deficits that could wipe out the excess of private savings.

The fact that, at a given current account deficit or surplus, private and public savings are close substitutes is very important in light of the request by the EU authorities (the Council, the Commission and the ECB) that public deficits have to be substantially curbed. If one agrees that public deficits crowd out private investment, one can infer that the EU request will produce higher private investment. Declining public deficits will be wiped out by lower net private savings. However, the crowding-out principle is just an assumption and there is nowhere in the economic literature something like the beginning of an agreement on the validity of this assumption. It is straightforward that the financial crisis has witnessed a surge of public deficits and a strong reduction in interest rates, in nominal and real terms: the latter reduction has not hindered private investment, it is the lack of outlets for firms’ products that did. One may argue further that public deficits were not high enough to have GDP recover faster. In France, a comparison of figures 2 and 3 also shows that lower nominal interest rates since the 1980s occurred hand in hand with permanent public deficits, not surpluses. Hence, if one assumes instead that public deficits do not either crowd-out or even crowd-in private investment, lowering public deficits will require an improvement in current account surpluses.
Reaching a current account surplus is not an easy task in a country which has evidenced a strong correlation between net private savings and public deficits for so many years, except a short period [1997-2001]. It may also prove contractionary on GDP. As a matter of fact, an improvement in the current account surplus will be made possible only if, by definition, France trade partners increase their imports from France and/or if France reduces its own. The likelihood that French exports increase dramatically to cope with lower public deficits is very low: French competitiveness is not good [see figure 2] and French trade partners are also committed to fiscal contractions that will reduce their economic growth and demand for foreign products. Hence, France will improve its current account balance only insofar as its economic growth decreases and its own demand for imports is reduced. As a conclusion, fiscal contraction will have to be contractionary, to drive down the current account deficit. Meanwhile, it will generate larger public deficits in France and elsewhere. By the way, current accounts will not move as fast as
expected: low worldwide growth will not change substantially relative trade positions. Hence, one can also expect that the net private savings position of France will remain large until economic growth resumes, hence as large as public deficits. What is true for France is also true for Spain, Portugal and Greece: only a change in trend growth will be able to modify the net private savings positions of these countries.

The early integration of the French economy in the globalization process is remarkably visible in figure 4. France’s net external position (the financial account reports the value of foreign liabilities minus the value of foreign assets, hence it is opposite to the net external position) was already substantial, but negative, early in the 1980s: on average, it equaled -1% of French GDP between 1980 and 1985, and France attracted capital to cope with its current account deficits. After deficits turned into surpluses, the net external position became positive, reaching 3% of GDP in 1999. Since 2006, France has turned back to a negative net external position. The current account deficit is matched by net capital inflows, hence moving away the risk of unsustainability of the French current account deficit.

On figure 4, it is also straightforward to show that the structure of the balance of payments’ financial account has been very diverse since the 1980s. Though in 1980, capital net inflows seem to originate exclusively from interventions of the central bank (via capital controls), the following years show a mix of portfolio investments and “other investments”, then a mix of net FDI (outflows), portfolio investments and “other investments”. Both FDI and portfolio investments helped finance current account deficits, and then they were driven abroad by current account surpluses. On the eve of the crisis, large net outflows of portfolio investments from French companies fed the world economy, but with the arrival of the crisis, French large private capital inflows turned back, as if France were a safe haven for capital. Shortly before and during the financial crisis, “other investments” were a cushion for the economy as they substituted for French net portfolio investments. It is noteworthy that the financial crisis has had no strong
consequences on the ratios of net FDI outflows of French companies: these companies continued to invest abroad and to grasp benefit of declining stock prices to control new companies or subsidiaries.

Figure 4. Financial account, net inflows, % of GDP

Source: International Financial Statistics (IMF)

The reliance of the French economy on all possible sources of external financing is more visible on figures 5 to 7 where gross capital flows are showed. With only a few exceptions, French companies have attracted foreign capital while at the same time they generated capital outflows, either via a long term strategy (FDI, figure 5) or via a diversification strategy (portfolio investments, figure 6). Frequently, credit operations, derivatives and monetary authorities’ interventions also went both sides, though the “mirror effect” between the assets and liabilities sides is not as clearly visible as for FDI and portfolio investments (figure 7).
Figure 5. FDI, in % of GDP

Source: International Financial Statistics (IMF)

Figure 6. Portfolio investments, in % of GDP

Source: International Financial Statistics (IMF)
It is worth noticing on figures 5 to 7 the extent to which gross capital flows increased past the late 1990s. Although capital controls were banished by the end of the 1980s, gross flows increased substantially 10 years after the abolishment. Their evolution can hence be associated with the creation of the EMU that certainly reduced the cost of transactions.

From figure 8, it appears that the integration of France in the globalization process was initially made possible via bank intermediation, hence credits and loans: from 1980 to 1990, capital inflows in France were almost exclusively intermediated by banks as far as portfolio and other investments were concerned. Since then, reliance on banks has generally coincided only with periods of crisis and recession (1993-1995, and 2010). Since 1991, a large proportion of portfolio and other investments inflows has relied on debt securities, giving foreign companies an access to the capital of French firms and ensuring high liquidity on these markets. It is also noteworthy that a few years prior to 2007 crisis, from 2004 to 2007, bank
intermediation was strong again, and it is even more visible on figure 9 which presents the structure of capital outflows. Banks in France have not only attracted capital on the French territory, but they have also participated in financing French activities abroad, through direct acquisitions or loans. After they underwent losses in 2009 on the assets and liabilities sides, banks financed again the current account deficits, with a new surge in credits and loans in 2010. A last point on the structure of capital flows as far as France is concerned is the relatively small and scarce reliance on equity and derivatives: except in 2008 and 2009 on the assets side, or between 1993 and 1995 on the liabilities side.

Figure 8. Allocation of portfolio inv. and other investments by type of instruments, % of Port. Inv. and other Inv., Assets

Source: International Financial Statistics (IMF)
Figure 9. Allocation of portfolio inv. and other investments by type of instruments, % of port. inv. and other inv., Liabilities

Source: International Financial Statistics (IMF)
2. Institutional changes that affect the integration of France in international financial markets.

It must be made clear that the impetus for France integration in world finance was political. There were two stages that need to be recalled.

The first one relates to the European Monetary System. It is needless to recall all the adventures of the international financial system after the collapse of the Bretton-Woods regime. The exchange rate volatility in the 1970s led European governments to imagine their own monetary system within a wider one. Past the “European snake” of small possible deviations from a fixed nominal anchor vis-à-vis the US dollar, the German Chancellor of the time, M. Helmut Schmidt, and the French President of the time, M. Valéry Giscard d’Estaing, imagined a European system that would improve trade integration thanks to stable but adjustable exchange rates, without reference to the US dollar, within what would come to be labeled the EU. In 1979, the EMS was born. Deeper trade integration meant larger volumes of trade: they also required further external financing. Reliance on larger-than-domestic financial markets and foreign banks became necessary.

In conjunction with the creation of the EMS – a new step in European integration -, the French governments of the early 1980s abolished capital controls at the frontier, reorganized banks and increased access to French financial markets. Paris was soon to become a European competitive stocks and bonds market.

As was shown in the previous subsection, French exposure to international financial markets occurred early, and it permitted to finance the twin deficits (public and current account deficits) of the 1980s through external debt and net inflows of portfolio investments, without hindering the recourse to net outflows of FDI. Meanwhile, France has created a number of multinational firms, either in the banking sector or in the corporate sector. According to World Investment Report 2012 by UNCTAD, there are two French MNFs in the top-10 of non-financial biggest world MNFs (ranked by foreign assets): Total (petroleum: exploration, refinery,
distribution) and GDF-Suez (utilities, electricity, gas and water). These two companies have more than 300,000 employees, among which more work abroad. Large French banks are Crédit agricole, BNP-Paribas and Société Générale. The growing size of French firms was consecutive to the 1980s privatization and capital deregulation.

3. Interpretation of the integration of France into international financial markets

Data provided in this section so far have evidenced the existence of twin deficits in France and it is certainly remarkable that France have not undergone any currency or twin crisis since the early 1980s.

In the early 1980s, the fiscal stimulus which was designed by the new Socialist government turned out to be very detrimental to current account balance. The increased demand for imports was not matched by increased exports because French partners were in the trough of their business cycles. Viewed ex post, French economic policy was not timely scheduled and it urged a policy reversal towards the “Franc fort” in order to foster competitiveness. Despite twin deficits (see figure 3), there was no currency crisis in France thanks to the large amounts of net savings, coming from corporate firms and households. With still high real interest rates (see figure 1), corporate firms were relatively reluctant to go in debt, whereas the reorganization of the entire banking system attracted households’ savings.

In the 1990s and until the mid-2000s, current account surpluses were achieved and there were no specific tensions on the French Franc until 1999 and the adoption of the euro. Over the most recent period, the resurgence of the twin deficits shortly before and after the 2007 crisis has been interpreted as requiring the implementation of a sharp fiscal contraction. We have already mentioned that such a policy would prove counterproductive. It may reduce the capital attractiveness of France a bit further, hence making it more difficult to finance France external debt. According to World Investment Report 2012 by UNCTAD, France ranks very far in
terms of attractiveness, around the 70th rank, while Belgium, geographically so close to France but with a quiet different tax systems on corporate firms and wealthy households, arrives second. Nevertheless, the amounts of FDI inflows in France are substantially higher than in Belgium: capital attractiveness of France seems resilient.

4. Conclusions

Except for the threat that fiscal contraction poses on French GDP growth and, to a lesser extent, on the ability of France to attract foreign capital, France integration within the EMU and world financial markets has been successful so far. As a drawback to its interconnections with international finance, France is hit by similar financial shocks as the US, the UK and Germany, having no buffer to escape them. As showed on figure 10, the stock market trend in Paris has been consistent with that of these countries: the first sharp reversal occurred in 2001 with the dot com bubble burst, and the second sharp reversal occurred in 2008 with the worldwide financial crisis. In contrast with the former, this time is different! The recovery of the stock exchange has come to be slower than it was in 2002-2003.

As a conclusion, France is among the countries which have been financialised early. Along the 1980s, the French economy has opened its capital markets to foreign capital while French companies were starting expanding abroad. Under the “Franc fort” policy, a commitment to stabilize the value of the French Franc vis-à-vis the German Mark within the EMS, France escaped the issue of foreign-currency denominated external debt: France was able to issue its own public debt in French francs because its commitment was credible. Since 1999, the adoption of the euro has not changed the currency denomination of the French public debt: it is entirely issued in euros. Hence, financial markets pose no more problems to France than to large developed nations.
Figure 10. Share Prices, Index 2005 = 100

Source: OECD
4. **The impact of the processes of European integration on the French financial systems**

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In this section we briefly review the impact of European integration on the French financial system, with respect to the financialization of the French economy, the organization of banking and financial services, the development of financial markets and the payment system. Needless to say, France has gone through an extended process of globalisation and has conformed to the process of European integration. The French financial system is no exception to these trends, though the State has long tried to limit the incidence of globalisation on the nature of French capitalism [see previous parts of this Report].

1. **Organization of banking and financial services**

According to Coriat (2008), the financialization of the French economy came both from the US, as a driving example for the privatization process, and from the EU, as a reform catalyst. The on-going change in the capital accumulation mode dominated by finance was introduced by the EU in 1986, under the implicit influence of the US capital accumulation mode. Indeed, following the phase of disintegration in Europe in the 1970s, with its slowdown or decrease in trade flows within the European Economic Community (EEC), the Delors Commission in 1984 decided to boost European economic integration with the Single European Act of 1986 (ratified in 1987) in order to establish a Single market in 1993. European liberalisation was a by-product of globalisation.

The Single European Act allowed the establishment of a European integrated financial and monetary market under the aegis of the four fundamental freedoms of movement of people, goods, services and capital. Competition was fostered and, because harmonization of national standards remained a tricky issue, the principle of mutual recognition was imposed. For all EU countries, it meant trust in the
standards of other European partners, recognition of the validity of their technical and social standards; hence, it led to minimum standards all over Europe. Improved competition has had strong implications on monopolies and utilities, as well as on public procurement. The privatization processes and the change in cross-holdings of French companies that have been described in a former part of this Report are a consequence of globalisation and European integration processes.

In addition, the implementation of the Single market, joint with EU directives of 1979 and 1989, fostered French banking reforms of the 1980s and 1990s. These reforms were meant to open French banking industry to international competition and to ensure equal and competitive access to banking services. Financial integration stated by the Single European Act was deepened with various treaties, directives and regulations that have succeeded in promoting a large unified market for European currencies and finance. The integration of the European financial sector accelerated in 1999 with Financial Services Action Plan [FSAP], launched by the European Commission and the White Paper of the European Commission published in December 2005.

Coriat (2008) also recalls that there has been an intense haggling and lobbying, to enable Europe to provide financial services on a "broader" basis, with the introduction of the single passport which allows extra-European banks and financial institutions to exercise automatically in the European Economic Area insofar as they have a subsidiary in at least one EU country. For example, in France, “Under the principle of mutual recognition of authorizations, credit institutions, investment firms and authorized payment institutions in the form of a French company are empowered to offer banking services and / or financial and payment services in another Member State when they have completed the required formalities and the CPA [Control and Prudential Authority] has informed the competent authority of the host state.”.
2. Development of financial markets

As shown by Goyeau and Tarazi (2006), France has witnessed increased competition and a radical change in financial markets, joint with a movement of technological cooperation and concentration that established a competitive European market.

With regard to technological and market organization, we already mentioned the movement of merger and clustering phenomenon of European stock markets, leading notably to Euronext. It was meant to increase economies of scale in the attraction of a larger number of issuers, on the one hand, and investors and financial intermediaries, on the other hand. The Law of 22 January 1988 cancelled the monopoly of brokers, hence allowing to open their capital to financial intermediaries. It gave rise to the development of trading companies which were authorized to perform operations for their own account as well as for third parties. Founded in 1990, the “Société des Bourses Françaises” (French SBF-Bourse de Paris), was first transformed into a limited company: Euronext NV, before it merged in September 2000 with the stock markets of Amsterdam and Brussels to become a listed company since 2001. Then, in 2002, the Lisbon Stock Exchange and the international derivatives market based in London, Liffe, joined Euronext. The group existed independently from 2000 to 2006 before combining with the NYSE in 2006.

Meanwhile, the on-going revolution of information and communication technology spread to France: the stock market adopted the CAQ system (Continuous Assisted Quotation) in 1986 to enhance the competitiveness of the Paris stock exchange against other markets, especially London’s. Since then, financial transmissions of orders, executions, payments and stocks and bonds deliveries have been automated.

Hence, globalization of financial flows and technologies, joint with increased European competition, gave an impetus to changes on the Paris stock market.
3. Payment systems

As far as payment systems are concerned, there are two interbank payment systems in France, stemming from European-wide initiatives: a high-amount payment system (‘wholesale’) and a retail one.

- The ‘wholesale’ payment system is TARGET2-Banque de France, a component of the European system TARGET2 (Trans-European Automated Real-time Gross settlement Express Transfer) of the Eurosystem. It relies on a single technical platform that is shared between European financial institutions and national central banks to smooth the establishment of business relationships between the TARGET2 participants (the involved financial institutions have an opened account vis-à-vis their central bank) and national central bank. The relationships between the national central banks and the banking community are completely decentralized. At the end of 2011, the ECB reported a total number of almost 60,000 participants in TARGET2, i.e. credit institutions which had access to the payment system.

- As for the retail payment system, the SEPA (Single Euro Payments Area) system is managed by the ECB which states that it is meant at enabling customers to make cashless euro payments to anyone located anywhere in Europe, by credit transfer, direct debit or debit card. SEPA hence creates a single market for retail payments in Euros, not only in the Euro area, but also in the EU and beyond. As a country using Euros in its retail payments, France is obviously an active participant in this system.
5. **The Present Regulatory Framework and the Key Changes in Financial Regulation and Liberalisation since 1980**

Christophe Blot (OFCE)
Jérôme Creel (OFCE & ESCP Europe)
Anne-Laure Delatte (Rouen Business School & OFCE)
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The 1980s’ key changes in the French banking and financial system cannot be appreciated without studying the regulatory framework that has always followed its evolutions. The banking and financial regulation was part and parcel of this system and it has to be linked to the specificity of the French financial system, that is to say the predominance of the State interventions. The 1984’s Banking Act\(^\text{15}\) paved the way for a set of legislations in France which have always tried to abide by the European and international regulation; that is why we cannot analyze the French regulatory framework without relating it to the European and global constraints. The financial regulation encompasses not only the banking, insurance and financial markets’ regulation but it is also based on several external components which have direct incidence on its efficiency. First, a stable financial system has to be founded on healthy macroeconomic policies and banking control authorities have to react if they seem to jeopardize the solidity or security of the banking system. Then, public institutions which are inadequately developed can contribute to weaken financial markets; they have to include a business law system, principles and exhaustive accounting regulation, an independent audit system, an efficient and independent judicial authority and a well defined regulation. Third, the market discipline has to be efficient, which depends on an adequate information flow to market operators, which is largely defined by regulatory authorities, on the existence of appropriate financial incentives with a view to rewarding well managed institutions and on operations

\(^{15}\) See bibliography for specific references.
which guarantee that investors are protected from the consequences of their decisions. Last but not least, a stable financial system needs mechanisms that ensure an appropriate degree of systemic protection, a sort of public safety net (see the fundamental principles for an efficient banking control of the Basel committee). It is precisely the role of regulation to establish a balance between protection and incentives.

The financial globalisation has not only a geographical dimension; it has also erased the legal and regulatory borders among the several stakeholders of the financial world. The present analysis of the French regulatory framework and the key changes in financial regulation and liberalisation since 1980 will bear in mind not only these close links between the financial regulation and its external constraints and consequences but also the fact that nowadays 70% of the French banking regulation comes directly from the EU regulation and that numerous financial and banking laws follow international Directives. Finally, it must be borne in mind that if globalisation has created some additional regulation, the regulation has also created some additional liberalisation by letting the banks control themselves. Liberalisation and regulation have been thus in a catch-22 since the 1980s.

1. The key changes in French financial regulation and liberalisation since 1980

The evolution of the French regulation has been sequenced by several laws that have followed either the international and economic situation or the European and international legislations that have introduced a global regulation framework.

The 1980s and the 1990s have witnessed a rise in financial risks (see 1. in Work Package 2) and a shift in their nature; the regulation since then has tried to contain them. The cornerstone of the French financial regulation since 1980 is undoubtedly the Banking Act of 1984, relative to the activity and control of the credit organisations, which has to be linked to the liberalisation context that knows the international financial system. This law, proposed by the Pierre Mauroy’s
government (PS\textsuperscript{16}), aimed at strengthening competition and at a better efficiency of the entire banking system. It put a halt to the bank specialisation by creating the ‘universal banks’, every organization that received an agreement can carry out every type of operations peculiar to credit organisations and can choose its customers without restrictions. These “credit organisations” encompassed the AFB banks like BNP-Paribas or Société Générale, the “mutualist” or cooperative banks (Crédit Agricole), the savings banks, local credit banks, financial societies (CETELEM, COFINOGA) and the specialized financial institution. This act also created three collegial authorities, which functioning is tightly linked to the functioning of Bank of France and that control the banking sector (see section 2): the Banking Regulation Committee (CRB), the Credit Organisations Committee (CEC) and the Banking Commission (CB). The CB had to control whether the credit organisations respected the several enforceable legislative and regulatory clauses and to punish them if necessary. Last, this law introduced a liquidity and solvability constraint for the credit organisations, which had to abide by accounting norms and by a balanced financial structure in order to guarantee their liquidity and solvability that were supervised by the CRB. This liberalisation had some quick effects on the securitisation movement through which France lived from 1986 to 1990 and this market policy has been continued through several measures like the lifting of the credit framework in 1987, the lifting of the control on assets movements or the dismantling of the exchange control in 1989 (see 1.).

Insurance activities and financial markets authorities did not experience such evolutions. The main institutions in charge of regulation were already in place or were created later. Thus, the COB, created in 1967, was at that time the authority in charge of financial market supervision. The CCA, in charge of insurance control, was created in 1990.

\textsuperscript{16} see Appendix 2 for the acronyms.
The 1990’s decade was marked by the pursuit of an internationalisation of the financial markets and actors. In concrete terms, there has been an acceleration of cross-border activities by the financial institutions, of many financial innovations like complex financial instruments that cannot be classified in a specific financial sector (bank, investing societies or insurance societies) and the setting up of financial conglomerates. These evolutions have lead to many reflections about a new regulation which can refer to both prudential rules and supervision organisation. As for credit organisations, the French authorities tried to adapt the prudential rules with a view to letting them cover the evolution of the financial techniques; as for the organisation of supervision, the French regulation tried to abide by the European banking market and its evolution perspectives. The 1996’s act about the “modernisation of the financial activities” has translated in French law the 1993’s European directive relative to the investment services in real estate. These investment services were able to be proposed by some new providers which are the “investment firms”. Investing firms are now able to establish an outlet in every European country they want to and to supply services from a distance (what we call “free service”). This act about the investment services has created a European financial go-between status. The 1999’s act relative to savings and financial security has instituted a guarantee fund for banks. It has been the first blanket system which covers every credit organisation for their essential activities (bank deposits, equity deposits, cautions), even if insurance on bank deposits was already provided; preventive interventions have now a legal foundation with the Deposits Guarantee Fund (FGD) which brings all of the banking organisations together. The agreement to bear a sinister has been facilitated by the setting up of stocks and the cooperation between the FGD, the CB and the CEC is reinforced to carry out a better regulation.

After the setting up of its new currency, the European Union asked for the regulation that can assure the best unification of its assets market and the efficiency of the supervision of a banking sector which evolves quickly. The 2000 decade has known a vast movement of integration among the financial markets, the products,
the issuers and the go-betweens. The development of modern communication technologies like the Internet facilitates such a process by opening the cross-borders relationships. In response, the European Union and each of its members have engaged several workings that aim the strengthening of the regulatory coherence and its adequacy to the last realities and the completion of the Unique Market. The 2003’s act relative to financial security (LSF) has been voted with a view to responding to the investors’ confidence crisis born in the United States with the Enron and Worldcom affairs. The LSF imposed to companies listed in France several obligations related to financial transparency and risk management. It also created the Financial Market Authority (AMF), an independent public authority, born from the merger of the COB and the CMF, which controls for the functioning of financial markets and for the protection of savings. Two other committees, the CCLRF and the CCSF, were also created to help regulating the financial markets.

The AMF works in coordination with the other authorities in charge of the control of the banking and financial professions like the Banque de France. The 2007’s order transposed the famous European “directive MIF” (directive relative to financial instrument markets). It introduced a corpus of fundamental and harmonized rules applicable to the negotiation of financial instruments. The main innovations of this order are the revocation of the principle of orders’ centralisation on the regulated markets and the introduction of competition between infrastructures of negotiation and execution of the financial transactions; that is why this directive is also a stepping stone for the modernisation of the financial regulators. It aimed to better prevent the sale of financial products and to facilitate the well execution of the orders.

Nonetheless, the lack of a Community regulation and the rise in self regulation in the 2000s paved the way for the banking and financial crisis (2008). First, the self regulation, which represents the possibility for financial organisations to use internal models to control and manage their financial risks, grew up. Then,
the financial Community regulatory framework remained incomplete and contributed to the splitting up of the financial markets in the Union.

This lack has shock the European Union into realizing that a setting up, in the long run, of a unique European financial regulator was necessary. The following orders and acts translated European directives in French law, pleading for a Community regulatory framework. The 30th January 2009’s order has translated the European directive relative to the fight against laundering and terrorism financing, the 15th July 2009’order the one relative to paying services (DSP). The 21st January 2010 was created the Prudential Control Authority (ACP) by merging two pre-existing authorities. Finally, the 22th October 2010 act relative to banking and financial regulation strengthened the actors’ and financial markets’ regulation and aimed to support the funding of the economy.

2. The current regulatory framework and authorities in France

The international and European contexts have deeply modified the French regulatory framework since the 1980s such that the reading grid of the actual French regulation is both international (in light of the proposals of the Basel committee for instance) and European (in light of a call for a Community regulation). Since the crisis, time has come to reach European and international harmonization, in order to avoid at all cost regulatory fragmentation that could lead to regulatory arbitrage (traders go where regulation is more lax). Thus, if the supervision and coercive authorities are national, the applied rules and regulation result from international norms and practices.

The French regulation is based on two major authorities, the ACP for the supervision of the banking and insurance sectors and the AMF for the supervision of financial markets. They coordinate their policies via the “Pôle Commun”. With a view to harmonization, the AMF is part of the ESMA, a European organisation that brings together all the European authorities in charge of financial markets. Its role is
primarily dedicated to data collection or supervision of the European financial market.

2.1 ACP’s role

The ACP delivers banking licenses; it has a supervision power as it orders stress tests, controls for the compliance to regulatory constraints, etc.; and it has the power to sanction if necessary. This authority was created in 2010 by the merger of four banking and insurance authorities (CB, ACAM, CEA and CECEI). The fact that the ACP leans back on the Banque de France could have been a drawback because it raises the issue of a target conflict at the central bank which has to pursue monetary policy. However, this situation is an important advantage to guarantee the stability of the entire financial sector because ACP receives therefore the economic and financial expertise from the central bank. Furthermore, this situation favours coordination and thus strength of French regulatory policy. The issues relative to different sub-sectors are tackled by sectoral sub-colleges. The Authority looks after the quality of the financial situation to guarantee the financial sector stability and the customers’ protection and includes an enforcement committee [CS] in case of breach of those principles. In legal terms, the Authority’s College “examines every general question common to banking and insurance sectors and analyzes the risks of those sectors under the economic situation. It deliberates on control priorities”. This prudential control can take the form of permanent control or in-place inspection and it is run on both banking and insurance sectors.

As for the banking sector, the ACP see to it that credit organisations, investment firms and financial companies respect the legal and regulatory clauses. For this purpose, it has quarterly a close inquiry about the accounting and prudential states of the credit organisations and analyzes precisely their governance operations. All the information collected by the ACP during its permanent and in-place inspections leads it to express some recommendations with a view to improving management operations and risk profile of the organisations. This information is also useful for possible additional requirements of prudential equity
[see 2nd mainstay of Basel II]. Thus, the ACP has imposed equity requirements above the regulatory minimum for 82 institutions that represent 97% of the national banking system risks. Finally, the ACP has contributed to the “stress tests” coordinated by the European Banking Supervisors Committee (CECB) and pays attention to the liquidity risk.

The ACP conducts the same supervision and regulation for the insurance sector, which encompasses insurance societies and mutual companies. It pays nonetheless an additional attention on sovereign risks that can be faced by French insurance organisations and their beneficiaries. Insurance societies invest indeed generally a great part of their assets in sovereign bonds.

The fight against asset laundering and terrorism financing is one of the priorities of the Authority. Banks, insurance and investment societies have a duty of care towards their customers and must meet a specific dashboard:

- identifying not physically present customers
- identifying the effective beneficiaries, especially when there are some relations with hedge funds
- maintaining a good knowledge of the customers
- identifying and implementing a strengthened review of unusually complex or high amount operations

Finally, the ACP attaches great importance to the protection of the customers. Until its inception, the mission of consumer protection in the banking and insurance sector was exercised mainly by regulating the solvency of financial institutions. It thus allowed having the certainty that the insurers had means to fulfil their commitments and that bank deposits were not jeopardized by an excessive risk taking. Henceforth, ACP’s customers’ protection includes the control of business practices.
2.2 AMF’s role

The AMF is “committed to ensuring the promotion of effective financial regulation to ensure safety and market integrity” (AMF Annual Report, 2010). From this perspective, the AMF has to protect investors, regulate and control the investment services, regulate the market infrastructure and the market discipline.

First, the issue of investor protection is a central concern for the Authority. It is in this context that has been created the Directorate for relations with investors (DRE) whose objective is to inform investors, analyze their behaviour and their marketing practices and assist them in resolving disputes. For instance, the marketing of financial products to retail investors is part of mediation cases: some subscribers complained that they had been pressured to invest without having received clear and complete information or being alerted about potential risks. In some cases, the subscribers may be compensated by the wrongdoers. Similarly, the devaluation of shares acquired at the time of their placing on the market raises many claims and takes part in the AMF mission of investor protection.

Then, AMF authorizes, regulates and controls the OPCVM and other collective savings products, management companies, investment services providers, and market infrastructures while ensuring the development and the innovation in the financial services industry. It supervises the functioning of the market, the quality of financial reporting and the compliance by financial intermediaries of their professional obligations. To this end, AMF is in close collaboration with other national and foreign authorities responsible for supervision of banking and financial professions (Banque de France, ACP, H3C and ANC). In concrete terms, AMF carries out:

- Daily monitoring, namely the monitoring of transactions and the behaviour of operators with a view to detecting possible anomalies in the functioning of markets. It includes for instance assumptions on price manipulation, insider trading or dissemination of false information.
- Based checks and in-site inspections of investment providers, including portfolio management companies and financial investment advisers to ensure they meet the rules relative to their business

- Investigations which focus on financial information and market abuse

AMF is one of the few European regulators that exercise direct supervision of the order book on its national regulated market. It then develops automated alerts on suspicious behaviour and it devotes a part of its monitoring workforce to process that data.

When AMF observes some behaviour may fall within the jurisdiction of other authorities (judicial, administrative or professional), it shall transmit to them information in its possession and reports it has established. Finally, it has a penalty procedure for noncompliance with the regulation.

AMF is part of the ESMA that brings together all European financial markets authorities. Its role is essential through data collection. An example of such a role emerges from the Greek debt crisis: during debt restructuring, creditors and negotiators had to know precisely the amounts of Greek debt that European banks had in their balance sheets and to what extent they could be affected by debt restructuring. These data were present in banks’ balance sheets but were of course non-public; they have been made available through these authorities and were pooled by a supervisor.

2.3 Prudential and accounting norms

Prudential rules and control methods are similar in major industrialized countries because of a movement of international harmonization driven by Basel Committee work. The EU has taken over the movement of harmonization, but created its own legislation that French authorities have translated in national terms.

As for the prudential norms, Basel regulation aims at preventing bank failures by imposing a minimum level of capital to cover risks. In this perspective, Basel I (1988) has specified a solvability ratio (ratio Cooke) and Basel II (2004) has led to a new set of regulation aiming at taking better in account the diversity of risks
[credit versus market risks]. Basel III, signed in 2010, will impose a higher capital ratio in banks’ balance sheets.

Accounting norms are essential because they condition the respect of Baile II [the estimation of available capital depends on accounting rules]. Capital requirements regulation is based on the idea that there is a bankruptcy if cash that assets are likely to produce can not cover all disbursements associated to liabilities. This is why prevention of bank failures is based on a measure of their “economic” equity, which corresponds to the difference between the current value of assets and the current value of liabilities. This approach, which is based on a valuation of the balance sheet at market prices, is the one favoured by the international accounting standards (IFRS). It is opposed to a valuation by historical costs as recommended by traditional French accounting.

3. Financial crisis and reform of financial regulation

Post-crisis measures are almost exclusively European and international in order to avoid regulatory fragmentation that could be brought about by purely national regulations. This section analyzes the main evolutions of the regulatory framework since the financial crisis for the French banking sector first and then for the French and more widely European financial markets.

3.1. Banking regulation

Furthermore, the recent financial crisis (2007-2009) revealed fundamental weaknesses in the operation and regulation of the banking system. The contraction of world economy has pulled the French economy into a severe recession and put its financial sector under strain. French banks faced the need to write down toxic assets; government recapitalization and liquidity measures were required to support the sector. By publishing Basel III in 2010, the Basel Committee on banking supervision has set new international standards on capital adequacy and liquidity of banks. Most of these standards constitute a major revision of existing rules, but some others are completely new and are about areas not previously covered. In
France particularly, further actions are required to fully uncover and address underlying vulnerabilities in the banking sector [French banks’ net earnings have dropped sharply and their leverage remains relatively high]. Furthermore, as French banks are exposed to mature markets, they are vulnerable to systemic risk, hence to potential spillovers from other developed countries. On the basis of stress tests, the French authorities should assess if there are needs for follow-up actions to further recapitalize banks and for measures to ensure the soundness of their balance sheets.

First, the financial crisis has shed light on the fact that standards encourage a transfer of risk. Solvency requirements and risk management have led institutions to transfer a large share of the risks they generate through securitization transactions, which have increased in France since 1980 [see 1.]. The 2000s securitization gave birth to a new type of asset: credit derivatives and financial structured products. However, securitization has reduced the risk from an accounting perspective. First, it modifies the treatment of asset risk: after securitization, the risk generated by the asset is no longer considered as a credit risk but as a market risk. The asset is no longer counted in a bank holding (or “banking book”) but in a trading portfolio (or “trading book”). The problem remains that capital requirements to cover market risk are lower than those required to cover the risks of the assets before securitization. From a regulatory perspective, securitization can thus reduce the risk although it has no incidence in macroeconomic terms. Then, securitization transfers risk off the balance sheet or to other players that are not facing the same regulatory requirements as banks [pension funds or investment funds for instance].

Second, the standards have neglected the existence of a liquidity risk. The financial crisis has indeed shown that credit standards were insufficient to prevent bank failures because of the possibility of a liquidity crisis. In France, the final regulation applicable to liquidity was in 1988 and subjected banks to a liquidity ratio of at least 100% between their short-term assets and liabilities. Institutions were also required to calculate three “observation ratios” reflecting their forecast liquidity
status (quarterly, biannually and annually). The requirements as defined in terms of liquidity of stock do not sufficiently address the developments in banking and markets, particularly with regard to the growing impact of market liquidity. Banks have indeed ceased being mere suppliers of liquidity and have become dependent on market liquidity, which has a major impact on their balance sheets. However, market liquidity has a direct impact on solvency through the valuation of securitized assets. The effect of uncertainty (the inability to assign probabilities to different situations) on markets development have increased by information asymmetries between issuers and buyers of securities. Moreover, with the valuation at market value, any uncertainty about asset values turns into uncertainty about the solvency of financial institutions. This results in some tensions at the heart of the system, i.e. the interbank markets.

Finally, standards themselves have generated a systemic risk because of their procyclicality. Solvency ratios are indeed criticized for their procyclicality: in times of economic downturn, the weights applied to commitments in light of the risks are increasing, which increases capital requirements. To continue to be part of existing standards, banks are then forced to reduce the distributed credit (credit crunch). Conversely, in periods of high growth, lower risk encourages banks to lend more, which can have the effect of feeding speculative bubbles. Prudential standards are then suspected to exacerbate the economic cycle. Moreover, the principle of “fair value” accounting means taking into account the unrealized gains and losses; it increases the variability in the value of capital and hence the capital adequacy ratio of banks. This procyclicality is particularly damaging as the measure of fair value is not completely reliable when estimated from models at the discretion of individual institution.

Following the international agenda (G20 for instance), several concrete recommendations have been made by the different French regulation authorities (see AMF, 2010 report) with a view to strengthening financial stability. Indeed, it must be borne in mind that if, by now, the post-crisis regulation has essentially been
European and has tended to be international-wide, national regulators remain and may be a force of proposition:

- On the basis of stress tests, follow-up actions have to be taken to further recapitalize banks and ensure sound balance sheets
- Continue to prompt banks to reduce the proportion of hybrid capital17
- Support confidence in the financial system by continuing adequate supervision and transparency about the financial standing of the key institutions
- Continue to prompt banks to strengthen internal controls and operational risk management.

Furthermore, French authorities (e.g. “Pauget recommendations” in the 2010 report ordered by the minister of economy and finance Christine Lagarde) have been active in supporting European regulatory reform and has proposed a series of steps, including strengthening supervision of EU-wide financial groups, harmonizing regulatory frameworks, undertaking joint supervision of cross-border banks and insurance companies, enhancing transparency and surveillance of non-regulated market, credit rating agencies and compensation.

3.2. Financial markets regulation

As for the European regulation of financial markets, a post-crisis emblematic action has undoubtedly been the regulation of CDS market, which takes part of a more global regulation process, the EMIR (European Market Infrastructures Regulation).

Similarly to most financial derivative products, transactions in the CDS market are traded “over-the-counter” (OTC). A new regulation on short selling and naked CDS will come into effect across the European Union in November 2012. First the regulation sets out a temporary restriction in uncovered short selling of bonds and shares in the case of a significant fall in price (the European text actually expands to European Union a German restriction on sovereign bonds and major

17 Hybrid capital is a form of debt that has been substituted for equity
financial shares in effect since 2010 and it catches up on a regulation already existing in the US]. Second to increase market transparency, investors are required to disclose major net short positions to regulators and the general market [a goal that will be difficult to reach as this regulation does not cover corporate CDS, which introduces regulatory arbitrage]. Last but not least, the European specificity concerns the ban of naked sovereign CDS [a ban proposal that was debated in the US in 2009 but finally abandoned]. From November 2012 on, investors willing to trade sovereign CDS in a EU country must hold the underlying bond or hold a portfolio of assets correlated to the value of the sovereign debt.

In total this regulation has the advantage to harmonize the regulation about short selling across the EU. Beyond that, its relevance is questionable in the context of the EMIR, the new European regulation on over-the-counter derivatives currently implemented. Indeed EMIR aims at increasing transparency in the opaque OTC market along similar moves in the US through the Dodd-Franck act, whereas this CDS regulation cannot reach this goal.

Beyond this EU regulatory move, France has had its own two post-crisis emblematic regulations on financial markets: the tax on financial transactions [which shall come into force on 1st August 2012] and the bill on bonuses controls and prohibition of stock options.

The tax on financial transactions provides for a 0.1% tax on shares exchanges of companies whose market capitalization exceeds € 1 billion and which are headquartered in France. It also aims, with a rate ten times lower at 0.01%, certain products or transactions charged to foster speculation: Credit Default Swaps (CDS) that are so-called “naked” and that are supposed to protect investors against the risk of bankruptcy of a State; and the “high-frequency trading” based on the exchange by computer any nanosecond. This French tax aims to cause a ripple effect on its European neighbors.

The bill on bonuses controls and prohibition of stock options is one of the strong measures directly affecting the remuneration of market operators. The fact
that it has still not been fully implemented in France led candidate François Hollande (PS) to include a commitment to legislate on this issue in his presidential programme. Again, this typically French regulatory measure plans to launch a European impetus.

France passed an “Arrêté” on traders’ bonuses in late 2010, in accordance with the final text of the European Directive amending the Capital Requirement Directive (“CRD”) as regards capital requirements for the trading book and for re-securitisations and the supervisory review of remuneration policies (known as “CRD3”). But one year before, the French government had already asked banks to reduce bonuses. The main outcome of the “Arrêté” was the introduction of differed bonuses, which were meant to increase the horizon of traders from the short to the mid-run. Despite this piece of legislation, bank bonuses increased again, shortly after the financial crisis. In his presidential programme, at point 7, François Hollande stated: “I will separate the activities of banks that are useful for investment and employment, from their speculative operations. I will forbid French banks from having operations in tax havens. Toxic financial assets that enrich speculators and threaten the economy will be put to an end. I will suppress stock options, except for start-ups. And I will control bonuses. I will increase taxes on bank profits up to 15%. I will propose the establishment of a tax on all financial transactions as well as a European credit rating agency.” Although in mid-2012, this 7th commitment was not already implemented, the first government under President Hollande started to cap the full remuneration of CEO of public companies: their remuneration should no longer be more than 20 times the smallest [full-time] wage of the company. In France, this new legislation has had a tiny impact on the banking system since it will cap the remuneration of the CEO of La Poste (Banque Postale is a subsidiary of La Poste). Caps and controls have seemed to be under way.
4. Conclusion

With national supervisory bodies vs. European and international rules, the French financial regulation is becoming less and less national. The only specificity that France tries to keep is its banking model which self-regulation and risk management appear to have allowed French banks to resist rather well to the global financial crisis (see. 16.). Facing up to this crisis, the Basel III standards aim at reducing credit and market risks by forcing solvency ratios. However, these new standards may have counterproductive effects on French banks by restricting credit and increasing the share of capital markets in financing the economy. These capital requirements could indeed encourage French banks to sell their credit portfolios in order to dilute their risk and increase equity in their balance sheets. Paradoxically, that may reinforce the process of securitization. Finally, non-alignment of prudential and accounting standards between the European Union and the United States could affect international competition between banks at the expense of French ones. Indeed, the absence of international harmonization (IFRS in Europe, US GAAP in the U.S.) can lead to compare ratios established on the basis of very different realities; the leverage ratio defined in Basel III, which is widely used in the U.S. and the Anglo-Saxon banking model, takes on different realities when it is calculated in accordance with the IFRS standards. The major differences are related to the restatement of business mergers, long-term assets value losses or hybrid financial instruments. French banks could then be negatively impacted by the adoption of these international standards and the French regulation, quite effective in managing risk so far, could be affected.

As a conclusion, the French regulatory framework of the financial sector is built on the basis of both European and international regulations (Basel Committee); the key changes in French regulation make plain this statement. However, the supervisory and law enforcement bodies are still national and they have a well-defined role to enforce the regulations. Finally, the recent financial crisis has highlighted some shortcomings of this banking and financial regulation, including
the fact that liberalization since the 1980s has led to a number of regulations that have not necessarily had the desired effect.
**Appendix 1 - Key events in French financial regulation and liberalisation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>1984</td>
<td>Banking Act</td>
</tr>
<tr>
<td>1987</td>
<td>Lifting of the credit framework</td>
</tr>
<tr>
<td>1988</td>
<td>Setting up of an international solvability ratio (ratio Cooke)</td>
</tr>
</tbody>
</table>
| 1989 | - Lifting of the control on assets movements  
- Dismantling of the exchange control |
| 1993 | - Setting up of the banking European single market  
- Directive about the investment services (European Union) |
| 1996 | Modernisation of the Financial Activities Act |
| 1997 | Creation of the FESCO (Forum of European Securities Commissions) |
| 1999 | - Law for savings and financial security  
- Setting up of the euro on the financial markets |
| 2003 | - Law for financial security  
- Creation of the Financial Market Authority (AMF) |
| 2005 | Setting up of the international accounting rules in the European Union |
| 2007 | - Translation of the European directive on Financial Instruments Markets (MIF)  
- Translation of the new European regime about the solvability of credit organizations and investment business |
| 2008 | - Setting up of the European solvability ratio (Basel II) |
| 2009 | - Coming into force of the 3d directive about the fight against assets laundering and terrorism financing  
- Translation of the directive about payment services (DSP) |
| 2010 | - Creation of the Prudential Control Authority (ACP)  
- Banking and Financial Regulation Act  
- Publication of Basel III recommendations |
Appendix 2 – Set of acronyms used

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACAM</td>
<td>Autorité de Contrôle des Assurances et Mutuelles</td>
</tr>
<tr>
<td>ACP</td>
<td>Autorité de Contrôle Prudentiel</td>
</tr>
<tr>
<td>AFB</td>
<td>Association Française des Banques</td>
</tr>
<tr>
<td>AMF</td>
<td>Autorité des Marchés Financiers</td>
</tr>
<tr>
<td>ANC</td>
<td>Autorité des Normes Comptables</td>
</tr>
<tr>
<td>CB</td>
<td>Commission Bancaire</td>
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<tr>
<td>CCA</td>
<td>Commission de Contrôle des Assurances</td>
</tr>
<tr>
<td>CCLRF</td>
<td>Comité Consultatif de Législation et de Réglementation Financières</td>
</tr>
<tr>
<td>CCSF</td>
<td>Comité Consultatif du Secteur Financier</td>
</tr>
<tr>
<td>CDS</td>
<td>Credit Default Swaps</td>
</tr>
<tr>
<td>CEA</td>
<td>Comité des Entreprises d’Assurances</td>
</tr>
<tr>
<td>CEC</td>
<td>Comité des Etablissements de Crédit</td>
</tr>
<tr>
<td>CECB</td>
<td>Comité des Contrôleurs Bancaires Européen</td>
</tr>
<tr>
<td>CECEI</td>
<td>Comité des Etablissements de Crédit et des Entreprises d’Investissement</td>
</tr>
<tr>
<td>CMF</td>
<td>Conseil des Marchés Financiers</td>
</tr>
<tr>
<td>COB</td>
<td>Commission des Opérations de Bourse</td>
</tr>
<tr>
<td>CRB</td>
<td>Comité de Régulation Bancaire</td>
</tr>
<tr>
<td>CS</td>
<td>Commission des Sanctions</td>
</tr>
<tr>
<td>DRE</td>
<td>Direction des Relations avec les Épargnants</td>
</tr>
<tr>
<td>DSP</td>
<td>Directive sur les Services de Paiement</td>
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<tr>
<td>EMIR</td>
<td>European Market Infrastructure Regulation</td>
</tr>
<tr>
<td>ESMA</td>
<td>European Securities and Markets Authority</td>
</tr>
<tr>
<td>FESCO</td>
<td>Forum of European Securities Commissions</td>
</tr>
<tr>
<td>FGD</td>
<td>Fonds de Garantie de Dépôts</td>
</tr>
<tr>
<td>H3C</td>
<td>Haut Conseil du Commissariat aux Comptes</td>
</tr>
<tr>
<td>IFRS</td>
<td>International Financial Reporting Standards</td>
</tr>
<tr>
<td>LSF</td>
<td>Loi de Sécurité Financière</td>
</tr>
<tr>
<td>OPCVM</td>
<td>Organisme de Placement Collectif en Valeurs Mobilières</td>
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<tr>
<td>PS</td>
<td>Parti Socialiste</td>
</tr>
</tbody>
</table>
6. **THE NATURE AND DEGREE OF COMPETITION BETWEEN FINANCIAL INSTITUTIONS**

Jérôme Creel (OFCE & ESCP Europe)  
Mathilde Viennot (ENS Cachan & OFCE)

The last twenty years have seen an unprecedented upheaval in the situation of the European banking system, characterized by powerful institutional and functional balances of power. On the one hand, globalization and economic integration (Single Market, EMU, Second European Banking Directive...), deregulation and the advent of new technologies have worked in the direction of weakening the barriers to entry of new competitors and have thus increased competition. On the other hand, the process has been severely hampered by an increasing consolidation of domestic financial systems, especially marked by numerous merger transactions that aim at maintaining a monopolistic banking market.

These recent changes in the French and European banking markets can be understood if one takes into account their characteristics: the search for increasing returns and the situation of imperfect competition. These two elements relate to strategy and consolidation in the analysis of competition in the financial sector. Indeed, these two strategies reflect both increasing returns to scale (consolidation) and imperfect competition (concentration)\(^{18}\).

Beginning by presenting and analyzing the nature and degree of competition in the French financial sector, especially the banking sector through the last two decades, this article then focuses on concentration and consolidation in order to draw up the main changes in the French banking scenery.

\(^{18}\) In the banking industry, productive efficiency can be achieved either by seeking economies of scale on a single type of product, either by seeking economies of scope on more than one type of product. For the former, the strategy draws on growth and concentration; for the second, it draws on product diversification. Both strategies produce imperfect competition.
1. The nature and degree of competition in the French financial sector

1.1. Overview of the nature of competition in the French banking sector since the 1980s

The competition in the French banking sector can be analyzed since the Banking Act of 1984, which has totally recast the banking industry.

First, in the field of investment banking, new competitors were not French institutions but foreign banks (Japanese, American but also European) that had already largely begun their organization transforming process and their strategy for meeting the needs of an international position. This transformation amounted to a redefinition of business banking for French banks: the function of banks, once defined in terms of intermediation, became the design and supervision of securities trading, investment financing in the short or long term and the implementation of hedging against risk. In this new economic and business environment, competition is not materialized only on the sale price. Indeed, the determinant of economic success on an operation is the bank’s ability to conceive and implement the transaction. These are the elements that constitute the real comparative advantages of a financial institution, more than a “low price”. That certainly means that strategy and competition are mixed: imperfect competition is at the core of banking activity.

To be present on the markets, French banks must invest heavily in both hardware and expertise, these investments are even more important that infrastructures must be installed in each financial centre. Costs of coordination between the services of a bank located in different countries are also very high; banks must be able to mount operations important and complex, to have sufficient financial strength to take position, to absorb losses when risks are realized and to offer competitive terms to international customers [technical quality, price]. This necessary recognition also means to obtain high scoring and ranking in the list of best operators made by international rating agencies. But until the mid-1980s, Anglo Saxon great institutions were dominating the market. European banks and especially French ones were relegated to a marginal role in these global markets. In 1984
Indosuez was the first French institution to truly develop market activities like stock market activities. Among the large generalist institutions, Société Générale took the initiative in 1987 in creating a direction of capital markets, followed by BNP that embarked on the bond and derivatives markets in the early 1990s.

The development of international financial activities was not neutral for French banks and it implied strategic and organizational issues. When the Credit Suisse decided to develop its international activities in 1995, this translated into an overall reorganization resulting in the disappearance of 110 of its subsidiaries on a total of 376. The problem for banks became gradually market segmentation and the formation of barriers to entry for each segment. For each type of operation, a group of twenty companies was formed and dominated the market; entering a group and becoming a market player involved being not only competitive but also able to implement operations needed by global industry and business groups that have become the main customers of banks in international markets.

Regarding competition in French traditional banking, while France has had a long tradition of high access of its population to banks, there were only eight banking groups that accounted for 80% of that market; hence on banks traditional markets (like lending and deposits), the situation was close to an oligopolistic market; network development and advances in technology had erected entry barriers that were difficult to cross. At the same time, new competition grew at the margin of the sector, that focused on credit but that did not take the form of banking activity (institutions without agency network: First Direct, Banque Directe, etc.). This led to an intensification of competitive pressure resulting in lower industry margins and an increase in risks, while French banks had previously been accustomed to “hushed” competition authorizing them to engage in flexible pricing policy and only lax check of their profitability.

By the late 1980s, the overall market structure was of an oligopolistic form (see table 1). The importance of networks, the saturation of demand and the importance of trust in the brand were sufficient entry barriers in order to rule out
the threat of new entrants. In another sense, the importance of fixed costs and the inability to diversify out the banking and financial field limited opportunities for diversification and reorganization of activity in other strategic groups. In this context, more than the conquest of market shares, the issue for each French bank was to maintain its position on each market segment.

Table 1 – Market shares of the largest French credit institutions expressed in the sector’s total assets, in %

<table>
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</thead>
<tbody>
<tr>
<td>5 largest</td>
<td>45.6</td>
<td>45.8</td>
<td>45.8</td>
<td>46.8</td>
<td>48.3</td>
</tr>
<tr>
<td>largest institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 largest</td>
<td>61.8</td>
<td>62.7</td>
<td>63</td>
<td>64.6</td>
<td>67.6</td>
</tr>
<tr>
<td>institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 largest</td>
<td>74.7</td>
<td>75.3</td>
<td>75</td>
<td>75.9</td>
<td>78.5</td>
</tr>
<tr>
<td>institutions</td>
<td></td>
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</table>


Besides traditional institutions, competition grew from specialized banks. Agencies which were specialized in the distribution of consumer or investment credits developed their business volume by relying more on product distributors than agency networks: they sell credits directly in department stores. These institutions took growing and significant market share not only on the retail market but also on the professional one; the most general of them (Cetelem, 14% market share in 2005; Sofinco, 19% market share in 2009; Cofidis, 6% market share in 2008; Cofinoga, 4% market share in 2005) expanded their offers towards new means of payment (those linked to the growing success of online business, on computer but also on mobile phones), cash loans and permanent cash reserves. For traditional banks, these new entries pose the problem of monitoring business performance and profitability of agency networks which witness a decrease in their activity. Mastering the quality of service is no longer their competitive advantage but a condition to maintain their share of the market.
In order to access higher-value markets that generate the largest volumes of fees, such as the sale of engineering services, consulting and wealth management, French banks must have a sufficient size to achieve a significant customer base and depreciate costs on sufficient business volumes. Finally, they must be identified by the various categories of customers as reliable and efficient stakeholders. The French banking market becomes a two-tier market: there occurs a distinction between leading banks, which design the operations and have access to the most profitable activities, and second-tier banks that are plagued with activities with low added value in a market with tense competition. For the banking market, the essential reaction was to attempt at imitating the skills of new entrants in the field of complex services in favour of international business clients; it was less to protect its position in the French market than to fit into a world market which rules have been defined by others. French banks that managed this integration are those which had already embarked on this route before deregulations and that had made the necessary investments after deregulation. They gained access to a market where competition was moderate and where margins were relatively high. For companies that were not engaged in this direction before deregulation and that have not been able to make the necessary investments, it has become a hard sell to enter the investment banking market. They have been trapped in the retail banking market characterized by a strong aggressive competition and thin margins, a trend that seems to increase. This gives a breakdown of the initial banking market in two sub-markets (investment banking and retail banking), between which barriers to mobility are rising to the point of making the transition impossible, except by acquisition. The entry of new competitors that offer very innovative services compared to those of incumbents has led to a real restructuring of the French banking sector.

1.2. Measurement, calibration and statistics about the degree of competition in the French banking sector
Two main models are used in order to estimate competition in the French banking sector\textsuperscript{19}. A first instrument, undoubtedly the most used in the literature, is the model of Panzar and Rosse (1987). They obtain a measure of market power and competitive conditions in a sector from the result of the impact of factor prices on the revenues of constituent entities of the sector. They show that:

- In a situation of perfect competition, under the assumption that firms produce their long-term equilibrium level\textsuperscript{20}, the growth of production factors prices creates a proportional income growth.
- In an “intermediate” configuration of monopolistic competition, revenues grow proportionally less than the factor prices, the demand in the market being de facto inelastic.
- At the other end, the case of a monopoly market describes in turn a situation in which an input price growth increments marginal costs and thus reduces the level of equilibrium output and income.

Panzar and Rosse (1987) derive a test of competition based on the estimation of the revenue function in its reduced form: the calculation of the H index, defined as the sum of elasticities of banking income to changes in input prices, assesses the degree of competition in the banking market (if $H=1$, perfect competition; if $H<0$, monopoly market; if $0<H<1$ intermediate monopolistic competition).

The second instrument offered by Panzar and Rosse (1987) in order to describe the competitive environment in a given sector is the Lerner index, defined as the relative difference between price and marginal cost. The value of this index gives an expression of the competitive situation:

- In a situation of perfect competition (high or infinite elasticity of demand), the index value is close to zero.
- In a monopoly situation, the ratio value would tend to infinity
- Between these two extremes, the elasticity of demand varies inversely as the monopoly power; there are intermediate competitive situations.

\textsuperscript{19} Boutillier, Gaudin and Grandperrin (2005)

\textsuperscript{20} Production can be difficult to assess for banks so a long term equilibrium level can be understood as a stable net income.
Rather than an application of Panzar and Rosse (1987) to the case of France, we use their intuition and compare their model predictions with the data on the number of banking institutions between 1995 and 2009. Model calibration of Panzar and Rosse (1987) and Lerner index for France between 1995 and 2000 indicates a relative stability of banking competition, which is maintained at a high level, but with a slight monopolistic specificity for cooperative banks. The interpretation may be that the lower competition due to concentration has been offset by lower barriers to entry resulting from the monetary and regulatory unification in the EU. The latter unification has certainly finally paved the way for an increase in competition by foreign banks, as figure 1 shows after 2003.
Figure 1 - Evolution of competition in the French banking sector

Figure 2 - The structure of the Financial System: Number of institutions

Source: FESSUD database
Figure 1 plots the evolution of competition within the French banking sector and corroborates the models predictions: competition is tense but decreasing over the period, except for cooperative banks. The dramatic decrease in the number of commercial banks in 2003 (figure 1) relates to the takeover of Crédit Lyonnais by Crédit Agricole; this restructuring resulted in a decrease in the number of institutions. The observations we draw from the banking sector are quite similar for the overall financial sector (plotted in Figure 2): competition remains high though it has been downward sloping since 1995.

2. Concentration and consolidation in the French financial sector

Concentration and consolidation analyzes are part of the competition issue. Indeed, concentration has often a negative effect on competition, especially for households and SMEs, through price-impact, which passes through interest rates or fees.

There are three main concentration indices that are mostly agreed upon to assess the concentration of a sector. The Herfindhal-Hirschmann Index (HHI) is determined by adding the squared market shares of all firms in the sector. The stronger the HHI of a sector, the more the production is concentrated:

\[ HHI = \frac{1}{n} \sum_{i=1}^{n} s_i^2 \quad \text{with} \quad s_i = \frac{\text{total assets of the bank } i}{\text{total assets of the banking sector}} \]

The C5 and C10 indices compute the market share of the 5 (respectively 10) largest banks in terms of total assets.

2.1. Overview of banking sector concentration and alliances in France

In the 1980s, it was advocated that concentration amongst French banks had to grow because it was felt that concentration would generate productivity gains and streamline the structure and activity. Concentration has been driven by an accentuation of a restructuring movement in a sector highly dominated by a handful of institutions. The restructuring movement increased in the 1990s for the mutual and cooperative network [Crédit Agricole] but also in all financial firms [104
institutions disappeared between 1991 and 1992). This restructuring was accompanied by a group of large banks which were part of some powerful credit institutions: in 1992, among 462 licensed banks, 106 belonged to one of the seven majors [BNP, Credit Lyonnais, Société Générale, Paribas Company, Compagnie de Suez, CIC and EU financial company, CCF]. These restructurings have favoured the concentration of credit institutions business but also the concentration of more specific activities like deposits or credits. Mergers and acquisitions but also alliances are the best way for French banks to withstand competition. M&A in banking, including transactions with insurance companies, covered 42 billion of French francs in 1987; credit institutions held 51% market shares involved in mergers and acquisitions. Between 1986 and 1988, their number increased sevenfold. Spurred by major banks concentrated in the traditional activities of deposits and loans, commercial banks were moving towards more profitable activities of financial engineering [trading, actuarial, risk assessment].

After this first wave of mergers & acquisitions, and relatively to other European countries, French concentration has decreased and stabilized around a low value [see Table 2] until the late 1990s [see Weill, 1998].

<table>
<thead>
<tr>
<th>Country</th>
<th>Herfindahl Index</th>
<th>C5 Index</th>
<th>C10 Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERMANY</td>
<td>0.023</td>
<td>0.292</td>
<td>0.417</td>
</tr>
<tr>
<td>AUSTRIA</td>
<td>0.085</td>
<td>0.550</td>
<td>0.762</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>0.098</td>
<td>0.658</td>
<td>0.848</td>
</tr>
<tr>
<td>SPAIN</td>
<td>0.043</td>
<td>0.402</td>
<td>0.564</td>
</tr>
<tr>
<td>FRANCE</td>
<td>0.049</td>
<td>0.427</td>
<td>0.650</td>
</tr>
<tr>
<td>NORWAY</td>
<td>0.132</td>
<td>0.711</td>
<td>0.850</td>
</tr>
<tr>
<td>NETHERLANDS</td>
<td>0.246</td>
<td>0.881</td>
<td>0.954</td>
</tr>
<tr>
<td>PORTUGAL</td>
<td>0.094</td>
<td>0.594</td>
<td>0.816</td>
</tr>
<tr>
<td>UNITED-KINGDOM</td>
<td>0.103</td>
<td>0.629</td>
<td>0.790</td>
</tr>
<tr>
<td>SWITZERLAND</td>
<td>0.156</td>
<td>0.758</td>
<td>0.830</td>
</tr>
</tbody>
</table>

Indeed, between 1990 and 1994, the five largest French credit institutions held 43% of the market shares of the total sector, whereas they held 71% of the market shares in the Netherlands or 62.9% in the United Kingdom. The ten French largest institutions held 65% of the market shares while the Norwegian ones held 85%. France stands largely below the average of the Herfindahl Index for the European countries listed in table 2, but largely above Germany. The situation of French banks as regards concentration is close to Spain.

The concentration movement has continued since 1990 (see table 3). Recently, Banque Populaire has taken control of Caisse d’Epargne, forming the group BPCE. However, this merger, which has been accelerated by the recent financial crisis (2008-2010), may reflect the woes of too much concentration in the banking sector and the risks it can induce (financial risks, competitive risks, decrease in efficiency). Indeed, Natixis, with its toxic assets valued at 40 billion euros, is a downside to this merger. The disappointments of this joint venture have led to a public support of 7 billion euros.
Table 3 - Main concentration and restructuring operations from 1996 to 2008 in France

<table>
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</thead>
<tbody>
<tr>
<td>Crédit Agricole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Crédit Agricole</td>
</tr>
<tr>
<td>Banque Indosuez</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BNP Paribas</td>
</tr>
<tr>
<td>PNF (Privatisation in 1993)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Société Générale</td>
</tr>
<tr>
<td>Paribas</td>
<td>1997</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Société Générale</td>
<td></td>
<td></td>
<td>2002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crédit Lyonnais</td>
<td>1999</td>
<td></td>
<td></td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td>Caisse d’Epargne</td>
<td></td>
<td></td>
<td>2001</td>
<td>2006</td>
<td></td>
</tr>
<tr>
<td>Banques Populaires</td>
<td>1998</td>
<td></td>
<td></td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Natexis</td>
<td></td>
<td>1996</td>
<td></td>
<td>2008</td>
<td>Crédit Mutuel</td>
</tr>
<tr>
<td>Crédit Mutuel</td>
<td></td>
<td>1998</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIC Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HSBC</td>
</tr>
<tr>
<td>CCF</td>
<td></td>
<td></td>
<td></td>
<td>2001</td>
<td>DEGTA</td>
</tr>
<tr>
<td>Crédit Agricole de France</td>
<td></td>
<td></td>
<td>1996</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Banque Wolze</td>
<td></td>
<td>1997</td>
<td>2001</td>
<td></td>
<td>Deutsche Bank</td>
</tr>
<tr>
<td>(15 groups)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GE Capital</td>
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</table>


2.2 Measures and statistics about the current banking concentration
Concentration measured as the market share of the 10 largest banks in terms of total assets, has decreased in France since the early 1990s, though it remains at a relatively high level (see Figure 3). Data pertaining to the concentration index of the five largest banking groups (see Figure 4, on a shorter time-horizon) is even more striking. Since the creation of the euro, French bank concentration has gained momentum, though concentration has been a bit lower after 2007.

In 2005, the five largest French banking groups represented 82% of deposits and 74% of customer loans. The French banking sector is thus nowadays highly concentrated around five large groups: two listed commercial banks (Société Générale, BNP Paribas), and three mutual banks (BPCE, Crédit Agricole and Crédit Mutuel).

![Figure 3 - French Bank concentration](image)

*Source: FESSUD database [C10 index]*

The polarization and concentration of the French banking sector into five major groups has led to the decreasing number of institutions, stemming from internal restructurings. The French banking system has become, since the 2000s and the
major restructuring, one of the most concentrated in the EU and this can be explained by the structure of the mutual banking system: the dense provision of French retail banking services makes the entry of foreign banks very difficult, except in niche markets, which makes foreign penetration in France amongst the lowest in the EU. In France, at the end of 2003, foreign banks held only 12 per cent of bank assets (reported by Hardie and Howarth, 2009). Hardie and Howarth (2009) provided a comparative study of French and German banking systems and faced their respective financialization and reactions to the recent financial crisis. They show that the financialization of French banks has contributed to the unravelling of the cross-shareholding groups created in the 1990s with a steep increase in foreign ownership of equity from leading French listed commercial banks since the early 2000s. They also show that the reason behind the better performance of the French banking system in comparison with the German one during and after the crisis depends heavily on the large retail banking businesses of the French bank.

Figure 4 - Concentration indices for French credit institutions

Source: ECB database
3. Conclusion

The French banking market is characterized by a small number of credit institutions which are “universal” banks, that is to say consisting of retail, credit and investment activities. This structure results from a continued concentration process of which the last step was the merger of Caisse d’Epargne and Banque Populaire in June 2009. The fifteen largest French banks existing in 1996 were grouped in five sets in 2011.

Computing the nature and degree of competition within the French financial sector is essential in order to tackle profitability, efficiency, risks and stability issues\(^{21}\) [see issues 5. and 14. of WP2]. Some studies [see Weill, 1998] have shown a significant positive relationship between concentration and average efficiency in the banking sector: increasing competition in the banking sector leads to lower concentration, which has a negative impact on banks’ efficiency. But concentration and consolidation have also some effects on systemic risk. Indeed, the degree of concentration of the banking sector can be an important element to take into consideration when assessing its resilience to systemic shocks: a high concentration may be a vulnerability factor insofar as the possible failure of a large institution would affect the whole financial system. In addition, the financial deregulation has brought the entry of new non-bank competitors; this structural change in the French and European banking scene may have an influence on the liquidity risk of the system. Last but not least, national banking concentration may have a negative impact on European banks’ financial soundness, as the “concentration-fragility

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\(^{21}\) See Abbasoglu, Aysan and Gunes (2007); Bejaoui Rouissi (2011), Ben Salem (2005); Corvoisier and Gropp (2002); Lambert, Le Cacheux and Mahuet (1997); Pastre (2004); Paulet (2000) for related studies on efficiency, profitability, stability or risk in the banking and financial sector.
view” implies (see Udhe and Heimeshoff, 2009). Such implications suggest how careful and cautious competition policies must be in the financial sector.

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22 Proponents of the “concentration-fragility view” argue that larger banks are often more likely to receive public guarantees or subsidies (the too big to fail doctrine); as a consequence, the moral hazard problem becomes more severe for larger banks’ managers who may take on risky investments under a government safety net.
Appendix 1 – *Set of initials used*

<table>
<thead>
<tr>
<th>Initials</th>
<th>Full Name</th>
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<tbody>
<tr>
<td>BPCE</td>
<td>Banque Populaire et Caisse d’Epargne</td>
</tr>
<tr>
<td>BFCE</td>
<td>Banque Française du Commerce Extérieur</td>
</tr>
<tr>
<td>BNP</td>
<td>Banque National Paris</td>
</tr>
<tr>
<td>CA</td>
<td>Crédit Agricole</td>
</tr>
<tr>
<td>CCF</td>
<td>Crédit Commercial de France</td>
</tr>
<tr>
<td>CDC</td>
<td>Caisse des Dépôts et Consignations</td>
</tr>
<tr>
<td>CIC</td>
<td>Crédit Industriel et Commercial</td>
</tr>
<tr>
<td>CNCE</td>
<td>Caisse Nationale des Caisses d’Epargne</td>
</tr>
<tr>
<td>HSBC</td>
<td>Honk-Kong and Shanghai Banking Corporation</td>
</tr>
<tr>
<td>IPO</td>
<td>Initial Public Offering</td>
</tr>
<tr>
<td>UAP</td>
<td>Union des Assurances de Paris</td>
</tr>
</tbody>
</table>
7. **The profitability of the French financial sector and sub-sectors and the proximate causes of changes in profitability**

Paul Hubert [OFCE]
Mathilde Viennot [ENS Cachan & OFCE]
Jérôme Creel [OFCE & ESCP Europe]

Profitability can be defined as the efficiency at generating earnings of a company or industry, here the financial sector and subsectors. In concrete terms, it measures two generic types of performance, “how much the company makes with what it has got” [Return on Assets] and “how much it makes from what it takes in” [Return on Equity]. Profitability is usually calculated as the ratio between income and capital invested. Computing the profitability of the French financial sector and its evolution through the processes of liberalisation and deregulation is certainly essential as it can give information for assessing financial stability: a first classical view is that profitability in the financial sector compensates for risk and enables resilience of the whole financial system to shocks. An opposite classical view is that profits reflect inequalities between shareholders and wage earners, paving the way for social resentment. Whatever the adopted view, the safeguarding of financial stability requires to know how much the sector is exposed to financial risk; it can be assessed via the analysis of several profitability ratios.

The plurality of definitions for profitability ratios makes its measurement for the financial sector difficult. Profitability, solvency and liquidity ratios are based on business balance sheets that cannot be translated in national accounting terms. Thus, we decided to focus the analysis on the banking sector instead of on the entire financial sector. It must be acknowledged that the analysis will reflect very reliably the French financial situation. The environment of banks is characterized by intense

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23 It comprises financial intermediaries, banks and insurance companies, financial markets and more generally market infrastructures.
competition, particularly related to the existence of a unified currency area in which institutions wish to acquire or maintain their market share. In this respect, banks themselves pay important attention to the profitability of operations, including intermediation, which is essential to their development strategy: lower profitability may lead to reduce the size of a bank; hence its ability to increase its market share would diminish.

In the following, we will first examine the profitability of the French banking sector and sub-sectors by computing several ratios; we will then compare an aggregate ratio for the financial and non-financial sectors. Finally, we will focus on the determinants of profitability in the financial sector in order to explain changes in profitability; drawing on these determinants, we will circumscribe some elements which may help to prevent major future risks and turnovers.

1. Profitability analysis

We will not focus here on one particular method but we will try to describe the crucial points and issues attached to the various analyzes that can be carried out to identify at best the French financial sector profitability. As explained in the introduction, the analysis of the French banking sector and sub-sectors will be our primary benchmark and we will compare the financial and non-financial sector profitability on the basis of some aggregated ratios.
Box 1 - Banking sector profitability, a reliable benchmark in order to study the profitability of the French financial sector

At the micro level (drawing on business accounting), profitability ratios can be calculated according to specific rules which are commonly accepted like net income after tax over equity. At the macro level (drawing on national accounting), the same computation is complicated by the aggregation of individual business balance sheets (e.g. the existence of cross-shareholdings have to be corrected). In addition, the classification items and the correspondence between financial and non-financial corporations are not the same in business as in national accounting, which explains the absence of a consensus on the profitability ratios derived from national accounts. There are also different types of balance sheets, e.g. financial and non-financial corporations balance sheets are not similar and can therefore not be compared. It is difficult, then, to compare aggregated ratios calculated for the financial sector and those calculated for the non-financial one.
1.1. Profitability of the French banking sector and sub-sectors

Evaluating the effectiveness of the French banking sector is useful for capital providers, including foreign investors and financial markets. Measuring profitability is critical in this respect and it provides insights on the allocation of production factors in the banking sector. There are usually two types of profitability. First, we usually look at "economic" profitability, which relates the net operating surplus to physical capital, in order to analyse the efficiency of the production process of banks regardless of the chosen financing structure (borrowing from the central bank, private savings, financial assets, etc.). Then, in business accounting, "financial" profitability relates income owed to shareholders after payment of interest due to lenders to equity; it measures investment in units of owners of the firm. As for banks, it quantifies the amount of profits as a percentage of capital investment.

Here, profitability of the French banking sector will be analysed in light of three ratios and two intermediate balances described in box 2 below. The banking sector has undergone many reforms since the 1980s: a unified legal framework (1984), the establishing of the principle of bank universality (1984), the lifting of credit control (1987), the progressive liberalization of interest rates (1989), the boosting of the money market (1999) and the strengthening of prudential rules (see 6. of WP 2) are all factors that aim at putting the banking and financial sector in a competitive environment which dynamics is determined by market forces. These reforms have had an impact on banking profitability. The present analysis shows how banks have responded to changes in their environment, knowing they face a double challenge: becoming more involved in financing the economy and meeting the demands of their shareholders.
### Box 2 - Profitability ratios calculation and data

**Profitability ratios and balances (ROE, ROA, Leverage effect, Banking Net Income, Interest Margin) for the French banking sector**

- **ROE (Return on Equity)** measures the profitability obtained from equity:
  \[
  \text{ROE} = \frac{\text{Net Income After Tax}}{\text{Equity}} = \frac{\text{Net Income After Tax}}{\text{Capital and Reserves}}
  \]

- **ROA (Return on assets)** measures the profitability obtained from all assets (equity and debt):
  \[
  \text{ROA} = \frac{\text{Net Income After Tax}}{\text{Total of Assets}} = \frac{\text{Net Income After Tax}}{\text{End-year Total Balance Sheet}}
  \]

- **LE (Leverage effect):** the difference between economic and financial profitability, called leverage effect, is the product of two terms: the difference between the cost of debt, \( i \), on the one hand, and the ratio of debt to equity on the other hand. Financial profitability increases with **debt leverage** \( \frac{D}{E} = \frac{\text{Net Debt}}{\text{Equity}} \) provided economic profitability is greater than the cost of debt \( \text{ROE} > i \).
  \[
  \text{ROE} = \text{ROA} + (\text{ROE} - i) \frac{D}{E} \Rightarrow \text{LE} = \text{ROE} - \text{ROA}
  \]

- **BNI (Banking Net Income).** It computes banking activity by measuring the net incomes generated by a bank as part of its operations.
  \[
  \text{BNI} = \text{Net Interest Income} + \text{Net non-interest Income} + \text{Fees and commissions receivable} - \text{Fees and commissions payable} + \text{Net profit or loss on financial operations} + \text{Other net non-interest income} + \text{Provisions on securities}
  \]

- **Interest Margin.** It measures the difference between the rate at which banks lend and the rate at which they refinance. This margin has to cover all overhead costs of the bank, the cost of risk (provisions on delinquent customers) and contribute to profits.
  \[
  \text{Interest Margin} = \text{Interest Income} - \text{Interest Expenses}
  \]

**Data**
- Source: OECD Banking Statistics; these data are only available:
  - From 2000 to 2009 for all banks data
  - From 2000 to 2008 for banking sub-sectors (commercial, large commercial and cooperative banks)
First, the Return on Equity (ROE) may be seen as the most reliable ratio in order to bring up banking profitability, as it comes close to the underlying concept of profitability.

**Figure 1 - French Banking Sector Profitability**

<table>
<thead>
<tr>
<th>Year</th>
<th>ROE (All banks)</th>
<th>ROE (Commercial Banks)</th>
<th>ROE (Large commercial banks)</th>
<th>ROE (Cooperative banks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>12.03%</td>
<td>10.08%</td>
<td>20.01%</td>
<td>6.80%</td>
</tr>
<tr>
<td>2001</td>
<td>11.75%</td>
<td>9.17%</td>
<td>15.29%</td>
<td>8.88%</td>
</tr>
<tr>
<td>2002</td>
<td>10.08%</td>
<td>12.85%</td>
<td>11.68%</td>
<td>8.68%</td>
</tr>
<tr>
<td>2003</td>
<td>9.17%</td>
<td>14.39%</td>
<td>12.90%</td>
<td>7.52%</td>
</tr>
<tr>
<td>2004</td>
<td>12.85%</td>
<td>15.76%</td>
<td>14.63%</td>
<td>8.85%</td>
</tr>
<tr>
<td>2005</td>
<td>14.39%</td>
<td>17.83%</td>
<td>14.50%</td>
<td>10.57%</td>
</tr>
<tr>
<td>2006</td>
<td>15.76%</td>
<td>19.77%</td>
<td>14.50%</td>
<td>12.58%</td>
</tr>
<tr>
<td>2007</td>
<td>6.24%</td>
<td>5.06%</td>
<td>19.77%</td>
<td>15.21%</td>
</tr>
<tr>
<td>2008</td>
<td>-7.36%</td>
<td>-3.48%</td>
<td>5.06%</td>
<td>8.91%</td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td>3.02%</td>
<td>2.51%</td>
</tr>
</tbody>
</table>

Figure 1 plots this evolution and shows that the 2008 financial crisis has deeply affected the French banking sector profitability. This loss in profitability is more glaring for commercial banks [-7.4% in 2008] whereas cooperative banks have resisted quite well by maintaining a positive profitability for 2008. However, the French banking sector as a whole has responded quite well to this shock by regaining a positive profitability in 2009 [6.03%].
The leverage effect, i.e. the difference between the ROE and ROA (see box 2), is relatively high for the French banking sector, as one can see through this chart.

**Figure 2 - Leverage effect in the French banking sector**

<table>
<thead>
<tr>
<th>Year</th>
<th>Commercial Banks</th>
<th>Large commercial banks</th>
<th>Cooperative banks</th>
<th>All banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>11.56%</td>
<td>19.45%</td>
<td>6.45%</td>
<td>9.27%</td>
</tr>
<tr>
<td>2001</td>
<td>11.30%</td>
<td>14.86%</td>
<td>8.32%</td>
<td>9.81%</td>
</tr>
<tr>
<td>2002</td>
<td>9.67%</td>
<td>11.32%</td>
<td>8.09%</td>
<td>9.08%</td>
</tr>
<tr>
<td>2003</td>
<td>8.79%</td>
<td>12.51%</td>
<td>6.94%</td>
<td>8.41%</td>
</tr>
<tr>
<td>2004</td>
<td>12.40%</td>
<td>14.16%</td>
<td>8.15%</td>
<td>10.45%</td>
</tr>
<tr>
<td>2005</td>
<td>14.00%</td>
<td>17.41%</td>
<td>9.76%</td>
<td>12.08%</td>
</tr>
<tr>
<td>2006</td>
<td>15.27%</td>
<td>19.27%</td>
<td>13.38%</td>
<td>14.58%</td>
</tr>
<tr>
<td>2007</td>
<td>6.07%</td>
<td>4.95%</td>
<td>11.17%</td>
<td>8.57%</td>
</tr>
<tr>
<td>2008</td>
<td>-7.16%</td>
<td>-3.40%</td>
<td>2.77%</td>
<td>-2.41%</td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td>5.76%</td>
</tr>
</tbody>
</table>

**Chart 1 - Debt leverage**

<table>
<thead>
<tr>
<th>Year</th>
<th>Commercial Banks</th>
<th>Large commercial banks</th>
<th>Cooperative banks</th>
<th>All banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>20.22</td>
<td>25.14</td>
<td>17.39</td>
<td>18.01</td>
</tr>
<tr>
<td>2001</td>
<td>20.63</td>
<td>24.57</td>
<td>14.04</td>
<td>17.52</td>
</tr>
<tr>
<td>2002</td>
<td>19.68</td>
<td>22.69</td>
<td>13.04</td>
<td>16.74</td>
</tr>
<tr>
<td>2003</td>
<td>19.48</td>
<td>22.96</td>
<td>11.46</td>
<td>16.18</td>
</tr>
<tr>
<td>2004</td>
<td>22.20</td>
<td>23.48</td>
<td>11.04</td>
<td>16.97</td>
</tr>
<tr>
<td>2005</td>
<td>26.83</td>
<td>29.78</td>
<td>11.27</td>
<td>19.49</td>
</tr>
<tr>
<td>2006</td>
<td>23.89</td>
<td>28.18</td>
<td>11.20</td>
<td>18.38</td>
</tr>
<tr>
<td>2007</td>
<td>27.81</td>
<td>18.74</td>
<td>10.93</td>
<td>20.10</td>
</tr>
<tr>
<td>2008</td>
<td>25.68</td>
<td>18.44</td>
<td>10.55</td>
<td>18.44</td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td>16.92</td>
</tr>
</tbody>
</table>
The leverage effect is an important indicator for banks’ profitability because it points to the choice between equity and debt in their balance sheets. Indeed, the transition from economic profitability to financial profitability is done by taking into account the financial structure (the preference for debt or for equity of the company, here a bank). The leverage effect being the difference between the ROE and ROA, a high ROE might stem from a high leverage effect rather than a high ROA; this strategy would induce a risk increase. In addition, the higher the debt leverage, the more financial profitability will be sensitive to changes in economic profitability. Leverage effect, as an analytical tool, allows essentially tracing the origin of profitability and thus its possible fragility: a bank whose results are only based on a cost of debt transiently low relative to its return on assets (e.g. with very low real interest rates) may not be sustainable in the long run. In the case of the French financial sector’s profitability, we will consequently look at the links with the interest rates. Here, the relatively high leverage effect (14.58% before the financial crisis, 5.76% in 2009) means that French banks have had a greater margin on debt than on equity. Regarding the debt leverage in chart 1 (16.92 in 2009), its high values show that French banks are used to prefer debt to equity (see Cayssials et al., 2008), which goes against the accounting and regulation recommendations of Basel III.

Net banking income measures the activity of banks through an intermediate balance calculated from the income statement. It computes the net revenues generated by a bank as part of its operations. It apprehends only the retail activities of credit institutions, without taking into account other activities. Profitability is linked to banking activity; it can thus be interesting to follow the evolution of the French net banking income [figure 3] in order to evaluate its contribution to the profitability of the sector (see Fournier and Marionnet, 2009).
Figure 3 - French Net Banking Income
(in million €)

<table>
<thead>
<tr>
<th>Year</th>
<th>Banking Net Income (All banks)</th>
<th>Banking Net Income (Commercial banks)</th>
<th>Banking Net Income (Large commercial Banks)</th>
<th>Banking Net Income (Cooperative Banks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>118 580</td>
<td>128 481</td>
<td>119 688</td>
<td>124 274</td>
</tr>
<tr>
<td>2001</td>
<td>119 688</td>
<td>124 274</td>
<td>119 531</td>
<td>124 042</td>
</tr>
<tr>
<td>2002</td>
<td>124 274</td>
<td>119 531</td>
<td>124 042</td>
<td>174 637</td>
</tr>
<tr>
<td>2003</td>
<td>119 531</td>
<td>124 042</td>
<td>174 637</td>
<td>152 989</td>
</tr>
<tr>
<td>2004</td>
<td>124 042</td>
<td>174 637</td>
<td>152 989</td>
<td>97 005</td>
</tr>
<tr>
<td>2005</td>
<td>174 637</td>
<td>152 989</td>
<td>97 005</td>
<td>155 836</td>
</tr>
<tr>
<td>2006</td>
<td>152 989</td>
<td>97 005</td>
<td>155 836</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>97 005</td>
<td>155 836</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>155 836</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>155 836</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Net banking income can also be calculated from the overall interest margin plus income and expenses related to various service activities:

Figure 4 - French Banking Interest Margins
(in millions)

<table>
<thead>
<tr>
<th>in millions</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Banks</td>
<td>12 221</td>
<td>12 250</td>
<td>14 570</td>
<td>15 025</td>
<td>13 327</td>
<td>14 732</td>
<td>11 700</td>
<td>8 826</td>
<td>18 907</td>
<td></td>
</tr>
<tr>
<td>Large commercial banks</td>
<td>9 495</td>
<td>9 985</td>
<td>12 845</td>
<td>13 516</td>
<td>8 871</td>
<td>9 138</td>
<td>4 129</td>
<td>4 224</td>
<td>10 326</td>
<td></td>
</tr>
<tr>
<td>Cooperative banks</td>
<td>12 153</td>
<td>13 342</td>
<td>14 506</td>
<td>14 518</td>
<td>14 386</td>
<td>14 132</td>
<td>13 611</td>
<td>12 785</td>
<td>11 919</td>
<td></td>
</tr>
<tr>
<td>All banks</td>
<td>28 827</td>
<td>29 098</td>
<td>32 722</td>
<td>34 301</td>
<td>27 775</td>
<td>28 929</td>
<td>25 363</td>
<td>21 659</td>
<td>30 875</td>
<td>41 418</td>
</tr>
</tbody>
</table>

Figure 4 shows that the French banking interest margin has increased since the financial crisis, except for cooperative banks that maintain a relatively stable trend. The relative fall in large banks interest margins can be explained by the high competition and concentration within this sub-sector (see subsection 2. and Suffian, 2011)
1.2 Profitability of the financial and non-financial sectors

In order to assess the profitability of the financial sector and compare it with the non-financial sector’s, ratios based on national accounting are necessarily different from those calculated on the basis of business accounts. For instance, as regards the definition of ROE that we gave in box 2, it is straightforward that capital and reserves point to different concepts for the financial and the non-financial sectors. The former involves mainly financial capital whereas the latter involves mainly physical capital. Another issue, for instance, is that financial firms’ liabilities include deposits.

Box 3 - Profitability ratios calculation and data

Profitability ratios for the French financial and non-financial sectors

In contrast with the definition of ROE that we used in the previous section, we now turn to the following two kinds of ROE (Return on Equity) which allow to compare profitability for financial and non-financial corporations. ROE can be computed from two formulas:

\[
\text{ROE} = \frac{\text{EBITDA}}{\text{Broad Capital}} = \frac{\text{EBITDA}^2}{\text{Equity - Stocks and mutual funds held}}
\]

or

\[
\text{ROE} = \frac{\text{EBITDA} - \text{Consumption of Fixed Capital}}{\text{Broad Capital}}
\]

Profitability ratios stemming from ROA, \(\frac{\text{Net Income After Tax}}{\text{Physical Assets}}\), cannot be compared for financial and non-financial corporations because physical assets do not exist for financial corporations or are a tiny part of their assets. Consequently, we also cannot compute leverage effects or debt to equity ratios for the aggregate financial sectors.

Data

National accounts, INSEE, 2005 Base, data are available:

24 EBITDA (Earnings Before Interests, Taxes, Depreciation and Amortization) = Net Income + Interest Expenses + Income tax expense + Depreciation and Amortization
- From 1978 to 2010 for the balance sheets of financial corporations [S12] and non-financial corporations [S11]
- From 1996 to 2010 for the financial accounts of financial corporations [S12] and non-financial corporations [S11]

Regarding data, because estimations of companies’ data seem hard to reconcile with those in national accounts, capital is priced at its acquisition value in the second ratio ($\text{ROE} = \frac{\text{EBITDA} - \text{Consumption of Fixed Capital}}{\text{Broad Capital}}$); hence they are closer to business accounting norms. Data currently published or available from national accounts are based upon concepts which are not amenable to rigorous comparisons. Two profitability ratios have been calculated and we primarily compare the evolution of the financial and non-financial sectors profitability\(^25\) rather than their values.

\(^{25}\) In order to make comparisons possible between the different sections of this chapter, all of the figures and tables in this subsection 1.2 have been drawn from 2000 to 2010. For the financial and non-financial sectors, data nonetheless began in 1996. The entire dataset is reported in figures which are available in appendix 1.
<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Sector</td>
<td>9.97%</td>
<td>6.47%</td>
<td>6.74%</td>
<td>8.90%</td>
<td>8.87%</td>
<td>6.32%</td>
<td>8.87%</td>
<td>12.06%</td>
<td>4.51%</td>
<td>7.82%</td>
<td>9.06%</td>
</tr>
<tr>
<td>Non-financial Sector</td>
<td>15.75%</td>
<td>15.46%</td>
<td>14.24%</td>
<td>12.99%</td>
<td>11.89%</td>
<td>10.96%</td>
<td>10.50%</td>
<td>10.53%</td>
<td>10.95%</td>
<td>9.73%</td>
<td>9.21%</td>
</tr>
</tbody>
</table>

The figures 5 - 6 show that the profitability of the financial sector is relatively volatile around a stable trend (around 10% for the first ratio – figure 5 -, 5% for the second – figure 6 -). On the contrary, the profitability of the non-financial sector has constantly decreased since 1998 and has established itself in 2010 close to the financial sector profitability. Nonetheless, if the financial crisis has deeply hit the financial sector (its profitability dropped from 12.06% in 2007 to 4.51% in 2008), the non-financial sector has not been affected (10.53% in 2007, 10.95% in 2008). This evolution of profitability for both financial and non-financial sectors appears reliable since it is quite the same for the second ratio.

The increase in profitability of the non-financial sector between 1998 and 2002 was stopped due to increased prices of production goods, especially in the real-estate sector. From 8.7% in 2000, it dropped to 5.6% in 2006. Indeed, when the market value of real-estate assets (to keep this example) increases, their rate of return is reduced mechanically (all else being equal) even though owners have seen their wealth increase.
Figure 6 - Non-financial and Financial Sector Profitability

Financial Sector
- 2000: 7.37%
- 2001: 4.05%
- 2002: 4.25%
- 2003: 5.80%
- 2004: 5.45%
- 2005: 3.38%
- 2006: 4.64%
- 2007: 5.96%
- 2008: 1.01%
- 2009: 4.30%
- 2010: 5.52%

Non-financial Sector
- 2000: 8.71%
- 2001: 8.50%
- 2002: 7.60%
- 2003: 7.03%
- 2004: 6.47%
- 2005: 5.89%
- 2006: 5.60%
- 2007: 5.74%
- 2008: 5.79%
- 2009: 4.50%
- 2010: 4.41%

Differences in financial and non-financial sector profitability can also be analyzed in light of CAC40 (Paris Stock Exchange Index) listed companies’ profitability.
Box 4 - Profitability ratios calculation and data

Profitability ratios for the French financial and non-financial CAC 40 listed companies

The following ROE (Return on Equity) gives comparable profitability measure for financial and non-financial corporations. It can be computed from this formula:

\[
ROE = \frac{\text{Net Income After Tax}}{\text{Capital and Reserves}}
\]

Data

Data were taken from the financial reports of the different companies on the internet, where they are only available since 2000:

- Financial corporations: Société Générale, BNP Paribas, AXA and Crédit Agricole
- Non-financial corporations: EADS, Total, PSA Peugeot-Citroën and LVMH

Figure 7 - Average profitability of non-financial and financial listed companies

26 EBITDA (Earnings Before Interests, Taxes, Depreciation and Amortization) = Net Income + Interest Expenses + Income tax expense + Depreciation and Amortization
We decided to compare the profitability of the top-4 companies of the French stock index in terms of market value\textsuperscript{27} with that of the 4 financial companies which are listed at Paris stock exchange, hence three banks (BNP Paribas, Société Générale, and Crédit Agricole) and an insurance company (AXA)\textsuperscript{28}.

Figure 7 reports that the evolution of profitability is quite different when it comes to comparing only a few CAC 40 listed companies or aggregate sectors. Profitability has been substantially higher for CAC 40 non-financial companies (LVMH, EADS, Total, PSA) than for the aggregate non-financial sector, and those listed companies do not witness the same kind of continuous downward-sloping trend as the aggregate non-financial sectors. The decrease in the profitability of the non-financial top-4 listed companies has been sharp since 2005, hence later than the whole non-financial sector. At the trough of 2009, their profitability remained twice the profitability of the non-financial sector. It is possible to argue that the aggregate downward trend certainly hides SMEs’ deep and early financial difficulties\textsuperscript{29}. As for large financial companies, their profitability appears higher and less volatile, as CAC 40 financial companies indicate, than the entire financial sector. Here again, size does seem to matter. It remains to be acknowledged that large non-financial companies have had a substantially higher profitability than large financial companies since 2001. Finally, figure 7 shows that the profitability’s trough occurred earlier for large financial companies (2008) than for large non-financial companies (2009); hence it testifies for a transition from a banking crisis to an economic crisis in France. It is also apparent from figure 7 that the non-financial companies have recovered faster than the financial ones since the profitability’s trough.

\textsuperscript{27} We dropped France Telecom from the top-4 and replaced it with PSA. Equity at France Telecom over the sample shows an unusual phase of negative value which gives rise to an irrelevant negative overall profitability for the top-4 non financial listed companies.

\textsuperscript{28} In Paris CAC40, there are only 4 financial companies.

\textsuperscript{29} OCDE – Centre pour l’entrepreneuriat, les PME et le développement local (2009), Blazy, Martel and Nigam (2010).
2. Proximate causes of profitability evolution

The globalization of economies and financial markets combined with deregulation has changed the conditions of competition and has increased profitability requirements. The internationalization of the market and the importance of technology investments have led the French banking sector to find a sufficient size, diversify and reorganize itself, a feature which has had an impact on its profitability. The analysis of the determinants of profitability for the French financial sector will help at circumscribing the possible causes of changes in profitability. These changes encompass accounting, sectoral, economic and regulatory arguments.

2.1 Sectoral and accounting causes

The size, of the sector and of the corporations themselves, and competition are sectoral features that can affect profitability of the French financial sector. They are assessed using indicators described in box 5 below.

---

**Box 5 - Determinants assessment**

*Calculation methods for sectoral determinants*

The size of the financial sector will be assessed by the number of financial institutions.

The size of banks will be assessed by the banks’ total assets because it takes into account the amount of loans and the access of major banks to asset markets, which has an impact on profitability.

*Data*

Source: OECD Banking Statistics; these data are only available:
- From 2000 to 2009 for all banks data
- From 2000 to 2008 for banking sub-sectors (commercial, large commercial and cooperative banks)

---

30 See Bejaoui Rouissi (2011) and Beckmann (2007).
First, observing the number of institutions, we can see that banking profitability is positively though quite weakly correlated with the number of French banking institutions.

**Chart 2 – Correlation between profitability and size of the banking sector**

<table>
<thead>
<tr>
<th>Correlation ROE / Number of Institutions</th>
<th>Commercial banks</th>
<th>Large commercial banks</th>
<th>Cooperative banks</th>
<th>All banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression coefficient [1]<strong>32</strong></td>
<td>0.29</td>
<td>-0.19</td>
<td>-0.07</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>4.10E-04</td>
<td>4.97E-04</td>
<td>1.32E-04</td>
<td>2.20E-05</td>
</tr>
</tbody>
</table>

Regarding the size of banks, the French banking sector does not follow the intuition that larger banks have higher profitability through their provision of large volume of loans and easy access to the asset market. In figures 8 – 9 and charts 2 – 3, one can see that profitability is negatively and weakly correlated to the size of different types of banks, even if the size of French banks has globally increased since the 2000s. The French banking sector seems to be subjected to diseconomies of scale.

**Chart 3 – Correlation between banking profitability and size of banks**

<table>
<thead>
<tr>
<th>Correlation ROE / Total assets</th>
<th>Commercial banks</th>
<th>Large commercial banks</th>
<th>Cooperative banks</th>
<th>All banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression coefficient [1]<strong>32</strong></td>
<td>-0.59</td>
<td>-0.78</td>
<td>-0.08</td>
<td>-0.55</td>
</tr>
<tr>
<td></td>
<td>-3.26E-08 *</td>
<td>-8.45E-08 ***</td>
<td>-9.89E-09</td>
<td>-1.86E-08*</td>
</tr>
</tbody>
</table>

\[31\] The estimated equation is: Profitability = constant + regression coefficient \* size.

\[32\] Estimations are performed using OLS. \*, ** and *** denote significance at the 10%, 5% and 1% levels.
Figure 8 - Correlation between Banking Profitability and Size

$R^2 = 0.2986$
Figure 9 - French Banking Total Assets
(in millions)

Last, banking competition in France has strengthened as a result of changes in the organization of the profession (Banking Act of 1984) and in the instruments of monetary policy (removal of credit controls between 1985 and 1987). It operates mainly on prices, especially on the rates charged on loans. Institutions may accept to suffer a reduction in their interest margins in the short-term in order to increase their market share by eliminating the least competitive of them. Indeed, since the production of banking services (including bank deposits and credits) is the cause of high sunk costs, credit institutions may be tempted to engage in a price war. In such a situation, profitability declines due to the compression of margins without sufficient rationalization of the industry (this is the case of France until 2007). Market shares do not move enough to offset the drop in profitability and do not eliminate less competitive banks (see Amel et al., 2003). The financial crisis of 2008 included
some form of “predatory competition” that raised again the profitability of surviving banks\textsuperscript{33}.

Liquidity and the volume of operating expenses and provisions are accounting determinants of profitability for the financial sector. They can be assessed using two ratios described in box 6 below.

<table>
<thead>
<tr>
<th>Box 6 - Determinants assessment</th>
</tr>
</thead>
</table>

**Calculation methods for accounting determinants**

The importance of staff costs and other non-financial charges (depreciation and amortization of tangible and non-tangible assets) in relation to total assets of a bank is measured by the **OVTA Ratio** [Overhead to Total Assets]. Thus, a bank with a wide distribution network is faced with a sizeable workforce and high investment in fixed assets:

$$\text{OVTA} = \frac{\text{Operating Expenses}}{\text{Total of Assets}}$$

Liquidity will be assessed by the **LCSTF Ratio** [Loans to Customers and Short-Term Funding]. It measures the volume of credits made by a bank relatively to the main source of funding for its loans. It is an inverse measure of liquidity of the bank since it links the management of liquidity to the banking performance. It compares the illiquid assets (loans) to deposits. Thus, the higher this ratio, the less the bank is considered liquid.

$$\text{LCSTF} = \frac{\text{Total of Loans}}{\text{Total of Deposits}}$$

**Data**
- Source: OECD Banking Statistics; these data are only available:
  - From 2000 to 2009 for all banks data
  - From 2000 to 2008 for banking sub-sectors (commercial, large commercial and cooperative banks)

First, the analysis of staff costs may indicate whether costs management is efficient and thus whether it determines higher profitability.

Figure 10 - Correlation between Banking Profitability and Operating Expenses

\[ R^2 = 0.1901 \]

The correlation between profitability and costs control is indeed positive: high costs can be considered as a proxy of the volume of banking activity and are therefore correlated with high incomes. The overheads thus seem to be a determinant for French banking profitability, even if the statistical significance is quite weak.

However, the amount of provisions in French banks seems to be a stronger determinant of profitability, as it is shown in figures 10–11.

Indeed, net banking income varies according to the volume of additional provisions. This is quite clear for 2006 when profitability has jumped to 15.21% when provision expenses fell to -51 million € against a decrease of -2.91% in 2008 when provision expenses rose by 15 140 millions €.
Figure 11 - Correlation between Banking Profitability and Provisions

\[ R^2 = 0.5469 \]

Figure 12 - Profitability and Provisions

Net provisions vs. ROE (All banks)
Last, liquidity is an interesting determinant of banking profitability. In figure 13 and chart 4, the analysis of the liquidity ratio shows that it has a weak but positive effect on profitability, which indicates a negative correlation between banking profitability and the level of liquid assets held by French banks that thus have a profitable transformation. This transformation inherent in the banking intermediation function is defined as the offsetting of permanent financing by resources with shorter maturities and it seems to be beneficial to cooperative banks, hence banks specialized in retail banking.

<table>
<thead>
<tr>
<th></th>
<th>Commercial banks</th>
<th>Large commercial banks</th>
<th>Cooperative banks</th>
<th>All banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation ROE / Provisions</td>
<td>-0.92</td>
<td>-0.66</td>
<td>-0.38</td>
<td>-0.74</td>
</tr>
<tr>
<td>Regression coefficient</td>
<td>-2.43E-05***</td>
<td>-2.61E-05**</td>
<td>-1.20E-05</td>
<td>-7.58E-06***</td>
</tr>
</tbody>
</table>

Chart 4 – Correlation between profitability and liquidity

<table>
<thead>
<tr>
<th></th>
<th>Commercial banks</th>
<th>Large commercial banks</th>
<th>Cooperative banks</th>
<th>All banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation ROE / Liquidity</td>
<td>0.39</td>
<td>-0.17</td>
<td>0.42</td>
<td>0.27</td>
</tr>
<tr>
<td>Regression coefficient</td>
<td>0.835</td>
<td>-0.076</td>
<td>0.188</td>
<td>0.572</td>
</tr>
</tbody>
</table>
2.2 Economic determinants of profitability

The French financial sector profitability is certainly sensitive to the economic environment, namely to interest rates, risks in financial markets or macroeconomic shocks. For instance, as shown in figure 14, the spread between lending rate and deposit rate has had an impact, though weak and weakly significant, on the interest margin of French banks:
Evaluating the resilience of banks’ revenues and profitability to adverse macroeconomic shocks can help at detecting some economic determinants of the financial and banking sector profitability. Indeed, banks’ profitability significantly also depends on macroeconomic and financial variables like interest rate spread (positively, see above), GDP growth (positively) or stock market’s volatility (positively). However, stress testing analysis (see Banque de France, Coffinet and Lin, 2010) showed that French banks’ profitability was more resilient to major adverse macroeconomic scenarios than foreign banks and that the impact of economic shocks on the French financial sector might be relatively modest in terms of profitability. The French banking sector seems to be well capitalized to absorb macroeconomic and financial variations. This can be interpreted as a plea for the model of universal banking, introduced in France in 1984.

However, risks due to financial markets and sovereign crises remain a determinant of the French financial sector profitability [figures 1 to 6 testify for the sharp drop of profitability that French banks underwent in 2008]. Reflecting the magnitude of the recent financial crisis, many vulnerabilities and new sources of risk have emerged in the euro area macroeconomic and financial environment, having thus an impact on French profitability. The main vulnerability is related to the unusual amount of balance sheet adjustment which has been required after the widespread credit expansions that foretold the global economic and financial crisis. In parallel, financial markets exhibited higher volatility and turbulences with sharp adjustments that characterized the latter half of 2011. In this context, European financial stability and more particularly the French financial sector profitability has faced strong headwinds. The four key risks in French financial sector profitability are:

- The contagion and negative feedback between the vulnerability of public finances, the financial sector and economic growth;

- Weakening macroeconomic activity, credit risks for banks and second-round effects through a reduced credit availability in the French economy;

- Imbalances of key global economies and the risk of sharp economic slowdown;

- Funding constraints in the French banking sector related to the new international regulatory framework.

Attention will have to be paid in order to prevent French profitability from these global risks.

Last, deregulation and securitization have brought credit risk in the French financial and banking sector; the analysis of the implications of private equity in banking balance sheets is therefore relevant. The private equity market is a cyclical market, with phases of fund raising and investment exit phases which depend on the dynamics of stock markets and interest rates. In this regard, the 2003-2008 period,

---

35 See the recent contagion of the Greek debt crisis to European banks and especially French ones, Antonin [2012].
characterized by a low level of long-term interest rates and rising stock markets was favourable to private equity, including LBOs\(^{36}\), hence creating a fear that a bubble might occur in this market, with ratios of Debt / EBITDA historically at high levels [see chart 5].

**Chart 5 – Ratio Debt to EBITDA**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt / EBITDA</td>
<td>5.76</td>
<td>8.99</td>
<td>7.84</td>
<td>8.02</td>
<td>9.01</td>
<td>10.99</td>
<td>12.19</td>
<td>15.18</td>
<td>23.76</td>
<td>14.19</td>
<td>13.81</td>
</tr>
</tbody>
</table>

The traditional distinction between equity and debt has given way to sophisticated assemblies with a continuum of diversified instruments (depreciable senior debt, junior and senior debt mezzanine, convertible bonds, preference shares...) that correspond to different pairs of risk and return. On the other hand, the development of securitization and credit derivatives allowed French banks to transfer 70% of their risk associated with LBO debt to non-banks (CDOs/CLOs\(^{37}\) and hedge funds). These structural changes induced also a loss of information on the carriers of LBO risk, which makes uncertain the systemic consequences of a downturn in private equity market. In a context of high indebtedness coupled with some easing of conditions for granting credit and margin erosion of credit, financing of private equity transactions and therefore financial profitability could be weakened by an economic shift or reversal. The behaviour of the new non-bank holders of risk could be significantly different from that of banks in case of multiplication of failures, such as supporting a rapid bankruptcy rather than attempting a debt restructuring (see Blazy et al., 2010). The global French financial sector profitability could be affected by such newcomers.

**2.3 Regulatory determinants of profitability**

Prudential banking regulation (Basel II, Basel III) increases capital requirements, which is likely to increase the capitalization ratio which both reduces

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\(^{36}\) Leveraged Buy-Out  
\(^{37}\) Collateralized Debt Obligation and Collateralized Loan Obligations.
the risk and declines the leverage. Bank regulation, via the capitalization ratio (which calculation is described in box 6 below), could be a determinant of the profitability of the financial sector in France, even if its adverse effects leave an indeterminacy on the sum effect. Figure 15 shows the evolution of French profitability regarding major French, European and international legislations. In order to qualify and comment more precisely upon the impact of regulation on profitability, one has nonetheless to focus on ratios comparisons.

![Figure 15 - Banking Profitability and Regulation](image)

**EQTA ratio** measures the weight of capital in a bank. It determines the distribution of funding resources between debt and equity. Thus, a high capital adequacy ratio is an indicator of low debt and therefore of a lower credit risk.
However, in terms of profitability, the risk-return relationship implies a usually negative link between this ratio and bank performance.

**Box 6 - Determinants assessment**

*Calculation methods for regulatory determinants*

The prudential regulation will be assessed by a capitalization ratio, EQTA (Equity to Total Assets):

\[
EQTA = \frac{\text{Equity}}{\text{Total of Assets}}
\]

*Data*

- Source: OECD Banking Statistics; these data are only available:
  - From 2000 to 2009 for all banks data
  - From 2000 to 2008 for banking sub-sectors (commercial, large commercial and cooperative banks)

At first sight, it seems that regulation has increased the capitalization ratio of French cooperative banks [figure 16] but has maintained it at a stable level for commercial banks, even during the recent crisis.
The positive effect of regulation on profitability prevails in France. Indeed, if equity is a source of capital more expensive than deposits, an increase in equity may increase the cost of capital for the bank leading it to fix a higher margin: the sign between EQTA and profitability is positive, although it is weakly significant. For French banks, an increase in equity seems to affect their profitability positively not only through higher average cost of capital but also through an increase in risk resulting from the extension of their portfolios to more gains producing assets (see Mouriaux and Foulcher-Darwish, 2006). Indeed, increasing the pressure on banks in order to reduce their operating costs encourages them to enrol in more profitable but riskier activities that generate greater profitability. Regulation could increase the profitability of French banks without achieving its original purpose, namely to reduce the credit risk (see articles in Revue Banque).
3. Conclusion

Over the last decades, the French banking system has experienced major changes regarding its sources of revenue. The traditional interest revenue has been increasingly replaced by trading incomes (see figure 18), which could have led to a weaker resilience of banks’ revenues to adverse shocks.
Yet, the French banking and financial system went through the current financial crisis without any bankruptcy and its profitability remained strong relative to other developed countries\textsuperscript{38}, in spite of the global strong economic and financial downturn. Yet, the regulatory process under the aegis of the Basel Committee that followed this crisis and urged French banks to increase their equity ratio in order to diminish credit risk could have some adverse effects. Indeed, with a high leverage effect, French banks have retained a certain hedge against credit risk. With regulations forcing banks to increase their capital and reserves, French banks sold some of their assets (loan portfolios) in order to receive stable capital. On the other hand, banks are incentive to take more risk on new assets in order to increase their profitability. All in all, with these prudential rules, banks are prompt to take risk that will increase profitability and to sell it via securitization in order to toe the line relatively to Basel III principles, which leads to more aggregated risk. If this policy

\textsuperscript{38} See Banque de France, Coffinet and Lin, 2010
would have a short-term positive effect on profitability, financial stability could be affected in the long run.
Appendix 1 – Profitability of the financial and non-financial sectors from 1996 to 2010

Non-financial and Financial Sector Profitability

Profitability (NFS, EBITDA/Capital Employed)
Profitability (FS, EBITDA/Capital Employed)

Profitability (NFS, EBITDA - FCC/Capital Employed)
Profitability (FS, EBITDA - FCC/Capital Employed)
8. **THE INSURANCE SECTOR IN FRANCE**

Anne-Laure Delatte (Rouen Business School, OFCE, Paris 10 University)

1. **General presentation**

Three kinds of insurance enterprises operate in the French insurance market. Insurance companies, which include privately owned stock companies and certain mutual societies account for approximately 85% of total premium income. They offer protection against all types of risks. The two other kinds of insurance enterprises include other mutual societies which are governed by the French Mutual Code (the *Code de la Mutualité*) and provident institutions governed by the French Social Security Code (the *Code de la Sécurité Sociale*). They mainly provide personal protection, in particular health insurance, to supplement that offered under the basic social security system.

In 2011 the French insurance sector ranked fourth worldwide with 6.5% of the world market share (see the next Table). The total turnover of the insurance companies was an estimated 216.2 billion Euros in 2011 (approx. 280 billion US $) with an average annual 10% growth rate since 1992. In total 70% of the turnover is made in France; this share has been stable over the last three decades.
## Table 1. The Top Insurance Markets in 2011

<table>
<thead>
<tr>
<th>Total Turnover in billion US $</th>
<th>Property &amp; Casualty</th>
<th>Total</th>
<th>World Market share (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>506</td>
<td>660</td>
<td>1166</td>
</tr>
<tr>
<td>Japan</td>
<td>441</td>
<td>116</td>
<td>557</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>213</td>
<td>96</td>
<td>309</td>
</tr>
<tr>
<td>France</td>
<td>192</td>
<td>88</td>
<td>280</td>
</tr>
<tr>
<td>Germany</td>
<td>115</td>
<td>125</td>
<td>240</td>
</tr>
<tr>
<td>China</td>
<td>143</td>
<td>72</td>
<td>215</td>
</tr>
<tr>
<td>Italy</td>
<td>122</td>
<td>52</td>
<td>174</td>
</tr>
<tr>
<td>Canada</td>
<td>52</td>
<td>64</td>
<td>116</td>
</tr>
<tr>
<td>South Korea</td>
<td>71</td>
<td>43</td>
<td>114</td>
</tr>
<tr>
<td>Netherlands</td>
<td>25</td>
<td>72</td>
<td>97</td>
</tr>
</tbody>
</table>

*Source: FFSA Report 2011*

The following table displays the top 10 insurance companies in France in 2011. Only three insurers included in the top insurers in 2001 still ranked in the top 10 organisms in 2011. Three companies encompassed in banking groups entered the top 10 insurers over the decade: Groupe Crédit Agricole Assurance, BNP Paribas Cardif and Société Générale Insurance.

## Table 2. The top 10 insurers in France in 2011 (by premiums, in billion €)

<table>
<thead>
<tr>
<th></th>
<th>Consolidated</th>
<th>In France</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Life</td>
<td>Property and Casualty</td>
<td></td>
</tr>
<tr>
<td>Axa</td>
<td>86.1</td>
<td>14.3</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>CNP Assurance</td>
<td>30</td>
<td>23.9</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Groupe Crédit Agricole Assurance</td>
<td>25.2</td>
<td>17.8</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>BNP Paribas Cardif</td>
<td>23.3</td>
<td>10.3</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Groupama</td>
<td>17.2</td>
<td>4.1</td>
<td>8.6</td>
<td></td>
</tr>
<tr>
<td>Allianz France</td>
<td>14.9</td>
<td>7.7</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Covéa (MAAF, MMA, GMF)</td>
<td>14.3</td>
<td>4.4</td>
<td>9.2</td>
<td></td>
</tr>
<tr>
<td>Générali France</td>
<td>13.7</td>
<td>9</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>SFEREN</td>
<td>10.6</td>
<td>3</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>Société Générale Insurance</td>
<td>9.8</td>
<td>8.2</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

*Source: FFSA report 2011*
The table reveals that the market concentration is on average similar to the rest of the European Union with the five leading groups controlling 30% of the French market. The level of concentration has been stable over the last decade with the 10 leading groups controlling 70% of the French market since 1995.

However, a process of market concentration started in the middle of the 1990s in life and health insurance and reinsurance. Mergers and acquisitions have been numerous in the sector of mutual societies which were rather mid-size companies in the 1990s. Pooling resources has therefore been a major motivation due to the increasing competition among mutual societies and the complexity of supplementary health insurance.

The French insurance market is notable for its broad range of distribution channels, which include tied agents and insurance brokers, salaried sales forces, direct writing mutuals, and banks and financial institutions. The weight of the different channels and their evolution over the last three decades is described in the next table.

It is worth observing that the distribution of insurance products by banks and financial institutions is not a recent evolution (it is often referred to as the “bankinsurance” activity). The progressive lifting of regulatory restrictions on insurance activity has motivated banks to operate in the insurance sector since the 1980s. As a result, their market share has increased progressively. Banks and financial institutions already accounted for 42% of all life insurance products in 1991, a share that has increased to 61% in 2011 and has remained stable until 2011. The most recent trend concerns the distribution of property and casualty products by financial institutions which share has increased from 1% to 11% from 1991 to 2011.
Table 3. Premiums broken down by distribution channel (expressed as a %)

<table>
<thead>
<tr>
<th>LIFE AND COMPOSITE COMPANIES</th>
<th>1991</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Institutions</td>
<td>42</td>
<td>60</td>
<td>61</td>
</tr>
<tr>
<td>Agents</td>
<td>17</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Brokers</td>
<td>8</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Salaried Employees</td>
<td>27</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Other Channels</td>
<td>6</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>PROPERTY AND CASUALTY COMPANIES</td>
<td>1</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Financial Institutions</td>
<td>46</td>
<td>35</td>
<td>34</td>
</tr>
<tr>
<td>Agents</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Brokers</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Salaried Employees</td>
<td>28</td>
<td>34</td>
<td>33</td>
</tr>
<tr>
<td>Direct writing companies</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

*Source: Annual reports FFSA 1997, 2001, 2011*
Two major categories of risk are usually distinguished when referring to insurance activity: the risk related to life and health on the one hand and property and casualty on the other hand. The relative share of life and health insurance has increased from 50% to 80% of total premium income from 1990 to 2011.

Groups that operate in both the property and casualty and the life insurance markets are required to set up two legally distinct entities. A single large group, active in a number of different business segments, may encompass five to 10 separate companies – sometimes even more.

Figure 1.

![AMOUNTS CREDITED TO POLICY HOLDERS in 2011](chart.png)

*Source: Annual reports FFSA 2011*
The next table provides a statistical snapshot of the insurance activity in France since 1992.

**Table 4. Insurance activity in France, 1992-2011**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Premium Income [France and abroad]</td>
<td>105,5</td>
<td>167,5</td>
<td>210</td>
<td>319,5</td>
</tr>
<tr>
<td>The French Insurance Market Premium income</td>
<td>76</td>
<td>123,8</td>
<td>127</td>
<td>216,2</td>
</tr>
<tr>
<td>of which life and health insurance</td>
<td>41</td>
<td>82,2</td>
<td>93,4</td>
<td>144,5</td>
</tr>
<tr>
<td>of which property and casualty insurance</td>
<td>35</td>
<td>41,6</td>
<td>33,6</td>
<td>71,7</td>
</tr>
<tr>
<td>Amounts credited to insureds</td>
<td></td>
<td>105,3</td>
<td>114,3</td>
<td>160,1</td>
</tr>
<tr>
<td>Asset managed by insurance companies [market value]</td>
<td>310*</td>
<td>627,1</td>
<td>903,8</td>
<td>1702,4</td>
</tr>
</tbody>
</table>


2. The financial activity of insurance companies

2.1. *The share of insurance products in total households’ savings in France*

At the end of 2011 the French households’ wealth amounted 11.6 trillion euros (according to Banque de France). As the following graph indicates two-third of households’ wealth is composed of non-financial assets (real estate, fields, and precious objects) and the rest of financial assets. Insurance products represent 13% of French households saving and 41% of the households’ financial wealth.
Figure 2.

<table>
<thead>
<tr>
<th>Total French Households Saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-financial assets 68%</td>
</tr>
<tr>
<td>Insurance products 13%</td>
</tr>
<tr>
<td>Securities 8%</td>
</tr>
<tr>
<td>Cash and demand deposits 11%</td>
</tr>
</tbody>
</table>

**Source:** Annual reports FFSA 2011

The share of insurance products in total household financial assets has doubled from 1992 to 2011 from 20% to 40%.

The next graph plots the decomposition of French households financial holdings. In the mid-1980s, households began showing a preference for contractual assets [home savings plans, popular savings plans, life insurance] over liquid assets [savings books, money market mutual funds]. This trend has been confirmed over the last decade.
Figure 3. Total household financial assets (in million €)

Source: Annual reports FFSA 2011

As regarding the long-term contractual saving in France, it was an estimated 2.5 trillion euros in 2011, hence a bit above 100% of GDP. It includes life insurance products, the special savings schemes providing lower interest mortgages and other long-term saving products such as bonds, equities, employee savings plan. The life insurance products represent 55% of this amount, a proportion that rank life insurance first in long term saving instruments in France. It has to be recalled here that France has still a major pay-as-you-go retirement system: hence, pension savings are of a lower order than in countries having private savings schemes.

According to a survey conducted by the FFSA (Fédération Française des Sociétés d’Assurance) in March 2001, the principal objective of life insurance policyholders is to supplement retirement benefits in the form of a lump sum. The three other objectives identified are savings for contingencies, estate planning and wealth accumulation.

2.2. The role of the insurance sector in financing the real economy

The estimated value of total assets under management by insurance companies registered by the French regulator ACP (Autorité de Contrôle Prudentiel), expressed in terms of balance sheet carrying value (acquisition value) was an
estimated 2000 billion euros at year-end 2011. The following graph plots the evolution over the last two decades of the total assets under management by insurance companies members of the FFSA expressed in terms of balance sheet carrying value. It doubled over the last decade and rose threefold every seven years since 1984: total assets under management were 62 billion euros [410 billion francs] in 1984, 187 billion [1,231 billion Francs] in 1990, 566 billion [3,712 billion Francs] in 1997.

To give a first glance at the composition of insurance companies’ holdings it is interesting to note that in 2011 the insurance companies hold an estimated 953 billion € of corporate assets and 528 billion € of sovereign bonds.

Life insurance and composite companies have been the major investors among insurers with holding an average 86% of total assets under management by insurance companies between 1992 and 2011.

**Figure 4. Insurance Companies Investments, 1997-2011**

![Graph showing insurance companies investments from 1992 to 2011](image)

*Source: Annual reports FFSA 1997, 2001, 2011*
Figure 5. Insurance Companies Investments, 2011

Source: Annual report FFSA 2011

The following two graphs plot the composition of assets held by life companies on the one hand and property and casualty companies on the other hand. The relative share of bonds investment has remained stable with an average 68.9% over the period. The relative share of equities investments has increased from an average 15% in the nineties to 25% in the decade 2000. This evolution reflects the booming stock market climate between 2002 and 2008. The increase in equities investment has been made at the expense of real estate investments which relative weight has decreased from 11% in 1991 to 3% in 2011.
Figure 6. Composition of life insurance, capital redemption and composite company investments (balance sheet carrying value/%)
Figure 7. Composition of property and casualty company investments
(balance sheet carrying value/%)
estimated to 101 billion euros for the French sector. According to QIS5 the requirement is more than covered by the sector’s equity which holds 82 billion euros equity in excess to the regulatory requirement.
9. **AVAILABILITY AND SOURCES OF FUNDS: THE BANKING AND SHADOW BANKING SECTORS**

   Jérôme Creel ([OFCE & ESCP Europe](#))

   We reported earlier in this report that the disintermediation process in the French financial system has been relatively mild. We showed that the amounts of credit to households and non-financial corporations have kept on increasing despite the surge in stocks and bonds markets capitalization.

   Another reason behind the mild disintermediation process lies in the surge of market-related activities by banks themselves. Moreover, the inclusion of France in the growing size of the shadow banking sector also testifies for the strong influence of bank-like activities in the financialisation of the French economy. These two points are dealt with in this part. It must be acknowledged that despite the impetus for new regulations and better supervision of shadow banking (see Financial Stability Board, 2011, 2012, or AMF, 2011 for France), research studies are still rare.

1. **Bank balance sheets, or the growing size of market sources of funds**

   The market activities by banks are clearly visible in the evolution of their balance sheets over time. In 1988 (first year for which we have data for French banks on the OECD database), French banks devoted almost 40% of their total assets to loans, and only 17% to market activities (see table 1). Twenty years later, loans to assets had decreased by 8 percentage points, whereas securities to assets had tripled and other assets doubled. Interbank deposits, which represented more than 40% of total assets, were close to a quarter in 2008.

   **Table 1. Bank balance sheet, assets, in percentage points of total assets, all banks**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Cash and balance with CB</td>
<td>1.4</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Interbank deposits</td>
<td>42.2</td>
<td>35.6</td>
<td>25.6</td>
</tr>
<tr>
<td>Loans</td>
<td>39.5</td>
<td>36.1</td>
<td>31.4</td>
</tr>
<tr>
<td>Securities</td>
<td>7.6</td>
<td>20.1</td>
<td>21.7</td>
</tr>
<tr>
<td>Other assets</td>
<td>9.3</td>
<td>7.5</td>
<td>19.6</td>
</tr>
</tbody>
</table>

   Sources: OECD, author’s computations

   On the liabilities side, French banks marginally increased their capital, from 3 to 4% of total liabilities between 1988 and 2008, but they substantially increased the
share of bonds and related debt obligations over the same period [see table 2]. Their share increased by more than 10 percentage points over a 20-year period. Customer deposits reveal an inverse U-shape: the share in banks financing increased substantially between 1988 and 1998, and then lost 2.5 percentage points during the following decade. The world financial crisis provoked a sharp increase in the share of borrowing from the Central bank, from 0.2 to 0.7% of total liabilities.

<table>
<thead>
<tr>
<th>Table 2. Bank balance sheet, liabilities in percentage points of total liabilities, all banks</th>
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<tbody>
<tr>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Capital and reserves</td>
</tr>
<tr>
<td>Borrowing from Central bank</td>
</tr>
<tr>
<td>Interbank deposits</td>
</tr>
<tr>
<td>Customer deposits</td>
</tr>
<tr>
<td>Bonds</td>
</tr>
<tr>
<td>Other liabilities</td>
</tr>
</tbody>
</table>

Sources: OECD, author's computations

Tables 3 and 4 report the balance sheets of large commercial banks, whereas tables 1 and 2 included all banks. On the assets side, interbank deposits are shown to have been of lower importance for large banks in comparison with all banks: their share amounted to one third at the maximum. Hence, the decrease in this type of assets has been smaller than for all banks. On the opposite, loans were a substantial asset for large banks in the late 1980s and 6 percentage points of total assets higher than for all banks. Hence, the decrease between 1988 and 2008 has been very sharp: loans to assets in large commercial banks declined by 20 percentage points. They were offset by a substantial early increase in securities [their share to total assets more than tripled between 1988 and 1998] and, more generally, by a substantial increase in market assets [securities and other assets]: their share was almost multiplied by 2.5 over two decades. These data reveal the growing shares of market activities by banks, and the larger sensitiveness of large commercial banks, which resemble universal banks, to these activities, in comparison with all banks.
Table 3. Bank balance sheet, assets, in percentage points of total assets, large commercial banks

<table>
<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Cash and balance with CB</td>
<td>2.1</td>
<td>1.0</td>
<td>1.9</td>
</tr>
<tr>
<td>15. Interbank deposits</td>
<td>31.0</td>
<td>22.4</td>
<td>22.6</td>
</tr>
<tr>
<td>16. Loans</td>
<td>45.1</td>
<td>39.3</td>
<td>25.9</td>
</tr>
<tr>
<td>17. Securities</td>
<td>7.6</td>
<td>25.3</td>
<td>21.9</td>
</tr>
<tr>
<td>18. Other assets</td>
<td>14.2</td>
<td>12.0</td>
<td>27.7</td>
</tr>
</tbody>
</table>

Sources: OECD, author’s computations

Sensitiveness to market-oriented activities is also clearly visible on the liabilities side of large banks [see table 4]. Their reliance on bonds and related debt obligations more than doubled between 1988 and 2008, showing a sharper increase than for all banks. On the other side, deposits have seen their share decrease quite substantially: their share decreased by more than 20 percentage points over two decades. Finally, capital and reserves, in proportion to full liabilities, represent half the proportion for all banks. The development of risk management in large banks has not been accompanied by an increase in banks’ capital, at odds with the evolution in other banks [see table 2].

Table 4. Bank balance sheet, liabilities in percentage points of total liabilities, large commercial banks

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19. Capital and reserves</td>
<td>2.5</td>
<td>3.2</td>
<td>2.2</td>
</tr>
<tr>
<td>20. Borrowing from Central bank</td>
<td>3.1</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td>21. Interbank deposits</td>
<td>39.8</td>
<td>32.0</td>
<td>29.2</td>
</tr>
<tr>
<td>22. Customer deposits</td>
<td>36.1</td>
<td>32.3</td>
<td>24.7</td>
</tr>
<tr>
<td>23. Bonds</td>
<td>6.8</td>
<td>13.5</td>
<td>13.3</td>
</tr>
<tr>
<td>24. Other liabilities</td>
<td>11.7</td>
<td>18.6</td>
<td>30.5</td>
</tr>
</tbody>
</table>

Sources: OECD, author’s computations

2. Shadow banking in France

In broad terms, and taking the words of Bakk-Simon et al. [2012] from the ECB, “shadow banking refers to activities related to credit intermediation, liquidity and maturity transformation that take place outside the regulated banking system.” Hence, they are related to activities of securitization, through asset-backed securities issuances, and to commercial papers issued by financial institutions outside the scope of central banks interventions.
The size of the shadow banking sector in Europe is quite substantial (see chart 1), as it amounted to almost one quarter of banks total liabilities in 2010. Quite interestingly, shadow banking activities peaked after the world financial crisis.

Chart 1. Size of the shadow banking sector in Europe

In contrast with the US situation, shadow banking in Europe went only through a temporary crisis, shortly after the world financial crisis, then it climbed again, and substantially so (see chart 2). Between 2008Q4 and 2010 Q2, the size of the shadow banking sector in Europe rose approximately by 27%.

Source: Bouveret [2012]
Chart 2. Shadow banking sector: comparison between Europe and the US

The situation of France as regards this European evolution should not be over-emphasized. According the Bakk-Simon et al. (2012), by the end of 2010, the share of France in total assets of financial vehicle corporations among the Euro area member states was 7%. The largest shares were those of Ireland (24%), Spain (21%), the Netherlands (19%) and Italy (14%). Germany’s share was quite low at 3%.

Another assessment of the size of the shadow banking sector draws on the assets of “other intermediaries” compiled by the ECB in its euro area accounts (see Bakk-Simon et al., 2012). Identifying the scope of shadow banking in available statistics is not an easy task. Bakk-Simon et al. (2012) state that assets of “other intermediaries” are equal to other financial institutions assets (OFI)\textsuperscript{39} plus money market fund (MMF) shares issued by monetary financial institutions (MFI) minus mutual fund shares issued by investment funds other than money market funds.

\textsuperscript{39} The OFI sector includes all financial institutions except those reported as MFI and insurance corporations and pension funds.
The distribution of total assets of “other intermediaries” by country modifies the hierarchy among Euro area countries [see chart 3]. The Netherlands represent 27%, Luxembourg 22% and France now appears as the Euro area’s third largest provider of shadow banking of the Euro area, joint with Ireland. The rank of France would be explained by the importance of securities and derivative dealers in this country, and not on the strong reliance of financial activities in France on the instruments of shadow banking, according to Bakk-Simon et al. [2012].

**Chart 3. Total assets of “other intermediaries”, by country (percentage shares of total, 2001-2010)**

Source: Bakk-Simon et al. [2012]

3. **Conclusion**

The growing influence of markets on bank and bank-related activities has been substantial during the two last decades. They have paved the way for a higher sensitiveness to swings in stock prices and bond yields by banks which still produce retail banking services.

These transformations of the French banking and shadow banking sectors have hence paved the way for possibly quite large contagion effects from the financial sector to the real economy. By the same token, they have also given French
households and resident firms access to new financial products and large amounts of financing that have facilitated the matching process of savings and investment.
PART II. RELATION OF FRENCH FINANCIAL TO NON-FINANCIAL SECTOR

10. SURVEY OF PREVIOUS RESEARCH ON EFFICIENCY OF THE FINANCIAL SECTOR (AND SIGNIFICANT SUB-SECTORS)

Paul Hubert (OFCE)
Mathilde Viennot (ENS Cachan & OFCE)

The stakeholders of financial companies (stockholders, bondholders, creditors, personnel and management), especially those which are listed on stock exchanges, want them to release financial information in order to control how effectively their interests are protected. They thus rely on financial statements to obtain information about performance, profitability and efficiency. Efficiency in the financial sector involves seeking a good balance between saving in terms of resources such as money, space, time or materials, and the achievement of a financial company’s goals and objectives. A distinction will be made here between efficiency and effectiveness, the latter denoting performance in terms of achieving objectives. Its main measure remains the efficiency ratio, which computes the relationship between income and overhead expenses. Often identified with banking and financial sectors, this ratio indicates an ability to keep overhead costs low. Low ratings may usually indicate a higher return on equity (profitability, see point 5 in WP2).

The literature relative to calculation methods, French financial sector efficiency and its comparison with other European countries is numerous and shows that France is globally less efficient than its European neighbours whereas its cooperative banking sector is far more efficient than its commercial banks. Beginning by stating the different concepts and general methods of efficiency calculation for the financial sector and sub-sectors present in the literature, this paper then presents French results in terms of efficiency. Finally, a literature review
is performed concerning other European financial and banking sectors efficiency in order to compare and identify several determinants, differences and peculiarities of the French financial sector efficiency at the hands of its European counterparts.

1. Concepts and methods of efficiency calculation in the financial sector and sub-sectors

The five important sets of tools for financial performance analysis are comparative financial statement analysis, common-size financial statement analysis, ratio analysis, cash flow analysis and balance sheet valuation. The commonly used method in financial performance measurement is ratio analysis, which is the application of analytical tools and techniques to financial statements and data. Specific groups of ratios such as liquidity, debt, profitability and turnover give some information about financial firms’ efficiency. However, although the calculation of these ratios is easy, problems can be encountered with interpreting their results; as a matter of fact, ratio analysis is usually criticized because of its subjectivity. In this respect, some articles\(^{40}\) point out that Data Envelopment Analysis, a non parametric method which measures the efficiency of a decision-making unit by converting multiple inputs into multiple outputs, can improve the traditional ratio analysis and provide a consistent and reliable measure to show administrative and operational efficiency. This method will be explained thereafter. First, efficiency calculation will be analyzed through general methods; then, specific methods for sectoral efficiency will be stated.

1.1. General methods for financial sector efficiency measurement\(^{41}\)

Two components of the efficiency of a financial firm can be distinguished:\(^{42}\): technical efficiency (it reflects the ability of the company to obtain maximum output from a given set of inputs) and allocative efficiency (it indicates the ability of the

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\(^{40}\) For example, Gümus and Celikkol (2011); Eken and Kale (2011); Carbo, Gardener and Williams (2002)

\(^{41}\) This section provides conceptual and methodological elements; their knowledge is useful but non essential to non-interested readers who can skip to the next section

\(^{42}\) See Farrel (1957)
company to use the inputs in optimal proportions. These two measures can be combined and provide a total economic efficiency (or cost-efficiency).

In order to measure the efficiency of production units within the financial sector, articles generally use dual frontiers of cost or profit. The deviation from these frontiers provides a measure of inefficiency. However, the technique developed makes it difficult to decompose efficiency into technical and allocative efficiency. The distance function solves this problem and identifies the differences in cost efficiency in the banking sector. It has some advantages compared to the cost and profit functions:

- It provides direct measures of technical efficiency, while dual functions measure the global (cost or profit) efficiency
- It only needs information about the quantities of inputs and outputs, without making assumptions on the objective function of the financial entrepreneurs [profit maximization or cost minimization].

There are two types of distance functions: the output distance function and the input distance function. The output distance function measures technically possible increase in production for a given input level [efficiency is thus measured in terms of profit maximization]. On the contrary, the input distance function measures the possible reduction of inputs for a given output level [efficiency is thus measured regarding cost minimization].

Output for financial corporations is measured by three types of outputs: deposits, loans and equity investments [see Chaffai and Dietsch, 1999]. The three inputs are physical capital [measured by fixed assets], labour [measured by wages] and financial capital [measured by the total financial charges]. To estimate a cost frontier, the price of capital [measured by the ratio of other operating expenses to fixed assets], the price of labour [proxied by the ratio of wages to total assets] and the price of financial capital [measured by the ratio financial burden to total balance sheet] are used.
Another method, the Data Envelope Analysis (DEA) model for constructing a production frontier and for the measurement of efficiency is an increasingly popular tool used in a nonparametric approach. Generally, DEA evaluates the efficiency of a given firm in a given industry, comparing its efficiency to best performing firms in that industry. It is thus not an absolute but relative measurement technique. Efficiency indices for each financial firm are determined on the basis of its inputs and outputs relative to its best input and output (DEA scores); from these DEA scores, efficiency can be measured for a whole sub-sector, which is considered as a decision-making unit (DMU). In the financial sector production process, each DMU has a varying level of inputs and outputs; DEA constructs a smooth curve based on the available data and a line is constructed, enveloping the distribution of sample points. From this line, DEA shows which financial DMUs are more efficient and identifies the inefficiencies of the others.

In order to study changes in efficiency, two methods are suggested in the literature: the Malmquist index and the window analysis. One extension with DEA is indeed to apply Malmquist index to panel data in order to estimate changes in technical efficiency. It allows the production frontier to shift over time and thus can measure efficiency evolution for one year relative to the prior year. In concrete terms, the efficiency change of a financial firm over time will depend on both its position relative to the corresponding constant returns-to-scale frontier (technical efficiency) and position change of the frontier itself (technical change). Window analysis also analyzes efficiency change over time in a panel data context. In this method, the efficiency score of a firm in a sub-panel is compared with its score in another sub-panel, as well as comparison among firms in the same window; this technique allows to examine the trend of a firm’s efficiency performance over time in addition to comparison among a group of firms at a particular point of time.

1.2. Methods for sectoral and sub-sectoral banking efficiency analysis

Measuring efficiency for the banking sector and its branches leads to using different methods and techniques (especially for the measurement of banking inputs
and outputs) than for the entire financial sector, even if the DEA method remains the most used. The following paragraph analyzes the application of DEA method for the banking sector, its branches, and the particular cases of commercial banks, savings banks and insurance companies.

The most widely used methods for computing banking sector efficiency are Data Envelope Analysis and the Stochastic Frontier Approach. The main difficulty with these methods applied to the banking sector is how the bank production can be estimated [see Grigorian and Manole, 2002]. The most common approaches to bank production can be summarized under the following three headings: asset approach, user-cost approach and value-added approach.

Under the *asset approach*, banks are considered as financial intermediaries between liability holders and fund beneficiaries (that is to say, debtors). Loans and other assets are considered as the banks’ outputs; deposits and other liabilities are inputs to the intermediation process. While this approach is appropriate for large banks that purchase their funds from other banks and large institutional depositors; for small banks, this method fails to account for transaction services delivered by the latter to their depositors and therefore it underestimates the overall value added of banking activities.

Under the *user-cost approach*, the net revenue generated by a particular asset or liability item determines whether that financial product is an input or an output. If the financial returns on asset exceed the opportunity cost of funds (or if the financial cost of a liability is less than the opportunity cost), the instrument will be considered to be financial output. Otherwise, it will be considered as an input [see Hancock, 1991]. The problem remains that an item which is considered as an output in one period can turn into an input in the next period if the sign of its user cost changes (as interest rates fluctuate, so does the user cost). Moreover, it seems difficult to measure marginal revenues and costs for each individual liability item.

Finally, the *value-added approach* considers that both liability and asset categories have some output characteristics. It differs from the user-cost approach
in that it is based on actual operating cost data rather than determining these costs explicitly. This method is widely used in studies of the banking sector.

DEA performance measurement tool is mainly used for analysis in branch banking [see Eken and Kale, 2011], not only because it sorts branches according to their efficiency but also because it provides much information about the nature of this efficiency: it benchmarks branches, provides potential improvement capabilities, indicates sources of inefficiency and takes management preferences into account when measuring performances. By employing DEA, different aspects of branch efficiency in the banking and financial sectors can be analyzed. Production approach analyses branches’ success at producing deposits and loans by using some resources like personnel or other expenditures; profitability approach measures the efficiency of using resources in order to maximize profit of a branch; operational approach measures the transaction side of a branch; and intermediation approach estimates the efficiency in converting deposits into loans. Inputs and outputs are each time specified in accordance with what the analyst wants to know about this branch.

Some additional specifications can be made about the use of DEA to specify efficiency for commercial or savings banks. Commercial banks\textsuperscript{43} perform two broadly defined goals: profit maximization (which encompasses also risk management) and service provision (which encompasses also intermediation and utility provision). Three inputs to the commercial banking process can be considered: labour, fixed assets and interest expenditures that account for all three essential inputs to commercial banks operations which are personnel and management, computer hardware and premises, and leverage funds (respectively). Holding output and two other inputs constant, the lesser amount of the third input used in the banking production would imply higher efficiency. The outputs of commercial banks can be separated in two sets, the first one corresponding to profit

\textsuperscript{43} Grigorian and Manole [2002]
generation (revenues, net loans and liquid assets), the second to service provision (deposits, net loans, liquid assets). Regarding savings banks\textsuperscript{44}, the choice of inputs and outputs for cost-efficiency studies is quite the same as for all banks. The inputs of labour, physical capital and deposits are used to produce earning assets, whereas total loans, total securities and total off-balance-sheet items are considered as outputs. The latter is not considered as an earning asset but it constitutes an increasing source of income for savings banks and it is therefore included when modelling savings banks’ cost characteristics; otherwise, total output would tend to be understated. For savings banks, inefficiency measures are estimated using the stochastic cost frontier approach; it labels a bank as inefficient if its costs are higher than those predicted for an efficient bank producing the same input-output combination.

Measuring efficiency for insurance companies is quite different because of the difficulty at measuring insurance output. Two techniques are used in the literature\textsuperscript{45} in order to measure this output (before applying DEA): the value-added approach and the flow approach.

In the value-added approach, property-liability insurers’ outputs consist of intangible financial services; it is therefore necessary to define suitable proxies that are highly correlated with the quantity of financial services delivered. Operating cost allocations identify three principal services provided by property-liability insurers: risk-pooling and risk-bearing, real insurance services and financial intermediation. The most common proxy for the quantity of risk pooling and real insurance services is losses incurred (losses paid + net change in loss reserves), that is to say losses expected to be paid as a result of providing insurance coverage during a period; the amount of losses pooled and redistributed provides a good proxy for the amount of risk-diversification taking place; the value-added from risk-pooling can be measured by the insurance premium, the amount that just makes an individual

\textsuperscript{44} Carbo, Gardener and Williams [2002]
\textsuperscript{45} Eling and Luhnen [2009]; Grace and Leverly [2010]
indifferent between purchasing insurance and retaining risk. Inputs are classified into five categories: administrative labour, agent labour, business services and materials, financial equity capital and policyholder supplied debt capital. The value-added approach captures the quantity of intermediation output using average real invested assets of a firm. In sum, the objective of insurance companies in this approach is to maximize profits by using factors of production to produce financial services valued by society (consumers and business firms).

The flow approach considers the single objective of maximizing profit inadequate; insurers are here characterized as pure intermediaries, borrowing funds from one set of decisions makers, transforming the resulting liabilities into assets and paying out interest to cover the time-value of the funds used. Collective risk theory assumes thus that at least a partial objective of an insurer is to guarantee that the probability of bankruptcy does not exceed a threshold. The flow approach outputs are rate of return on investments, which is a general indicator of the quality of a company’s investment performance; ratio of liquid assets, which measures the company’s claim paying ability; and score that represents an insurer’s probability of remaining solvent. The flow approach inputs are current year policyholders’ surplus [which characterizes the amount of funds available to meet commitments to policyholders beyond liabilities]; sum of the costs associated with performing the underwriting and investment functions; and policyholders supplied debt capital [measured as the sum of unpaid net losses, unpaid loss adjustment expenses and unearned premium reserves]. Overall, the objective of insurers in the flow approach is to use the factors of production to balance three goals [maximizing solvency, financial return and claims-paying ability] against each other in order to serve the interests of regulators and the firm’s policyholders and employees. Using this measure of insurances output, DEA method is applied to compute their efficiency.
2. French banking sector efficiency and comparisons with other European countries

All of these methods are applied to evaluate the efficiency of the French banking sector and compare it with other European countries, distinguishing among the various determinants of efficiency.

2.1 French financial sector and sub-sectors efficiency

Chauveau and Couppey (2000) based their study on the DEA method and shed light on the peculiarity of the situation of French banks during the period 1994-1998. This period was marked by very small bank profitability; the productive inefficiencies are nonetheless not substantial. In 1994, 40% of French banks were efficient, 55% in 1995 and 1997. The technical efficiency of the banking sector amounted to 89% in 1994, 94% in 1995 and 1996, and 95% in 1997. In addition, performance evaluation in terms of productive efficiency appears in phase with the difficulties encountered shortly afterwards by banks that went bankrupt [e.g. Banque Hervet and Société Marseillaise].

Dietsch (1996) based his study on X-efficiencies measurement between 1988 and 1992 and showed that the average efficiency of French banks can be estimated at 40% (for the allocative efficiency) or 90% (for the technical efficiency); the X-efficiency medium is therefore set at 70%: it means that a 30% reduction in production capacity would enable the French banking industry to restore long-term profitability. One could interpret this evaluation as advocating economies of scale in the French banking sector. The search for economies of scale paved the way for banking concentration. Last, there is a negative relationship between efficiency and risk-taking in French banks: the least efficient banks in terms of costs are those which took more risk.
Regarding more sectoral results in the French financial system (see Sifakis-Kapetanakis, 2007), cooperative banks often have superior performance and efficiency than commercial banks. Indeed, over the period 1992-2003, the cooperative status has not been a handicap for cooperative banks; on the contrary, it has induced less risky strategies that have enabled them – in a deregulated environment and the enhancement of competition – to improve their relative efficiency. Indeed, the improvement of margins and cash-flow business in the 1990s and the growth of financial markets led to profound changes in funding arrangements of French large companies: increase in funding by equity at the expense of financing through bank credit. This led to a decrease in the volume of bank loans to large companies, traditional clients or other banks. Commercial banks have thus rushed out to conquer other groups of agents – households, real estate, states and foreign firms – taking much risk. Instead, cooperative banks were much less affected by the disintermediation process, given the limited capacity of investment diversification and funding sources of their customers. They were then able to maintain profit margins and increase their market share.

2.2 Efficiency comparisons between France and other European countries

Chaffai and Dietsch (1999) computed technical and allocative efficiency for French and chosen European countries.

Regarding technical efficiency, several European scores are reported in table 1. Technical efficiency averaged 78%; the French banking sector has efficiency below the European average (70%) while some countries have a very strong banking industry such as Luxembourg, the Netherlands or Austria. Regarding allocative efficiency, all countries are in a situation of over-staffing relative to physical capital, with the exception of the Netherlands. France is in a situation of allocative efficiency for the two factors (financial capital and physical capital).

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See table in appendix 1 that gives comprehensive estimates of the French financial sector’s efficiency.
Table 1 – Technical efficiency scores for European countries (DEA scores) for the sample 1992-1996

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
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<th>Minimum value</th>
<th>Maximum value</th>
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</tr>
<tr>
<td>Belgium</td>
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<td>0.15</td>
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</tr>
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<td>0.09</td>
<td>0.57</td>
<td>1.00</td>
</tr>
<tr>
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<td>0.12</td>
<td>0.57</td>
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</tr>
<tr>
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<td>0.02</td>
<td>0.57</td>
<td>0.625</td>
</tr>
<tr>
<td>France</td>
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<td>0.12</td>
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<td>0.57</td>
<td>1.00</td>
</tr>
<tr>
<td>All sample</td>
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<td>0.13</td>
<td>0.57</td>
<td>1.00</td>
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Table 2 – Allocative efficiency ratios for European countries (DEA scores) for the sample 1992-1996

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<th>θ (physical capital, labour)</th>
<th>θ (physical capital, financial capital)</th>
<th>θ (labour, financial capital)</th>
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<td>Spain</td>
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<td>0.38</td>
<td>5.75</td>
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<td>0.13</td>
<td>1.16</td>
<td>5.48</td>
</tr>
<tr>
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<td>0.13</td>
<td>1.51</td>
<td>4.49</td>
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<td>4.56</td>
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<td>3.45</td>
<td>1.91</td>
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<tr>
<td>Portugal</td>
<td>0.15</td>
<td>1.09</td>
<td>6.09</td>
</tr>
<tr>
<td>All sample</td>
<td>0.18 [0.06]</td>
<td>1.21 [0.51]</td>
<td>5.41 [0.40]</td>
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</tbody>
</table>

Numbers in brackets are the standard errors of the estimated coefficients

Other studies\textsuperscript{47} using DEA or SFA methods found that efficiency techniques do not provide comparable averages in all countries: over the period 1992-1998, the lower range is in Italy [from 67.91\% with DEA to 84.20\% with SFA], the higher range is in France [from 40.16\% with DEA to 70.56\% with SFA]. Regarding time-variation efficiencies, there is an improvement in cost-efficiency in France and Spain, while it declines in Germany, Italy, the United Kingdom and the United States [see table 3]. The cost efficiency of French banks evolves from 86.40\% in 1994 to 91.52\% in 2006, that is to say an increase of 4.50\%.

<table>
<thead>
<tr>
<th>Year</th>
<th>France</th>
<th>Germany</th>
<th>Spain</th>
<th>Italy</th>
<th>United-Kingdom</th>
<th>United-States</th>
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<td>97.85</td>
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<tr>
<td>1996</td>
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<td>99.45</td>
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<tr>
<td>1997</td>
<td>94.77</td>
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<td>95.43</td>
<td>99.44</td>
<td>93.46</td>
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</tr>
<tr>
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<td>98.83</td>
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<td>94.32</td>
<td>95.21</td>
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<td>91.87</td>
</tr>
<tr>
<td>1999</td>
<td>97.09</td>
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<td>96.23</td>
<td>93.52</td>
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<td>96.64</td>
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<tr>
<td>2004</td>
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<td>96.81</td>
<td>93.48</td>
<td>92.41</td>
<td>96.84</td>
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<td>2005</td>
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<table>
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<td>-1.41</td>
<td>-11.54</td>
<td>-2.92</td>
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</table>


2.3. How and which determinants lead to these differences

Efficiency in the financial and banking sectors is determined by several factors peculiar to the industry or the institutions themselves. The stake is firstly to detect the broad determinants of bank efficiency and to see to what extent some factors affect more French banks than foreign and European banking sectors.

\textsuperscript{47} Weill (2004); Jimborean and Brack (2010), see table in appendix
Bejaoui-Rouissi [2011] identified various factors influencing the efficiency of the banking sector and its branches: the market share appears to have a positive effect on efficiency while the size and number of branches seem to have a negative effect. Intermediation has in turn an ambiguous effect. However, some factors may have different effect on French banks. Indeed, the fact that the French leverage effect is far larger than European leverage effects makes the determinants of French banks quite different from the determinants of foreign banks’ efficiency: the liquidity ratio is more favourable for foreign banks efficiency while the profitability ratio has a more significant effect for French banks. It is therefore necessary to examine more precisely the determinants of the efficiency of French and European banking sectors in order to understand how these determinants may differ.

First, environment, concentration and consolidation are sectoral efficiency determinants which may have different effects on French or European banking sector efficiency.

It has been shown that the introduction of environment variables, together with macroeconomic, bank structure and regulation variables in a cost frontier model reduces the cost inefficiency gap between France and Spain (see Chaffai and Dietsch, 2009), which means that environment has an effect on efficiency, even at the branch level. The environment is classified in six types: rural zones, tourist residential zones, medium-sized zones, medium-sized towns with high unemployment rate, residential suburban areas of large urban centres and city centre areas in large urban centres. The highest levels of environment inefficiency is obtained in the latter type (it varies from 5.7% to 10%), whereas branches located in the 5th type of environment have the lowest average rate of environmental inefficiency. The average inefficiency contribution of environment to total inefficiency is computed as greater than 40%. In other words, there is evidence that countries with a high retail banking industry may have a better banking sector efficiency.

Weill [1998] proved a theoretical decreasing relationship between the number of banks and their efficiency and showed this result empirically with OECD countries.
First, regarding banking concentration, countries can be classified into three groups: low concentrated banking sectors (Germany, Spain and France), moderately concentrated banking sectors (Austria, Belgium, Portugal, United Kingdom) and highly concentrated banking sectors (Norway, Netherlands, Switzerland). Regarding efficiency, a great heterogeneity appears: countries with inefficient banking sectors (Spain, UK), those with moderately efficient banking sectors (Germany, Belgium, France, Portugal) and those with very efficient banking sectors (Austria, Norway, Netherlands, Switzerland). The correlation analysis shows a significant positive relationship between concentration and average efficiency in the banking sector: increasing competition in the banking sector leads to lower concentration, which has a negative impact on banks efficiency. This result is related to the interdependence of decisions within a circular model of competition. If a bank decides to increase its efficiency to increase its profits, it will cause an increase in the efficiency of its competitors that will strain its advantage, leading ultimately to a negative effect on the profit of the bank. Facing the entrance of new banks, banks are encouraged to reduce their efficiency in order to maintain the required level of profits. This conclusion seems to be empirically verified for OECD countries: highly concentrated countries as Netherlands or Norway will have a high efficiency while countries with a lot of competition such as France or Germany, which then have a very low concentrated banking sector, will have a lower efficiency.

Last, consolidation (computed with mergers and acquisitions) can have an impact on banking sector efficiency, especially for commercial banks and insurance companies. Indeed, in response to fundamental changes in regulation and technology, financial institutions have attempted to improve their efficiency and preserve falling margins by increasing market share, which is fulfilled by way of mergers and acquisitions that allow financial institutions to rapidly increase their size. There are several ways in which mergers and acquisitions can improve efficiency: the larger firm resulting from consolidation may gain access to cost-saving technologies, thus reducing average costs; efficiency gains can derive from
the exploitation of economies of scale; or the merging parties can be allowed to enter new markets and cross-sell their products to a wider customer base. Studying the impact of M&As on financial sector efficiency, it has been shown that in Europe, domestic mergers among banks of equal size improve cost efficiency [see Amel, Barnes, Panetta and Salleo, 2003]. The average efficiency level for insurance companies is stable around 50% for France and Belgium whereas it is growing in Germany; efficiency seems to be higher in countries where the regulatory burden is lower (United Kingdom) because deregulation could help close the efficiency gap by introducing more competition. However, these results are quite antithetical for French investment banks, especially regarding the economies of scale: French large institutions (even mutual funds) tend to exhibit diseconomies of scale, whereas mergers and acquisitions usually allow economies of scale because of fixed operating costs of asset management companies. The beneficial effect of mergers and acquisitions on efficiency may be offset by other determinants (shareholding structure for instance) in the case of France.

Financial integration, shareholder structure and the ability of banks at capturing their potential are more special determinants that can have different effects on efficiency.

First, common wisdom has it that a well integrated financial system [single set of rules, equal access to financial instruments and services, equal treatment for participants when they are active in the market] should increase the efficiency of the euro area economy. It is thus assumed that different countries’ banking sectors will become equally efficient with the removal of cross-border restrictions. Casu and Girardone [2009] studied the link between the dynamic of efficiency and financial integration and found the results reported in tables 4 and 5.
Table 4 – DEA efficiency scores [% efficiency] for EU countries over the
period 1997-2003

<table>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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<td>73.10</td>
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<td>78.60</td>
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<td>77.10</td>
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<td>74.50</td>
<td>71.20</td>
<td>67.10</td>
<td>73.70</td>
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<tr>
<td>Denmark</td>
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<td>79.40</td>
<td>75.90</td>
<td>70.30</td>
<td>76.90</td>
<td>77.40</td>
<td>70.90</td>
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<tr>
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<td>68.60</td>
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<td>61.10</td>
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<td>75.53</td>
<td>76.52</td>
<td>72.03</td>
<td>76.46</td>
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</tbody>
</table>

Table 5 – Dispersion of Efficiency Scores [All EU countries] over the period 1997-2003


They showed that efficiency for the different EU countries varies between 59.6% (Sweden) and 80% (Portugal), with an average inefficiency score of about 20% (see table 4); they showed also that the dispersion of these efficiency scores has decreased over time (see table 5). If results seem to provide efficiency convergence evidence towards an EU average, the potential gains brought about by increased integration have been nonetheless offset by a decrease in the overall efficiency levels.

Agency problems can hamper efficiency and the shareholding structure of a financial institution can have an effect on its efficiency. This can be the case of listed companies. Barry (2010) showed that listed European banks have a higher profitability than non-listed banks, which have an effect on performance policies from these institutions. It appears from this study that, while the shareholder structure of banks is relatively stable in Europe, changes in it explain the differences in efficiency: an increase in shares held by families is associated with a decreased
risk of assets and default risk but an increased efficiency of the financial institution. Barry estimates that families or individuals held only 0.07% of shares in only one bank in France in 2010, while the share held by managers was 3.36% in two banks, that held by institutional investors 37.23% in seven banks, that held by financial companies 48.89% in sixteen banks and that held by other banks 88.94% in 57 banks. Moreover, a family shareholding structure is decreasing in France (in 2004, the CAC 40 had 17 family-controlled groups, which were only 12 in 2010) and this trend may hamper an improvement in efficiency of French financial groups, despite their increasing concentration (see for instance the merger of Banque Populaire and Caisse d’Epargne in 2009).

Moreover, the ability for banks at “capturing their potential” (Niederkon 2009) may determine efficiency. Indeed, banks have failed into increase their productivity because of five misconceptions: productivity can only be improved through massive Information Technology Investments; they have to choose between cost or quality; efficiency is a matter of economies of scale; outsourcing and off shoring is essential; efficiency can be improved by cross-border consolidation. The awareness of the existence of large improvement potential has increased amongst European financial institutions, but capturing it takes the industry a long time. Perhaps France may find in this ability a way of increasing its financial efficiency.

3. Conclusion

The literature on French financial sector’s efficiency shows that it has been increasing but remains relatively low regarding other European countries. The cooperative banking sector has experienced a better efficiency than commercial banks, which have taken ever more risks since the 2000s in order to increase their profitability. However, this strategy hampers efficiency.

Financial sector efficiency is a thorny issue because it may impact on financial stability. Studying efficiency of domestic banking sectors is a first step in order to
watch over this stability, but efficiency of the financial system in its entirety has to be analyzed too, which cannot be done at a country scale. The financial sector functions efficiently if it intermediates at a minimum price and reduces the comprehensive cost of capital to its optimal level. This cannot be measured directly but the analysis of a much more deregulated and liberalized banking sector can help at comprehending the stakes, risks and futures of financial stability. Inefficiencies in the financial system arise from the same reasons as they do in the banking sectors: imperfections related to inside information, scale issues, natural monopolies, specialized skills. Surveys and research on these determinants are therefore essential.
## Appendix 1 – Recapitulative table of French efficiency scores

<table>
<thead>
<tr>
<th>Authors</th>
<th>Estimation of French efficiency</th>
<th>Efficiency type</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbo, Gardener and Williams (2002)</td>
<td>87.9% 23.1%</td>
<td>Scale economy of savings banking sector Mean inefficiency of savings banking sector</td>
<td>1991-1996</td>
</tr>
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<td>Erber and Madlener (2009)</td>
<td>88%</td>
<td>Average technical efficiency estimates in financial intermediation based on fixed effects estimates</td>
<td>1995-2005</td>
</tr>
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<td>Eling and Luhnen (2009)</td>
<td></td>
<td>Technical efficiency [DEA]:</td>
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</tr>
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<td></td>
<td>77% 45%</td>
<td>- Life insurance companies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>64% 32%</td>
<td>- Non-life insurance companies</td>
<td></td>
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<tr>
<td></td>
<td>88% 74%</td>
<td>Cost efficiency [DEA]:</td>
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<td></td>
<td>80% 75%</td>
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<td></td>
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<td>- Non-life insurance companies</td>
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<td>Technical efficiency [Stochastic Frontier Analysis]:</td>
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<td></td>
<td>70.56%</td>
<td>- Commercial banks</td>
<td>1992-1998</td>
</tr>
<tr>
<td>Weill (2004)</td>
<td>70.44% 71.56%</td>
<td>- Cooperative banks</td>
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<td></td>
<td>67.01%</td>
<td>- Savings banks</td>
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<td></td>
<td>40.16%</td>
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<td>39.56%</td>
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<td>40.16%</td>
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<td></td>
<td>45.80%</td>
<td>- Savings banks</td>
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<td>Jimborean and Brack (2010)</td>
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<td>DEA analysis, average scores of cost efficiency</td>
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</tr>
<tr>
<td>Chaffai and Dietsch (1999)</td>
<td>70% 74% 50%</td>
<td>Technical efficiency score</td>
<td>1992-1996</td>
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<td></td>
<td>Allocative efficiency [Cobb-Douglas frontier]</td>
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<td></td>
<td>Global cost efficiency [Cobb-Douglas frontier]</td>
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<td>Boussemart and Saidane (2005)</td>
<td>65.39% 78% 83.72%</td>
<td>Cost efficiency scores [average over the period]</td>
<td>1988-1998</td>
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<td></td>
<td>Technical efficiency scores [average over the period]</td>
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<td></td>
<td>Allocative efficiency scores [average over the period]</td>
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<tr>
<td>Dietsch (1996)</td>
<td>83.0% 40.6% - 70.7%</td>
<td>Total efficiency [X-efficiency + scale efficiency]</td>
<td>1988-1992</td>
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### Appendix 1 – continued

<table>
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<th>Study</th>
<th>SFA cost efficiency:</th>
<th>Period</th>
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<td>Allen and Rai (1996)</td>
<td>73.4% Small banks</td>
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<td>84.3% Large banks</td>
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<td>Pastor, Perez and Quesada (1997)</td>
<td>95% Technical efficiency (DEA scores)</td>
<td>1992</td>
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<td>Dietsch and Weill (2000)</td>
<td>82.36% Cost efficiency (mean SFA score)</td>
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<td>88.38% Profit efficiency (mean SFA score)</td>
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<td>Vander Vennet (2002)</td>
<td>68.2% Cost efficiency (cost frontier; SFA)</td>
<td>1995-1996</td>
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<td>70.8% Traditional banking activity</td>
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<td>Specialized banks</td>
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<td></td>
<td>81.5% Traditional and non-traditional banking activity</td>
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<td>Specialized banks</td>
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<td></td>
<td>68.7% Profit efficiency (profit frontier, SFA)</td>
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<td>67.1% Financial conglomerates</td>
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<td>Specialized banks</td>
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<td>93% Total efficiency (DEA scores)</td>
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<td>Dietsch and Weill (1999)</td>
<td>78% - 91% Mean technical efficiency (DEA) over the period</td>
<td>1994</td>
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11. **THE SOURCES OF FUNDS FOR BUSINESS INVESTMENT**

Jérôme Creel (OFCE & ESCPEurope)  
Mathilde Viennot (ENS Cachan & OFCE)

1. **Introduction**

The recent financial crisis has rekindled the debate upon the sources of funds for business investment. The lack of confidence in the financial markets and the relative reluctance of banks to invest in projects and fund the economy led companies and firms to rethink the funding of their investments and their capital structure.

In order to carry out their economic activities, companies have to obtain funds based on the mobilization of capital or the use of debt. These two options are complementary or substitutable and each of them can be broken down into several modalities. First, the equity financing distinguishes capital provided by the owners at the time of the company constitution or of a capital increase [which corresponds therefore to equity funds] from retained earnings that can lead to self-financing [or internal financing]. However, companies do not finance their activities solely on equity, they can appeal to creditors and debt in two ways: borrowing from credit establishments, which is an operation of indirect funding, or borrowing on the capital market (stocks or bonds), which is an operation of direct funding.

The choice between these three sources of funding is decided by the company in light of the business investment to be made [its nature, its amount], of the availability of sources which depends on the situation, and last of the opportunities that this funding source can bring to the company, which corresponds to the search for an optimal capital structure [see box 1].

Moreover, the choice of funding raises corporate governance issues. Indeed, every funding of a business investment gives some additional power to the investor: shareholders if private equity has been chosen, creditors if the company has
preferred bank loans. Thus, the choice of funding sources reveals agency problems between managers / shareholders and between shareholders / creditors. When a bank or an investor lends some money to a company, the shareholders continue to control the company, including its investing and financing decisions. However, investors and lenders do not always agree on the best way to guide business decisions, mainly because they have different duties: shareholders who receive a residual claim on cash flows tend to favour decisions that increase the value of their business investment, even if it means that it will increase the risk that creditors do not receive the promised payments; on the other hand, creditors wish to preserve and increase the security of their rights. By borrowing in order to fund its business investments, the company is exposed to this type of conflict.

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**Box 1 – Several theories about the optimal capital structure**

According to Modigliani-Miller’s [1958] theory which argues that the source of funds are neutral for the value of the firm, the business investment decisions can be made independently of the financing decisions. Nonetheless, other articles have questioned this theory and have given some explanations to the various sources of funds for the corporate and non-corporate sector. Let us only mention two of them.

- **The pecking-order theory** [Myers, 1984]:

  First, firms prefer internal financing to external financing. Nonetheless, if there is a need for external funds, firms prefer the safest way first, so debt rather than private equity (debt investors are less exposed to a mispricing of the firm, since the announcement of a debt lifting will have less impact on the share price than the announcement of equity issuance); if there is a surplus of capital, the latter is used primarily for debt rather than private equity. The firm will follow the scale of the less risky to the riskier debt, then perhaps convertible securities and finally, ultimately, private equity. Thus, each debt ratio reflects accurately the firm’s need for external financing.

- **The trade-off theory** [Myers, 2001]:

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206
Remembering that bank borrowing interest are tax deductible while cash flows from equity and new equity issuance are not, there is a trade-off between debt and equity which is based on the tax rate and the cost of excessive debt. This theory justifies moderate debt ratios: the firm will borrow until the marginal value of tax deductions on additional debt is offset by the increase in the current value of potential costs in case of financial distress. Thus, companies with a low marginal tax rate would be more likely to perform private equity (because it prefers paying low taxes than increasing its default probability) than firms with large profits which face the official tax rate (they must pay too many taxes if they issue some equity, so they prefer debt even if it increases its default probability); taxable firms would therefore be in favour of debt.

All these issues about the choice of funding, the way companies fund their business investments, and its consequences on the corporate governance will be studied here in the case of France. First, this chapter provides the evolution of the sources of funds for business investment in France since the 1970s, an attempt at evaluating the efficiency of their allocation, and the impact on French corporate governance this allocation can bring. Then, we will focus on the specific case of SMEs and the way they fund their economic activities, especially since the recent financial crisis.

2. The sources of funds for business investments in France since the 1970s

From the 1970s to the present, the French financial system has undergone profound upheavals that have radically changed how French companies finance their activities and investments. The transition from a bank-based to a market-based economy that has taken place since those years has left many traces in terms of investment choices, investment volumes and corporate governance.

2.1 The French transition from a bank-based to a market-based economy

From 1970 to nowadays, the transformation of French capitalism and though the shift from a government-based financial system to a market-based one has been
evidenced by a series of new regulations on the one hand and by a change in sources of business financing on the other hand.

In the 1970s, the French state was extensively involved in the financing of the economic activity and it controlled the allocation of credit by financial institutions, especially through the *encadrement* system which limited the lending autonomy of the banks (in the early 1970s, unrestricted credits amounted to less than 20% of total credit allocation, see O’Sullivan, 2007). At that time, French companies were thus major users of external funds, especially of debt finance which was supplied by the banking system or directly by the government.

For most of the 1980s and 1990s, the French governments drove the expansion of the financial markets and the privatization programmes induced French enterprises to rely more on the financial markets for funding rather than State and bank funds. As one can see in O’Sullivan’s figure [see her Figure 1, reprinted as figure 11 in chapter 2], by the late 20th century, the importance of the banking sector, relatively to other sources of funds, declined while markets have soaked up most of the expansion in corporation’s use of external funds. Nonetheless, the importance of the banking system remains high relative to other European countries for funding the French economic activity.
Cobham and Serre [2000] studied the evolution of the French financial system as regards to the sources of finance of the corporate sector since 1970 and we have extended their data to the 2000s. We show that internal finance is a large net source of funds for the French companies [see Table 1 and Figure 1] and has increased in the late 1990s, at the expense of bank finance. Though internal finance has reduced a bit since the early 2000s, and ever more so during the financial crisis, bank loans have not retrieved their share of financing of the 1970s. However, between 2005 and 2010, bank loans were the second most important net source of finance of the French corporate sector, in front of bonds which share was halved between 2000-2005 and 2005-2010.

The equity market has grown significantly in France over the last ten years; in 2011 the invested amounts totalled 9.7 billion euros in 1694 firms [see the report of the Court of Auditors]. This market is very dynamic and involves 0.06% of French firms (which is its vocation because it aims precisely at supporting those with high growth potential).
Figure 1 – Sources of finance for the French corporate sector

Net sources of funds for the corporate sector, in % of physical capital

Source: D. Cobham and J-M. Serre [2000], INSEE database and authors’ computations

If we observe a more recent evolution of the internal funding rate [see Figure 2], we can see that this source of funding remains quite high and relatively stable over time, except for large firms. For these latter firms, because of the volatility of retained profits especially in the 2000s, the internal source of funds underwent many variations, especially during the recent financial crisis.

As regards to the trade-off between debt and equity, French companies have shown a continuous reduction of their debt burden since the 1990s in favour of new equity issuance. The importance of external finance [debt or equity] rose in the late 1980s and market sources took a somewhat expanded role relative to bank borrowing; this increase accelerated from the late 1990s and was characterized by a clear dominance of market sources [new issuance of stock, bonds, commercial papers, etc.], although bank credits remained a relative large source of funds [compared to other European countries], especially during the recent financial crisis.
during which bank lending rebounded substantially for corporate finance at the expense of direct financing from financial markets.

The rapid rise of institutional investment funds in the capital of major French companies also dates from this period; investment funds (especially Anglo-Saxon pension funds) looking for diversifying their portfolio have been interested in French companies. The overall strategy of extensive growth they were developing also made institutional investment funds likely buyers. The most important external financing sources for French incorporated companies became thus to be found in equity and in the accumulation of trade credit from suppliers and reserves (see Friedrichs et al., 1999); it may therefore be concluded that the French model of corporate finance went from a heavily bank-intermediated system to a more Anglo-Saxon capital market-based model with financing from capital markets.

Figure 2 – Internal source of finance for French companies

Source: Banque de France

Several factors may explain this transition and mainly focus on the dramatic liberalization and deregulation of the financial system that occurred in France form
the early 1980s. The growing pressures for financial returns from institutional investors and from financial markets penalize companies that do not conform in the short run to their business investment but also reward those that comply by supplying them with capital at a relatively low cost, which induced French companies to fund themselves on financial markets. Another explanation of such a shift in finance sources is linked to capital taxation; in France, the tax burden on corporations was significantly reduced (50% in 1987, 33% in 1993, see Friedrichs et al., 1999), which has encouraged many companies to turn to new issuance of equity and shift debt. [see Box 1 and the trade-off theory].

Figure 3 shows the evolution of the three main sources of funds over the last 15 years, year after year rather than with 5-year average. It is very striking that banking and market sources show completely reversed pictures, as earlier comments already acknowledged. However, recent trends here are more precise. The disintermediation era started in 2000 and reached a peak in 2003. Between 2004 and 2008, re-intermediation was strong, before it collapsed at the beginning of the financial crisis. It remains to be recalled that since 2008 the swing between banking and market shares in sources of finance for the corporate sector in France occurred with a lower amount of funds available, whatever their source. Disintermediation of the years 2008-2010 is an artefact as business investments decrease.
While the rate of internal finance had increased in the 1990s, it has deteriorated over the recent years (103% in 1998 for large French companies, 84% in 2005, 72% in 2008, see Figure 3). In 2011, it stood at 67.2% which is its lowest level in 20 years, reflecting the lack of savings and retention of profits sufficient to cover business investment. This deterioration can also be explained by the heavy burden of taxation in France (1.45 % on fixed capital, to be compared with 0.04% in Spain or in the United Kingdom, 0.08% in Germany), which restricts the flow of business and encourages, therefore, to refer to external financing in order to fund business investments. Indeed, when seeking for external funding, companies will prefer debt for taxation reasons because, in France, the deductibility of mortgage interest is wide (no cap), which creates a bias in favour of debt at the expense of equity because dividends are not deductible. It may explain the relative resilience of bank loans (as a proportion of physical capital) in Figure 1 since the mid-1990s. According to Figure 3, it seems that this resilience was even an increase shortly before the financial crisis.
Drawing on tax issues, the increase in market sources of funds that is visible in 2009 and 2010 on figure 3 may be short-lived.

External financing still comes mainly from banks rather than bond market [see Figure 4]. Despite a [non-linear] downward trend since the mid-1990s, the share of bank borrowing in total financial debt by the French corporate sector was still substantially higher than the share of bonds in 2010. It remains to be acknowledged that the share of non-bank borrowing [other debts] in total financial debt of the French corporate sector has remained fairly stable since the mid-1990s. These “other debts” include borrowing from one non-financial firm to another one: they hence produce cross-participation. “Other debts” represented 44.2% [resp. 52.3%] of total financial debt for all corporate firms [resp. big firms] in 1996, and 43.6% [resp. 48.2%] in 2010.

By the end of 2011, the debt of non-financial companies accounted for 65.9% of French GDP [which is below the euro-zone average at 70%]. Bank borrowings have been falling on since the 1990s [from 40% of total debt in 1996 to 28% in 2003], then they increased to 34% in 2008 during the financial crisis before falling back to 29% in 2010. This fall can be explained by a conjectural fact: from August 2011 on, French banks have struggled to refinance themselves in US dollars, mainly because of a withdrawal of US money market funds in the European market; despite central bank interventions to facilitate access to liquidity in dollars, liquidity has been scarcer and more expensive than before the crisis; banks have therefore attempted to reduce their supply of foreign currency financing, which leads to a higher cost of refinancing [related to the use of euro-dollar swaps]; this movement of inflation and withdrawal has penalized the financing of projects and the export, which has resulted in a fall in dollar loans granted to French companies.
Figure 4 – Debt structure of the French corporate sector

Debt structure of French companies

Source: Banque de France

Moreover, the financial crisis could have lasting effects on the financing of projects, mainly because of required increased margins (to compensate for earlier losses), a reduced leverage effect, the disappearance of long-term financing and risk transfer to the government. The funding horizon has been shortened (less than 10 years) and their unit amounts have been reduced (less than 50 million euros). Furthermore, in a crisis situation, project profitability declines and private partners are therefore more reluctant to assume the risk of their funding. This decline in the profitability of projects is accompanied by an increase in needs of capital (to cover risks not shared between partners), which increases projects’ leverage.

2.2 The efficiency in allocating sources of funds

After describing the sources of funds in France, we measure whether bank sources of funds are efficiently allocated to French companies by observing the

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48 We do not report the share of “other debts” in total financial debt.
49 The amount of equity relative to the amount of loans.
temptation of French companies to finance abroad, especially via offshore funds (see Figure 5). An offshore bank, as a traditional bank, can open lines of credit in order to finance the purchase of stocks or to finance a company’s business.

Figure 5 – Offshore financing of French companies

Offshore financing, in millions USD

Source: World Bank

We can see that the financing through an offshore jurisdiction increased sharply in the 2000s, which can be linked to the fall of bank sources of funds over these years. This increase has been stopped since the international regulation and a fortiori France cracked down on such type of financing (see London G20 summit in 2010). Nonetheless, if we observe the evolution of offshore financing relative to non-offshore financing (see Figure 6), it appears that the former has been almost continuously increasing since the 1990s. In 2009, offshore bank deposits represented record-high 12% of domestic bank deposits in France.
Figure 6 – Offshore financing in France relative to other bank sources of funds

Offshore bank deposits relative to domestic bank deposits in France

Source: World Bank

As for the risk premium on lending, it can show the possible reluctance of the banking sector to fund business investments that are considered as too risky. The risk premium is computed as the interest rate charged by banks on loans to companies over one year minus the risk-free 10-year Treasury bill interest rate at which short-term government securities are issued and traded in the market. The risk premium on lending to French companies increased substantially between the late 1980s and mid-1990s, and then it shrunk between 1994 and 2000. Afterwards, it has more or less stabilized around 0.5%, before declining somewhat in 2010 and 2011 (see Figure 7). This means that French banks have had higher confidence in the business investments proposed by French companies between the former recession [1993] and the next large real shock of 2001, a period of booming world economy. Shortly after the downturn of 2001, the risk premium characterized a situation of relatively lower confidence in business investment that was partially limited in the early 2010 by the re-intermediation of large corporate companies. Let us note that
the size of a company is certainly a key element of the assessment of credit risks by banks; in principle, it follows that the aid granted to SMEs (Small and Medium Enterprises) will normally be more expensive than credits given to large companies. Lower risk premia may have signalled credit crunch towards SME.

![Figure 7 - Risk premium on lending](Image)

Sources: Eurostat, ECB and OECD.

From French companies’ point of view, rather than banks’, the lack of efficiency in the allocation of bank sources of funds can be analyzed through the cost of their debt (see Figure 8), which is computed as the ratio of the interests paid on a company’s debt to the company’s gross financial debt. From figure 8, it appears that SME and intermediary firms have witnessed sharp decreases in the cost of their debt at the very moment when risk premia fell (figure 7). The crisis period (2008-2011) also evidences lower costs of debt without substantially lower risk premia. This period corresponds to the phase of sharp decline in the European Central Bank’s rate (-3.25 percentage points between October 2008 and May 2009) and to the
establishment of the ECB policy at providing unlimited liquidity at a very low fixed rate. The cost of debt has thus fallen sharply over this period for all types of firms and stands now around 4%. The increase in bank sources of funds since this financial crisis can thus be linked to this recent evolution of ECB policy.

Figure 8 – Cost of private debt for French companies

![Cost of debt (interest paid on gross financial debt), in %](image)

Source: Banque de France

2.3 The consequences of the sources of funds for French corporate governance

As mentioned in the introduction, the choice of funding raises corporate governance issues, which may have consequences on investment choice. If one looks at the evolution of income distribution within the French corporate sector (see Figure 9), one can see that shareholders have had a growing income share since the 1990s (6.1% of total income in 1996, 10% in 2002, 14.1% in 2010), which creates a growing weight of shareholders in the management and funding choices of French firms. French State still has an important control over the corporate sector, though
its influence has been continuously decreasing over the period [13.4% of total income in 1996, 9.9% in 2010].

Figure 9 – Income distribution in the French corporate sector

Income distribution, except to staff, in % of total income

Source: Banque de France

From this perspective, the control of state bureaucrats has been partially diluted and shareholders, especially foreign institutional investors, now may influence more strongly the actions and choices of French corporations. Among the funds that make some investments in large French listed companies, three categories of actors can be identified (see M. Djelic and P. Zarłowski, 2005): the pension funds, that manage retirement savings, asset management companies, acting on their behalf or on behalf of pension funds and hedge funds whose investment horizon is much shorter than the first two. Except hedge funds that do not constitute a class of recurrent or stable shareholders, pension funds and asset management companies are managers of financial assets; they are therefore in the
position of a minority shareholder (with respect to the company), which seeks to optimize the performance of its portfolio in terms of profitability and risk.

Their investment logic is expressed fundamentally in financial terms and the requirements they formulate in terms of changes in corporate governance practices are consistent with the preservation of their interests as minority shareholders. Compared to an individual shareholder, institutional investment funds are strong minority shareholders that may favour the emergence of a new mode of governance that borrows some of its characteristics from the shareholder model (e.g. purely external regulation by the financial markets through the threat of hostile takeover bids in the case of a fragmented shareholding).

Nonetheless, this new power given to minority shareholders in French companies has to be minimized, because the French financial system is still distinguished by the fact that French firms and their managers have more autonomy in their investment and business choices and more control over the allocation of financial resources than their counterparts in the Anglo-Saxon countries (see O’Sullivan, 2007).

3. The specific case of French SMEs

Difficulties encountered in acceding to funds remain one of the main obstacles to the creation, survival and growth of SMEs, especially innovative ones. This issue is particularly thorny and important in France, where SMEs represent two thirds of jobs and 10 million people in the French entrepreneurial landscape. The crisis has exacerbated these difficulties, while small businesses and entrepreneurs suffer from a double whammy: a drastic fall in demand in terms of goods and services and a tightening of credit conditions, which has severely affected their cash flow.

SMEs represent an important segment of the French economy; if a large number of them are able to make productive use of available funds, their access to finance is often denied to them, which constitutes an obstacle to the creation,
survival and business growth. Although French SMEs are heterogeneous in terms of size, sector of activity, length of existence, location and performance, they all have an urgent need for innovative financing solutions.

SMEs, because of the lack of external sources of funds, fund their businesses essentially with internal funds (see Figure 10). Nevertheless, their internal funding rate stands below the average internal funding rate of the whole French corporate sector over the same period. This can be explained by the fact that SMEs have narrower margins than large companies, which reduces the access to available capital to finance new investments (see OECD report, 2009). Furthermore, these margins have deteriorated as a result of the crisis, which may explain the sharp decline in the internal funds rate in 2009.

Figure 10 – Internal funds in French SMEs

*Internal funding rate for SMEs, in % of total sources*

![Graph showing internal funding rate for SMEs and all firms over time](image)

Source: Banque de France

The case of French SME is particularly specific as regards external financing. By definition (see the report of the Court of Auditors, 2012), independent SMEs do not
receive funding from a group, whether in the form of debt or equity. Their size limits the availability to find an alternative to directly fund themselves on financial markets because of the costs they imply (accounting and legal obligations, quotation expenses) and the need expressed by the markets of predictability and minimum liquidity. Also, once exhausted the internal funding capacity of the entrepreneur, independent SMEs are generally dependent on banks for external finance via debt (see Figure 11). In contrast with Figure 4 which reported the debt structure of the entire corporate sector, the situation of SMEs is non-equivocal: the variability of the bank share in their financing has been rather small. It remains that the recent tightening of prudential requirements\(^5\) could encourage French banks to limit their risk exposure by reducing the volume of loans they distribute to French companies, in order to increase their solvency ratio. Generally considered as risky borrowers, independent SMEs may thus be primarily concerned.

\(^5\) See Basel III requirements in point 6 of Work Package 2
Non-banking external sources of funds remain extremely limited for French SMEs. Reorganized in 2005, the French stock market now includes an organized market for SMEs, called Alternext. However, despite the increase in the number of companies listed on the Alternext market, this market remains marginal; capitalization does not exceed 5.8% (€ 83 billion) of the total French quotations. SMEs’ access to market financing is smaller in France than in other European countries: the LSE-AIM in London and the Deutsche Börse Entry Standard represent respectively 82% and 11.5% of the market capitalization of European quoted SMEs, against 3.8% for Alternext [see report of the Court of Auditors, 2012]. In addition, bond financing are scarcely raised by French SMEs [see Figure 11], their bond issues representing only 3% (€ 16 million) of capital raised on Alternext.

51 We do not report the share of “other debts” in total financial debt. They represent about one third of SME total financial debt.
To overcome this lack of funding and trust in French SMEs, public funding is positioned as a useful support. Covering debt and equity operations, the French financial public services offers a virtually complete fan of instruments to support the financing offer. For instance, the “FSI France Investment” is involved in one out of two operations in equity and one out of three operations in capital investment. OSEO, for its part, is involved in about one out of ten proceedings (see Box 2 about local authorities).

In the recent context, which is one of the worst economic and financial crisis in decades, it is recognized that various factors have or should have very significant impacts on SMEs’ access to finance in the short and long run, leading to larger risk aversion, lower liquidity and sluggish economic growth prospects. SMEs are particularly vulnerable because:

- they cannot reduce their size, they are already small;
- individually, they are less diversified in terms of their economic activities;
- in terms of credit risk, their score is lower than larger companies;
- they are heavily dependent on credit;
- they have fewer options for sources of funds, particularly because of their limited access to financial markets.

Box 2 – The specific case of local authorities

The funding for local authorities is based at 97% on banks (see report of the Court of Auditors, 2012); thus, the recent financial crisis has particularly affected and threatened this funding, both for economic and structural reasons.

First, local authorities have been facing an economic offer tightening, embodied by Dexia restructuring that led to a contraction of credit supply of the order of 6 to 7 billion euros, or about one third of the annual municipal credits. Furthermore, almost two-thirds of French banks have tightened their criteria for lending to local governments. The supply of toxic credits to local authorities also put
a Damocles’ sword over their balance sheets, reducing further their future access to funds.

Then, some structural factors tighten the credit to local communities. The new market environment as well as liquidity ratios under Basel III52 make difficult to backing long-run loans to communities with short-run resources which can be raised cheaply in the interbank market; the tension on the interbank market has been forcing the banks’ access to refinancing while it has increased the cost and shortened the maturities. In addition, liquidity ratios under Basel III discourage the transformation of short sources in long uses and impact, because of this, particularly the communities that need medium and long-term loans without providing to banks stable deposits or consuming ancillary services. More generally, loans to communities being poorly paid, banks may choose to focus on other borrowers or to increase the cost of lending to local governments. Finally, the reduced competition following the restructuring of Dexia could have an impact on the condition for granting credit, including tariff terms. Indeed, the market of loans to communities had been marked by a high level of competition since a decade53, which helped to keep down the cost of financing local governments [see report of the Court of Auditors, 2012]. All in all, the loans granted by credit institutions to communities should become scarcer, shorter and more expensive.

The impact of the crisis on French SMEs has been especially felt in banking sources of finance. The overall demand for credit from French SMEs fell sharply in the fourth quarter of 2008 [see Figure 12]; 90% of French SMEs had a state of falling demand during the crisis period, against 66% for large companies [see OECD report, 2009]. Credit conditions have tightened at the same time; banks have significantly increased their margins on riskier loans (and to a lesser extent on less risky loans), have reduced the amount of lending, but they have not reduced neither maturity nor the required level of security. In spite of higher growth rates until mid-2011, the

52 see point 6. in WP2
53 see point 4. of WP2
tightening of credit conditions has been strongly felt by SMEs over the last year for which data have been available.

Figure 12 – The evolution of loans provided to French SMEs

Growth rate of credits to SMEs in France, in %

Source: INSEE database

The evolution of loans provided to SMEs stands in contrast with loans provided to large firms (Figure 13). Loans provided to the latter firms decreased over a longer time period than loans to SMEs, as negative growth rates acknowledge, but these growth rates have been on a positive trend since October 2009 onwards.
Figure 13 – The evolution of loans provided to large firms

Growth rate of credits to large firms, in %

Source: INSEE database
Despite different evolutions in terms of growth rates of credit, the share of loans attributed to SMEs or the large firms has been remarkably stable since 2006 (figure 14). There has not been a trade-off between SMEs and large firms in France during the crisis.

Faced with this lack of funding sources for SMEs, the Court of Auditors, in its 2012 report on the financing of the French economy, recommends targeting market failures for SMEs financing:

- to support the capitalization of companies in the development stage;
- to prevent from a possible credit rationing;
- to develop non-bank external financing.

First, the equity financing of SMEs in seed or in early development is an important issue, because below a certain size, the intervention of capital-investment professionals is difficult, mainly because of the high cost of reviewing and editing small files and because of a higher risk. These difficulties have led the government
to provide the establishment of a public bank of investment that could focus on the financing of SMEs and local authorities. To be useful, the resources of the bank will be allocated at proved market failures. In addition, the State must prepare for the future by strengthening the orientation of the Oséo interventions to compensate for market failures, including innovation and development. Indeed, the company needs to be accompanied without break in its development process, so one must avoid the partitioning between different investment funds that establishes threshold effects, which can introduce uncertainty about the growth of the SME when it crosses successive thresholds.

Then, it is up to the French government to continue to closely monitor developments in the supply of credit granted to very small businesses and SMEs. If strong tensions were emerging on funding of SMEs, the State would have a lever to offset a sharp slowdown in bank credit supply: the use of the resources of the Savings Fund, through Oséo, and, more marginally, La Banque Postale, which is now approved to disburse loans to corporations.

Finally, the new prudential ratios applicable to liquidity will likely result in a limitation of the transformation made by financial institutions. SMEs will be conducted to seek to diversify their sources of funding, which could go through market financing, although this may only involve a small part of funding requirements.

4. Conclusion

From the 1970s to nowadays, the French financial system has undergone a transition from a bank-based to a market-based economy, which has had its consequences on the sources of funds for French companies. Maintaining a relative high level of banking sources, French companies have been relying more on market sources, issuing equity in order to funds their business investments. Nonetheless,

54 Oséo is the French public company in charge of the funding of SMEs’ growth.
this shift has left and may leave many traces in terms of funding conditions for companies, especially SMEs.

The French banking system will not, in the coming years, contribute to the financing of the economy in the same conditions as before the financial crisis. This crisis has led to a tightening of bank funding that the new prudential rules on liquidity should increase. In the short-run, exceptional interventions of the ECB may contribute to support liquidity in the financial sector, but they may be temporary. Nonetheless, the financial sector’s need for liquidity is more durable. In parallel, the increasing use of foreign capital to finance the French public debt weakens the overall financing of the economy, even if it avoids foreclosure effects. Indeed, the deteriorated competitiveness of French companies weighs on their margins; their low internal financing compels them structurally in the search for external financing, mostly from banks. French companies’ investment is thus influenced by the conditions of the financial markets, which makes the French real dependent on the financial sphere.

Finally, we can observe the extent to which theories of financing choices coincide with the funding sources of French companies. First, the pecking-order theory (Myers, 1984) appears to be satisfied in the French case: companies, including SMEs, have a high rate of internal finance and a preference for bank borrowing as a source of external financing. This finding may nonetheless be tempered by the recent and continuous rise in equity in the financing choices of French firms. Then, we can see that the increasing preference for private equity can be linked to a decrease in the tax burden for French companies, which may confirm the reality of the trade-off theory (Myers, 2001) in the French case. However, the recent financial crisis tempers the substantiation of both theories.
12. CULTURE AND NORMS OF THE FINANCIAL SYSTEM

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Mathilde Viennot (ENS Cachan & OFCE)

1. Introduction

The financialization process that the French economy has been through since the 1980s has not only had consequences on the French private sector but also on French households and on how they perceive finance on a daily and practical basis. New means of payment, new accesses to financial markets and new kinds of loans may have affected the way they fund their everyday life, notably their consumption, education, health, etc. Moreover, the shift in financial practices may have widened the gap between those who have access to new sources of financial income (to be opposed with labour income only) and those who do not.

Thus, the impact of financialization on French households’ everyday life leads to three issues: financial knowledge and use, financial inclusion and consumers’ protection. Indeed, financial knowledge allows consumers to better analyze their needs of financial products (credits, savings, means of payment, etc.) and make appropriate choices. Then, the access to financial and banking services should be granted to the largest part of population, especially to those who are financially weak. Finally, consumers’ protection gathers both a certain culture of solidarity towards those who are in financial distress because of these new services and a legislation to protect them against abuses. We will tackle these three issues separately.

2. Financial culture and finance in everyday life

2.1. French households’ financial culture and apprehension

The AMF (French Authority of Financial Markets) published in 2011 a report on French financial culture and perception. It gave an interesting global view on French households’ budget management, types of detained assets, and perception of risk linked to types of assets.
First, it highlighted the fact that French people were on the whole averse to credit and debt, especially housing or consumer loans. For instance, only 16% of French people were overdraft during the previous three years and 52% of the population found better to reimburse consumer credits before investing in financial placements. The driving reason for their financial investments was precautionary savings (inheritance transmission or planning, and/or retirement planning).

Second, as regards the general attitude towards the French financial system, 59% of the population answered they were wary of banks, with 22% that did "not trust it at all". Therefore, the French financial community suffers, as a whole, from a very negative image which has been reinforced since the 2008-2009 crisis. However, French people seem to trust their banker, as if they were closer to bank employees than to the institution itself.

Last, on broader financial knowledge, while French people feel that they control less and less all the issues related to financial investments, they seem to read more the financial press, assess more the risk and profitability of their investments and choose more their investments than in earlier 2000s. The recent financial crisis seems to have thrown a general disorder and, in response, households have made the effort to try to understand the financial issues that affect them most directly.

2.2 French preferences among different means of payment

For households, several means of payment are available. Modes of payment are constantly improving, reflecting the rampant internationalization of the French financial system. Nowadays, payments by the Internet and mobile phones are emerging; this revolution follows the previous one which was marked by the rise of credit cards, French preferred means of payment. Since then, cash and checks have lost their dominant role, though consumers still use them quite often.

The share of transactions made in cash is relatively low in France, although it is difficult to quantify with precision due to the high number of transactions and the
lack of reliable accounting. Drawing on the literature, we can estimate at 55% the number of transactions paid in cash in France, against 89% in Italy, 75% in Germany and 60% in the United Kingdom. The use of cash in France is higher when the purchased amount is low; whereas French consumers prefer other means of payment when the amount to be paid increases.

Compared to other European countries, the distribution of means of payment calculated in proportion to the volume of transactions shows the greater role of checks and credit cards in France. Both account for 61% of the total number of transactions (see Table 1). In 2010, checks still represented 18.3% of non-cash payments, with 3 122 million checks issued for a total amount of 1,828 billion €. These figures put France far ahead other European countries (the United Kingdom comes second with only 8% of transactions paid by checks). For twenty years, a downward trend in the number of checks has been observed (see Figure 1). Between 2006 and 2010, checks passed from 23.6% to 18.2% of the total number of transactions.

Table 1 - Shares of the various means of payment in France between 1991 and 2010

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<tr>
<td>Checks</td>
<td>56.6</td>
<td>45.3</td>
<td>25.6</td>
<td>23.6</td>
<td>22</td>
<td>20.2</td>
<td>18.2</td>
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<tr>
<td>Transfers</td>
<td>16.4</td>
<td>18.2</td>
<td>17.5</td>
<td>17</td>
<td>17</td>
<td>17.1</td>
<td>17.3</td>
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<tr>
<td>Deductions</td>
<td>9.2</td>
<td>13.3</td>
<td>17.3</td>
<td>17.8</td>
<td>18.1</td>
<td>19</td>
<td>19.8</td>
</tr>
<tr>
<td>TIP</td>
<td>0.2</td>
<td>1.6</td>
<td>1.1</td>
<td>0.9</td>
<td>0.8</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>LCR/BOR¹</td>
<td>1.9</td>
<td>1.3</td>
<td>0.8</td>
<td>0.7</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Credit cards</td>
<td>15.7</td>
<td>20.3</td>
<td>37.6</td>
<td>39.7</td>
<td>41.2</td>
<td>42.2</td>
<td>43.1</td>
</tr>
<tr>
<td>Electronic money</td>
<td>0</td>
<td>0</td>
<td>0.1</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
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¹ "Lettre de Change Relevée" and "Billet à Ordre Relevé"

Transfers represent nowadays 17.5% of transactions (against 16.4% in 1991). In terms of the value of the transactions, they represent 85% of payment amounts (the average unit amount reaches 7 158€). Transfers are widely used in business transactions and they are the major vector of payment of wages, in both private and public sector.

Finally, mass distribution of credit cards is an essential feature of the French payment system. Credits cards represented in 2010 43% of cashless transactions.
payments, with 7.4 billion annual transactions (which is somewhat higher than the European average). A very large number of cards (credit and debit cards) circulate in France; this number was estimated at 104 millions in 2010 (see Pauget and Constans, 2012). The growth of this payment method has been continuous since the early 1990s, though the trend has flattened in the 2000s (see Figure 1). Since 2006, payments by credit cards have exceeded those made by checks and the gap between them has widened.

Since the 2000s, consumers and businesses alike have been shifting the majority of non-cash payments to electronic options like transfers, automatic debits, credit cards and electronic money that represent 80% of the total number of transactions in France. The advent of cost-effective contactless/RFID payments,
development of micro-payment solutions, increased usage of electronic bill payment and the emerging market for device software are catalysts to enable payment alternatives in future years.

2.3 The financialization of public services in France

The financialization of public services, such as health or education, is quite limited in France, even if only very few data are available that can prove it quantitatively. If we take a look at the evolution of the financing structure of French households’ health expenditures (see Figure 2), the financialization, through a greater importance of mutual insurance funds in financing health expenditure, remains relatively marginal and stable (12.2% of total health expenditure in 1995, 13.5% in 2010).

Figure 2

Financing structure of the current health expenditure in France, in % of total expenditure

Source: DREES
3. Demand for credits and indebtedness in France

3.1 The evolution of credit demand

According to Eurostat’s and Banque de France’s most recent data, the gross debt ratio of French households is much lower than their neighbours’, even though indebtedness has increased since the 1990s in percentage of GDP (see Figure 3). The French gross debt ratio of households\(^{55}\) in percentage of gross disposable income reached 77% in 2009 against 275% in Denmark, 261% in the Netherlands, 149% in the United Kingdom and 89% in Germany.

![Figure 3: Indebtedness of households in France, as a percentage of GDP and in current prices](image)

Source: Banque de France

Credits are nonetheless unequally distributed in France (see Figure 4). The supply is larger in urban regions (Île de France, Rhône-Alpes, Provence-Alpes-Côtes)

\(^{55}\) The gross debt ratio of households is defined as households loans [liabilities] divided by the gross disposable income of households. It is adjusted for the change in net equity of households in pension funds.
d’Azur) where demand for housing credits is certainly high (see Figure 4). More rural areas (Basse-Normandie, Pays de la Loire) evidence lower shares of credit supply.

A look at the various types of credits delivered to the French private sector reveals that the main type is housing loans, whereas consumer credit (cash loans) is not much developed among French households (see Figure 5).
The regional distribution of credits in 2012

Source: Banque de France
Indeed, if one looks at the growth rate of outstanding credits to consumption since the 2000s in France (see BIPE report, 2006), it was generally between 4% and 5%, while a majority of European countries highlighted much higher growth rates. France is therefore at a modest rank in the development of consumer credits, in particular because of the above-mentioned debt-averse culture.

3.2. Over-indebtedness of French households

Over-indebtedness of individuals is a social phenomenon which has grown steadily for many years in France. 145 000 cases were reported in 2002, 165 000 in 2003, and more than 210 000 cases in 2011, which were all filled by the Commission of over-indebtedness (see Figure 6). In 2011, the total number of over-indebtedness cases, under the assumption that no individual had more than one case each, represented 0.4% of the French population above 20.
Figure 6
Evolution of over-indebtedness in France from 1990 to 2010 assessed through the number of files accepted by the Debt Commission.

Source: Banque de France

Over-indebtedness corresponds to the impossibility for a debtor to meet all its debt obligations (whether they are due or accruing); the main cause is the occurrence of an “accident of life” (unemployment, divorce, illness), that is to say an exogenous shock that affects households’ budget; but another cause is people’s lack of knowledge of the functioning of banking services to which they subscribe, of their fiscal responsibilities, and of the quality of advice they received, etc., that is to say their lack of financial culture.

We can note the very strong growth in the number of over-indebtedness files [see Figure 6] since they have experienced a growth of 242% since 1990 and even 342% if we refer to 1992, when the number of deposit files was the lowest.

According to the triennial Banque de France report on over-indebtedness, the indebted French population in 2010 was characterized by the predominance and growing share of singles (65% against 58% in 2001); according to another study by
Banque de France [2011], this outcome fits the causes of over-indebtedness analysis which reveals that 23% of cases are due to family problems, implying fewer resources. People between 35 and 44 and 45 to 54 are the most affected with respectively 28% and 26% of reported over-indebtedness in 2010. The share of over-indebtedness among people above 55 increased sharply from 13% in 2001 to 23% in 2010. People that have resources at or below the minimum wage, that are between 35 and 54 years old and that are under over-indebtedness represented 54% of reported over-indebtedness in 2010. This reflects some stabilization compared to 2007 (people between 35 and 54 years old represented at that time 55% of reported over-indebtedness) but an increase of 12 percentage points compared to 2001.

Average debt levels across all Debt Commission cases stood at 34,500 € in 2010, hence 30 times the minimum wage; the debt consists up to 83% of bank debts, 9% of current expenses arrears and 8% of outstanding payables. Bank debts are present in 95% of French over-indebtedness cases, with an average amount of 30,170 €. They cover mortgages (in 7% of cases), consumer credits (in 91% of cases), with revolving credits (in 82% of cases) and leading to overdrafts (in 57% of cases). Computed roughly, over-indebtedness related to consumer credits impacted 0.37% of the total French population above 20.

3.3 Banking exclusion in France

Financial and banking exclusion can be defined as “a person who faces a restriction in his/her banking and financial practices that does not allow him/her to lead a normal social life” [see Gloukoviezoff, 2004].

Banking exclusion can take many forms, including the two main which are banking exclusion in terms of access and banking exclusion in terms of use. Banking exclusion defined in terms of access refers to people who do not have access to a bank account or a savings account. Lack of access to credit also reflects banking exclusion of the same kind; it affects 8% of the French population. Banking exclusion defined in terms of use results from a progressive complete withdrawal from the banking system. The two dimensions of bank exclusion reflect differences in the
length of the exclusion: it may be temporary in the first case, whereas it is long-lasting in the second.

France is quite advanced in banking inclusion; the penetration of banking services is almost completed: 98% of households have a deposit account, against only 18% in 1966; and around 5 to 6 million people suffer from banking exclusion (see Bumacov, 2012). The figures are quite encouraging with regard to the access to a bank account: less than 1% of households under poverty do not have an account. They are less encouraging in terms of access to banking services that include credit components: check book, overdraft, credit card and credit itself. The possession of a check book is a quite relevant indicator to measure first level banking exclusion in France: 27% of households living under poverty have a deposit account without having a check book. The overdraft has a high value for households experiencing financial hardship; nonetheless, 29% of households living under poverty have no overdraft authorization. This figure is slightly high compared to households without a check book, indicating a probable greater financial exclusion – the second level banking exclusion. This second-level banking exclusion in terms of access affects 29% of French households living under poverty.

4. The French culture of solidarity: the struggle against financial exclusion and over-indebtedness

France has been quite precocious in the struggle against financial and banking exclusion and solidarity is deeply infringed in its financial culture, in spite of the financialization process.

4.1 The struggle against over-indebtedness

Struggle against over-indebtedness can be tackling in two different ways, one preventive, the other one curative. In France, the curative manner is the most developed, through the action of Over-indebtedness Committees (these committees help people who cannot face their debt anymore in finding a solution to get out of this situation); the preventive manner concerns mainly the legal framework of the
information quality which is available to the potential borrower; its purpose is to prevent him/her to borrow more than he/she can bear.

On the curative side of over-indebtedness, the Neiertz law of 1989 created Indebtedness Committees in each French department in order to address every individual over-indebtedness situation. These commissions seize upon the request of the debtor and have to establish the debtor’s state of debt and whether the case is admissible or not. They are responsible for reconciling the stakeholders in order to develop a contractual recovery plan which has to be approved by the debtor and by its creditors and which allows debt repayment.

On the preventive side of over-indebtedness, the 2003 law relative to financial security stipulates that information on credits to consumption must be “honest and informative”. Prevention on over-indebtedness can also go through a rebalancing of the credit relationship (responsible lending, financial pedagogy).

4.2 The struggle against banking exclusion

First, France has cracked down on financial and banking exclusion quite early:

- In 1984 the Right to an Account was established; anyone having no bank account and being denied the right to open a bank account may apply to the Bank de France; it will designate a bank which will have the obligation to open her/him an account.

- In 1989, the Neiertz law created debt commissions which may decide to reschedule or even cancel some debts if they were incurred while the consumer was already overburdened.

- In 1998, the Right to an Account is complemented by a basic banking service (account statement once a month, receipt of received transfers, etc.).

- In 2005, the Social Cohesion Fund is established in order to facilitate access to credit for the financially weakest consumers.

- In 2009, the Accessibility Charter reinforced the effectiveness of the Right to an Account.
In 2010, a law was passed in order to strengthen the prevention of over-indebtedness. Thus, benefiting from the legal framework defined by the Social Cohesion law (2005), personal microcredit allows greater access to credit for low-income people and is based on the joint involvement of banking networks and associations. In 2010, nearly 8,000 new micro-loans have been issued, representing an increase of 43% compared to 2009.

Similarly, the Law of Modernization of the Economy (2008) entrusted a mission of banking accessibility to La Banque Postale through the A-savings (fixed interest rate) booklet. La Banque Postale has to open an A-saving booklet to anyone who requests it and make on this booklet free deposit and withdrawal operations. More than 50% of social-minima beneficiaries domiciled at La Banque Postale operate the domiciliation of their allocations on the A booklet.

In order to struggle against financial and banking exclusion, microcredit is quite advanced in France. Adie is the MFI (Microfinance Institution) of reference in France. It offers personal and professional credits that are assumed to be sustainable for individuals and small business which do not have alternative access to bank loans. Personal loans, known as employment microcredit, are limited at 3,000€ (that is to say 10% of the average French GDP per capita). Since employment remains a major determinant of banking exclusion in France, Adie focuses its offer of personal credit on the need to access or retain a job. Based on State funds, Adie also grants credits called unsecured loans, which are interest-free, limited to 4,000€ and coupled with a professional microcredit. In 2010, 1,400 personal microloans were distributed by Adie, representing 11% of total Adie microloans (their full number was 12,023).

This marginal financial inclusion is consistent with the important role of revolving credits in the banking exclusion of households under poverty. Compared with microcredit (not reduced to Adie activities), at interest rates comparable (9.71% on average) and similar amounts (maximum 6,000€), people prefer revolving credits
because they are easy to get. Most of French banks funded microfinance activities of Adie up to three quarters of outstanding amounts in 2010. The Banque Populaire network financed alone more than one quarter of outstanding microloans.

5. Conclusion

Financialization has affected French daily lives in an equivocal way. First, the French have a strong preference for credit cards, which are a pure product of financialization, modernization and internationalization of the French banking system. However, they retain a certain caution against new risks that arise from these changes: consumer credits and cash loans are mildly developed, and most public services are still under the aegis of the State. Above all, legislation against financial exclusion and the struggle against over-indebtedness are quite advanced and solidarity seems to be still deeply rooted in the French financial culture through microcredit and solidarity savings. This diagnosis should not be viewed as downsizing the consequences of financialization on individual behaviours, but it should be kept in minds that despite financialization, French public authorities implement collective actions to try to curb over-indebtedness and unequal access to banking services.
13. **Real estate sector and housing finance**

Sandrine Levasseur (OFCE)

1. **Long-run empirical development of the real estate market**

1.1 *Developments of real estate market in private housing and commercial sector*

The real estate prices in private housing have followed an upward trend since the 1970s, which accelerated further in the 2000s (Figure 1). Between 2000 and 2012, the real estate prices (in nominal terms) have more than doubled, with only a small and temporary fall in the context of the global crisis.

![Figure 1: Index of real estate prices in private housing (nominal, basis 2000 = 100)](image)

*Source:* National institute of statistics, INSEE.

The evidence of cycles appears more clearly when real estate prices for private housing are considered in growth rates (Figure 2). Over the period, we detect three cycles on the real estate market for private housing:

- from mid-1970s to the beginning of the 1980s
- from mid-1980s to the beginning of the 1990s
- from 1999 onwards

The last cycle on the real estate market for private housing is different from the two previous ones. First, it differs by its amplitude; it is particularly evident when real estate prices are deflated (by the private consumption deflator). Second, it
differs by its duration (more than a decade!). The financial crisis produces so small and so short lasting a fall in prices that it cannot reasonably be considered as ending the 2000s cycle to begin a new one. The extent to which the French real estate market has been resilient during this crisis may appear somewhat puzzling. In section 3, we will shed light on the reasons why the French real estate market has not crashed and probably will not crash in the future.

It is worth noting that the boom of the 2000s was widespread all over France, with Paris and the coastal cities (especially in the South of France) recording the highest increases in real estate prices.

![Figure 2: Growth of real estate prices in private housing](image)

*Source: National institute of statistics, INSEE.*

Developments in commercial real estate are quite different from those in private housing. This is clearly illustrated by Figure 3 which compares the rents (used as a proxy of prices) in Paris-La Defense – a very famous business center – with the prices of private housing in Paris. The disconnection between both markets

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56 The National institute of statistics (INSEE) does not provided data on commercial real estate (sales prices and units). We have to use private sources (generally banks) which are not always reliable and/or may be specific to market segments.
is clearly visible; prices in private housing have been on a continuous upward trend over the 2000s whereas those of offices have been fluctuating around their mean.

*Figure 3: Developments of real estate prices for commercial and private housing in Paris (in €, per m²)*

**Figure 4: Share of real estate VA in total VA (in %)**

*Note 1:* m² per year for commercial rents.

*Note 2:* 2012 (up to June)

*Source:* National institute of statistics (INSEE) and BNP Paribas Real Estate.

1.2. *Contribution of the real estate sector to the business cycle*

The real estate sector represents currently around 13% of GDP against 7% in 1980; hence, the share of real estate sector in GDP has roughly doubled in three decades (Figure 4). The share of real estate in GDP has increased continuously over the period, showing almost no cycle.

*Source:* OECD; own computations.
The share of residential investment in total investment stands currently at 31% (Figure 5). That is a higher share than in the beginning of the 2000’s (i.e. 27%, the lowest share since the 1980’s) but a lower share than in the turning of 1984/1985 (i.e. 37%, the highest share over the period).

![Figure 5: Share of dwellings investment in total investment](image)

*Source:* Eurostat; own computations.

The contribution of real estate sector to GDP growth rate is illustrated in figure 6. Over 1980Q1-2012Q2, the correlation coefficient between the two series stands between 0.33 and 0.40 depending on how many lag(s)/lead(s) are taken into account. Over 2000Q1-2012Q2, the correlation coefficient turns to be higher (at around 0.55), meaning that the contribution of real estate sector to the business cycle was by no way negligible over the last decade. The exact way of causality would require a deeper analysis, though. Double causality could be possible.
1.3. Development of real estate credits

The housing loans to households stood at 843 billion euros in 2011, or put differently at 62.3 % of their disposable income (Figure 7). The indebtedness of households for housing purposes has increased sharply during the 2000s, by 30 percent points in terms of disposable income. A much more dynamic growth in housing loans than in disposable income explains the surge of the ratio throughout the 2000s (Figure 8).

*Per capita*, the housing loans to households accounted for 5000 € in 2000, to reach 13,000 € in 2011.
2. Institutional changes in the real estate market

Since the 1980s, no major shift has occurred in France in terms of financial institutions related to real estate market.

Commercial banks continue to be the main providers of resources to finance home purchases. The degree of concentration in the banking sector increased further in the 2000s, though (see also the part dedicated to bank competition). While, in the 1980s, around fifteen commercial banks were operating in the financing of the home purchases, their number falls at five or six in the 2000s.

The Caisse des Dépôts et Consignations (CDC) continues to finance the housing societies (called in France, HLM or “habitation à loyer modéré”) through the mechanism of Livret A: resources are collected to households (savings in Livrets A), then centralized to CDC (savings funds of CDC) and distributed to housing societies through long-term loans with a subsidized rate (below to market rate).

The Caisse de Refinancement de l’Habitat (CRH) was created in 1985 in order to make more dynamic the mortgage market. Then, in 1999, the status of Société de Crédit Foncier (SCF) was created in order to introduce new instruments of home refinancing, including instruments based on principles of securization. However, the
development of securitization was quite limited in France, with covered bonds accounting for the bulk of refinancing (see below).

In France, the data of loan-to-value ratio (LTV ratio, hereafter) are quite scarce simply because there is no equity withdrawal for consumption purposes (see below). The LTV ratio can be however deducted from the share of home purchase financed by own resources of the borrower (through savings, capital gains, inheritance). In 2011, this share (called taux d’apport personnel in French) stood at 18% according to the Banque de France, meaning that the LTV ratio was 82%. Data from commercial banks give 22.4 % and 24.6 % for the taux d’apport personnel in respectively 2010 and 2011. That means that the approximate LTV ratio would be even lower and, decreasing between 2010 and 2011. Anecdotic evidence suggests that the approximate LTV ratio would have decreased further in 2012 with commercial banks setting higher requirements to finance home purchases of households.

Comparatively, the French LTV ratios were higher at the beginning of the 2000s when commercial banks often financed the bulk of the home purchase\(^{57}\). But, comparatively, the French LTV ratios were lower at the beginning of the 1990s after the period of defaults of the late 1980s\(^{58}\).

In France, the bulk of interest rates for real estate credit are fixed and long-term. To a very large extent, it illustrates a cultural behavior since, legally speaking, both variable and short-term interest rates may be proposed to households to finance their home. In 2010, less than 10% of new loans were bearing a variable interest rate. The years 2004 and 2005 turned out to be exceptions, when the share of new loans bearing a variable interest rate reached 1/3 (Banque de France, 2011).

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\(^{57}\) In the beginning of the 2000s, the strong competition between commercial banks, in a context of decreasing interest rates, has created conditions for a near 100 % financing when the borrower was satisfying some conditions (for instance: first access to real estate property for a young and highly educated household with a strong potential of future income flows).

\(^{58}\) In the late 1980s, defaults on housing credit increased as some household had borrowed at a high [nominal] interest rate in the 1970s when inflation was high. Then, with the process of disinflation in the 1980s, the [real] interest rates surged, leading to unpaid monthly reimbursements.
The traditional length of housing loans is 15 years in France. However, in a context of growing real estate prices, many households have borrowed on a longer time period in the last decade. From 13.5 years in 2001, the average length of loans has increased continuously to reach 19.5 years in 2007. Currently, the average duration is 17.25 years\(^{59}\).

It is noteworthy that here is no possibility to make equity withdrawals for consumption purposes in France (rapport Bourdin 2006).

Nevertheless, it is possible to repay mortgages or re-schedule mortgages without fees if this possibility was negotiated at the time of the credit subscription. Indeed, these clauses are rarely used by the borrower as they are quite strict and constraining: generally, they may be activated only once and under some specific conditions precisely defined in the contract.

The re-purchase of credit (rachat de crédit) is sometimes used by households with numerous credit subscriptions (including housing credit) toward numerous credit institutions in order to get only one credit (with only one monthly reimbursement instead of several). The re-purchase of credit is generally used by households in huge difficulties for reimbursing; consequently, one credit institution substitutes for several ones and allows to get a more efficient credit re-schedule.

In France, it is not possible to get rid of mortgage debt by giving the real estate property to the creditor. The mechanism of residential guarantee is used extensively to avoid that the owner loses her/his property. Then, and ultimately, the owner has to sell her/his property in case of cumulated arrières. Foreclosures are rare.

In France, the secondary markets of mortgage loans (defined in a broad sense) make a low contribution to refinancing.

As a preliminary remark, note that in France, mortgage is no longer the main tool used to secure housing loans of households. Instead, in the 2000s, a mechanism

\(^{59}\) Source: Crédit Logement/CSA.
of residential guarantee (prêt cautionné) has substituted for, favored by legislation and preference of borrowers\textsuperscript{60}. In conformity with everyday usage, we will use the term of mortgage to speak about all housing loans, whatever the type of security.

**Box 1: The shift between mortgage and residential guarantee in the 2000s**

In France, either mortgage or residential guarantee (crédit cautionné) is the tool used to secure housing loans.

In case of mortgage, the loan is secured by the real property (the home to be financed).

In case of residential guarantee, there is no mortgage on the real property. Instead a credit institution or an insurance company substitutes to secure the loan.

Up to 1999, mortgage accounted for the main tool used to secure loans, with 70 % of housing loans secured by mortgage (and 30 % by residential guarantee). Things turned different in the 2000s as:

- in 1999, housing loans secured by residential guarantee became eligible for refinancing;
- households have given a preference to secure through residential guarantee, which was less expensive and was associated with no mortgage on their home.

As a result, residential guarantees tend now to predominate among the tools used to secure, with 70 % of housing loans secured by this tool. However, in everyday usage, the term of mortgage continues to persist to describe all type of housing loans, whatever their type of security.

The refinancing of housing loans is summarized in Table 1. As evidenced, the use of specific market instruments to refinance housing loans is quite low, accounting for 20% of housing loans to households in 2004 and 33% in 2011. In fact, most of resources come through households deposits (between 2/3 and 80%).

\textsuperscript{60} See Box n°1.
Interestingly, among instruments of refinancing, the covered bonds issued by either the *Caisse de Refinancement de l’Habitat* (CRH) or the *Sociétés de Crédit Foncier* (SCF) are predominant. Comparatively, assets based on principles of “securization” (e.g. RMBS) account for a negligible share (3% in 2004 according to data reported in table 1). More recent data provided by IMF (2011) show that RMBS account for 1.8% of housing loans.

Table 1: Refinancing of housing loans in France

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total housing credit to households</td>
<td>Covered bonds</td>
<td>of which CRH bonds</td>
<td>of which SCF bonds</td>
<td>“Securization”</td>
<td>Total instruments of refinancing</td>
</tr>
<tr>
<td>in billions €</td>
<td>321,1</td>
<td>55,3</td>
<td>13,9</td>
<td>41,4</td>
<td>9,2</td>
<td>64,5</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>17%</td>
<td>4%</td>
<td>13%</td>
<td>3%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>Covered bonds</td>
<td>of which CRH bonds</td>
<td>of which SCF bonds</td>
<td>“Securization”</td>
<td>Total instruments of refinancing</td>
</tr>
<tr>
<td>in billions €</td>
<td>843,2</td>
<td>281,1</td>
<td>48,4</td>
<td>232,7</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>33%</td>
<td>6%</td>
<td>28%</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>


In box 2, we give some information on the *Caisse de Refinancement de l’Habitat* (CRH) which is an important player on the secondary market of mortgage loans.

Box 2: Characteristics of the Caisse de Refinancement de l’Habitat (CRH)

CRH is a credit institution set up in 1985 as part of the general reform of mortgage markets decided by the French government.

The sole object of CRH is to refinance housing loans, granted by the credit institutions which are its shareholders, by issuing bonds. Refinanced loans are either first mortgages loans or residential guaranteed loans. All the loans comply with the criteria defined by the law and securitization funds and Residential Mortgage-Backed Securities (RMBS) are excluded.

Its loans are matched by bond issues and secured by a pledged loans portfolio equal to 125 % of the amount borrowed. As a result, CRH acquires ownership of the loan portfolio in the event of a borrowers’ default, without further formality.

Apart from the special supervisory duties of the Commission Bancaire, the CRH’s audit department makes regular inspections at borrowings banks, to confirm the soundness and the pledged loans.
Each borrowing bank must contribute to CRH’s equity capital in portion to its outstanding borrowings. Shareholders’ equity amounted to €478 millions in June 2012, mainly held by following groups:

- Crédit agricole SA – Crédit Lyonnais: 36.9 %
- Crédit mutuel: 33.0 %
- Société générale: 13.8 %
- BNP Paribas: 10.0 %
- BPCE: 5.7 %


In France, mortgage credits in foreign currencies are almost inexistent. There are a handful of cross-border workers who borrow in Swiss francs, to quote a few. Moreover, to our knowledge, there is no “sale-lease-back” model for housing in France.

In France, 59% of households are owners of their home. The remaining households are renters either in the private sector (24%) or in the public sector through housing societies (17%). Since the 1980s, the rate of owners has increased by steps: it was 52% in 1984, stabilizing at 55% over 1988-1998, then increasing again to reach 59% in 2011.

In the public sector, the sale of home to their renters (tenants) is not largely used even if the law allows for it. Housing societies are quite reluctant to such sales as they prefer a 100 % property of a building rather than sharing property with numerous private owners. Expenditures related to sharing property (copropriété) may be an unsustainable burden for small income households – most of tenants in the public sector – causing in turn financial difficulties for other owners.

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61 In France, the stock of homes in the public sector consists mainly in flats (not in houses) which requires necessarily a sharing property (copropriété) of common parts.
around 10,000 homes of housing societies are sold each year: that is a very small [ridiculous] figure compared to the stock accounts of around 4.3 millions!

Since the 1960s, the role of housing societies has been traditionally large in France [Figure 9]. However, the construction in public sector slow downed from 1995 to 2005 at a time when politics preferred to encourage either private renting or private property, both through financial subsidies to households. Since 2006/2007, the construction in public sector has been relaunched, with the financing of 100,000-110,000 new homes per year over 2009-2011. Under the Hollande Presidency, 150,000 new homes per year are expected to be financed before 2017.

![Figure 9: New delivered homes in public sector](image)

**Source:** Former « Ministère de l’Equipement et du Logement ».

3. **Interpretation of the development of the real estate market and its consequences for the economy**

The credit market for real estate is quite highly regulated in France, governed by strict and stringent rules. It protects the households and in turn the banking sector against a major shift of the property value in real estate sector. For instance, there is no equity withdrawal for consumption purposes which may be very harmful in case of real estate bust. The credit access for households is subject to strict rules

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62 Financing differs from delivery due to time-to-build (in average, 6 years in public sector).
and most banks have adopted a safe behaviour. Such rules and principles to manage risks have been put forward again in the context of the global crisis by the governor of the Banque de France, Christian Noyer in September 2011: for instance, the monthly reimbursement of a borrower has to be limited with respect to his disposable income. Moreover, in its 2011 report, the Committee of financial regulation and systemic risk (Conseil de régulation financière et du risque systémique, Corefis) recommends to follow two other indicators of risk. The first one is the share of income used by a borrower to finance all expenditures related to housing (taux d’effort des emprunteurs). In this case, reimbursements are considered net of housing subsidies while other expenditures include heating, maintenance and so on. The second indicator is the length of loans which should be reduced as much as possible.

As a result of the strictness of rules and principles guiding the access to credit in France, the default rate of households has remained almost flat in the context of the global crisis, to around 1.5% of total loans. The share of toxic loans in total loans confirms that the global crisis had only a minor impact on reimbursement capacity of households (figure 10): in 2007, 0.95% of housing loans was toxic, to reach 1.2% in 2011. Loans bearing a “variable rate” have reported a higher share of toxic loans (2.6% in 2011) but, by no way, alarming for the banking system and, then, for the whole economy.
In France, the strong growth of real estate prices (and its resilience even during the global crisis) is due to the combination of different factors\textsuperscript{63}. First at all, there has been a demographic dynamism which has led, on average, to 338,000 new households per year since the beginning of the 2000s. Comparatively, the number of new households was “only” 266,700 per year in the 1990s. The acceleration in the growth of new households has caused tensions on the real estate market, as supply of new homes was comparatively more sluggish (due to time-to-built). Yet, even in the long run, supply tends to present a low price-elasticity in France (as documented by OECD for instance), a feature we can attribute to strict regulations governing urbanism. For instance, in Paris, where real estate prices are very high by any standard, current rules impede to build more than a certain number of floors, depending on how far away are sightseeing points. As demand for real estate in Paris is high and supply of new flats almost flat, adjustment occurs through “price” rather than through “quantity”. A similar line of reasoning holds for other French cities and regions, albeit to a lower extent as rules of urbanism are less strict than in Paris.

\textsuperscript{63} Here, we focus on factors specific to France which explain why prices have increased so much in the real estate sector. Thus, the downward trend of the interest rate, common to most EU countries, is out of our scope. Similarly, we do not deal with the lengthening of loan terms which probably has followed a double causality mechanism: from real estate prices/to real estate prices.
It is worth noting that demand by non residents accounts only for a small share of the total demand of French housing. According to various estimates, one million of homes would be lacking for the sole French residents. To adjust such a deficit in housing, both vacant homes and secondary homes were reduced throughout the 2000s [Levasseur, 2011].

Other important factors to explain high real estate prices are housing policies, in particular those which have fuelled the demand side of real estate market. Such policies include loans with no interest rate [prêt à taux 0 or PTZ]. First introduced in 1995 for only low-income households, the PTZ was generalized without conditions to all households in 2005. Surely, such a policy has boosted the demand for home purchases, then contributing to increase prices on real estate market. Another policy which contributed to sustain real estate market in the context of the financial crisis was the Scellier investment consisting in a [large] fiscal rebate for households purchasing a new built home in order to rent it. That policy implemented as soon as January 2009 had two consequences. First, construction of new buildings remained at a high level even in the context of uncertainty caused by the financial crisis (60,000 homes would have benefited from the Scellier mechanism in 2009 and another 88,000 supplementary units in 2010). Second, prices of homes remained high as developers and builders were taking into account the fiscal rebates which benefited to households when setting their prices. According to some observers, prices of new built homes would have been 10% or 15 % lower without the Scellier mechanism. The fiscal “gift” was reduced two times under the Sarkozy Presidency to benefit only to new built homes satisfying environmental conditions (“green” houses). The Hollande Presidency, while keeping the principle of Scellier mechanism, has set limits for the levels of rents64. Quite expensive for the public finances, such a mechanism [now called Duflot mechanism] had to be maintained in order to meet

64 The high level of rents is another problem for French households.
two goals: first, to sustain the construction sector and, second, to supply new homes to the French population.

4. Conclusion

The current situation of the French real estate market appears by no way critical, with no strong sign of bust in the near future. Consequently, the risks – for the banks – coming directly from the real estate sector seem to us quite limited. The French authorities of regulation and supervision have recommended that banks continue to follow prudent and safe rules when providing credit to households, though. Indeed, problems may arise indirectly, from other spheres of the real economy. If the problems of competitiveness of the French economy – and its associated process of disindustrialisation – were to persist, the resulting loss of jobs and incomes could have harmful consequences on the real estate market as some (over-)indebted households might face difficulties to honor their reimbursements. The impact on banks and on the stability of banking sector could be only indirect, not direct. More generally, the real estate market in France is sustained by intrinsic forces, in particular a strong demographic growth which fuels demand for homes. As the attractiveness of main cities or regions will continue in the future (in first instance, Paris for young workers and South of France for young retirees), a large fall in real estate prices cannot be reasonably expected.
14. **INEQUALITY AND THE FINANCIAL SYSTEM**

Mathilde Viennot (ENS Cachan & OFCE)  
Jérôme Creel (OFCE & ESCP Europe)

1. Introduction

A broad consensus emerged in France and around the world to consider that the economy has changed since the 1980s and the process of financialization, and that this process has not only affected the international way of trading but also, in a wider way, the social and economic structure and inequalities. The impact of financialization on social inequality and cohesion is often treated in the French media as dramatic “stock layoffs” (see Godechot, 2013) by linking the depletion of one [redundant employees] to the enrichment of the other [shareholders’ gains and bonus]. Objections and oppositions to these inequalities are thus multiplied in force when these exceptional incomes appear to be the reward of neither merit nor skill but rent extraction.

Though the debate on wage inequality produced by and within the financial sector deserves to be somewhat dispassionate, financialization has potentially a direct impact on inequalities in France (income inequality and hiring discrimination); this is due to the classes of entrepreneurs and employees that it promotes [those in charge of financial matters, within the financial sector or specialized in corporate finance in the non-financial sector]. Over the 1990s, chief executive pay rose from about 40 to 400 times the pay of a rank-and-file employee [mostly due to stock-option plans]; and from 2009 to 2010 the median CEO pay [including salary, bonus and long-term incentive plans] rose by 11% in the OECD countries (see Egger, von Ehrlich and Radulescu, 2012). The personal income distribution has become increasingly unequal, and the increased skewness at the very top end of the income distribution may be attributed to financial service sector employees [investment banks, hedge funds, private equity funds, mutual funds, see Kaplan and Rauh, 2006]. Indeed, France has seen a sharp increase in inequality over the last 12 years; half of
the increase in the upper 1/1000th being due to an increase in salaries of executives in finance [see Godechot, 2011a].

Several studies have begun to show the extent of wage premia received by the employees of the French financial sector and their role in the rise in inequality, and the main reference in France is certainly Olivier Godechot. This chapter aims at bringing together the literature on three points: the quantification of these inequalities since the 1980s and the impact of the recent crisis, the main causes of such inequalities and finally the solutions that are proposed to address them.

2. Quantifying inequality in the French financial sector

2.1 A brief history of remuneration and inequality in the French financial sector

France is experiencing an era of widening pay inequality [see Piketty, 2001] and the banking sector is an example of the rapid transformation of economic inequality; the extraordinary rewards secured by those in the financial sector have played a substantial role in this growing inequality, especially within the financial sector itself. However, this finding is the culmination of a long process of evolution of the remuneration mode in the French financial sector [see Godechot, 2004].

Before the financialization of the French economy that can be dated to the 1980s, the diversity of remuneration in the financial sector was more in informal remuneration forms (even illegal), which seemed to be very developed during the 1970s and the 1980s, although they were difficult to measure. We can distinguish three main types of compensation, which differ both in their procedure and in their degree of illegality: transactions for own account, insider trading and bribery. The radical transformations of the Paris financial market place during the years 1984-1988 served as fertile ground for the transformation of remuneration modes and for rising amounts of these remunerations. Staff turnover, the emergence of new actors on the place, the appearance of highly profitable financial sectors and the fact that employees had a direct impact on the financial firms’ profits allowed employees to seek for new and higher forms of remuneration. Notably, the bonuses have been
adopted on the Paris financial place under the influence of Anglo-Saxon banks. Moreover, since 1983, wages have been no longer indexed on prices, which enabled companies to give to their pay systems other objectives than just maintaining the purchasing power (see Dejonghe and Gasnier, 1990). Wage policy became thus a key incentive factor.

It was at the end of the 1980s that bonuses began to develop, both the terminology and the associated practices. The 1990s were years of a very strong growth of bonus on the Paris place, developments that are put to the account of two factors: firstly the growing financial results (especially in the derivatives industry) and secondly the tendency to match with the remunerations paid in London. Along this increase in bonus, there was a major expansion of its distribution during the second half of the 1990s, although they were still concentrated in the hands of a small minority (traders).

It is a hard sell to define the bonus as a mode of remuneration in a simple way. The actors use the same word to denominate several ways of remuneration that are sometimes opposite: is it a contractual or discretionary, individual or collective remuneration, is it function of merit or seniority, and is it perennial or reversible?

In its most common form, the bonus is a discretionary compensation, in the sense that the amount awarded is not the product of the application of a formula [x% of results attributed to a financial operator]. The bonus is based on a qualitative and quantitative evaluation of the performance of the operator by his/her superior.

This evolution has had a great impact on the evolution of inequality in the financial sector, particularly in the banking sector. Firstly, the share of the ten largest salaries grew strongly in the total payroll: in the 1980s, at the Société Générale, salaries in the top 10 were usually ten times the average salary (see Fleury and Godechot, 2005); this ratio then increased from 13 in 1991 to 134 in 2001. The evolution of the ten highest remunerations has indeed grown quite exponentially over the past twenty years: they were 200,000 € at the end of the 1970s, 1 million € in the early 1990s and reach now 6 million €. These higher wages have focused on
market specialists (team leaders, heads of desk, trading managers, heads of trading rooms). When we compare with other professions in the financial sector where skill levels are very high (risk controllers for instance), the contrast is striking: bonus reaches six months’ salary for the highest remunerations in the risk service, against 10 years’ salary for a head of trading room.

Rising inequality resulting from the swelling of the elite salaries can not be reduced to the increase in wages of those few very specific people as it affects the entire wage distribution. From 1978 to 1987, the share of the top decile wages was between 18 and 20% in the three major French banks. This inequality ratio at Société Générale was 22% between 1989 and 1993, 25% between 1994 and 1998 and reached 28-30% from 1999 to 2002; initially at a particularly low level of inequality, the Société Générale exceeds now the average level of inequality, in France and would rejoin the US’s. These universal banks have indeed to manage network activities, which are excluded from the system of bonuses and market activities that benefit of it greatly. Godechot (2013) shows that inequalities within the financial industry grew at a more rapid pace during the latest 12 years than during any other previous period, especially at the end of the 1990s, which can be linked to the great increase in prices and volumes on the stock exchange. Moreover, that pace has been stronger than in the US: the top 1% share grew from 6% to 10% [see Figure 1] in 12 years, whereas the United States experienced this increase during 35 years (from 1965 to 2000, see Piketty and Saez, 2003).

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65 Société Générale, BNP and Crédit Lyonnais
2.2 Gender inequality and hiring discrimination in the French financial sector

Gender inequality in the French financial sector remains a taboo subject for the banking industry, both for hiring discrimination or for income inequality issues, so most of the studies come from the US, where the debate is more dispassionate. L. M. Roth (2006) describes a situation in the US that can be quite comparable to the French case where women have entered financial careers only since the 1980s. The occupations of women in the French financial sector, however, are very different from those held by men, which may explain the fact that women are fairly numerous in the sector (see Figure 2) but that income inequalities remain notable. Thus, in investment banking where bankers negotiate directly with business managers, women are confined to activities without direct contact with customers or in less
lucrative sectors. In ordinary shares trade, being woman is often considered as a relative strength to talk on phone daily or seduce the customer. Women are thus fairly represented in the financial sector (56.5% in 2009) but they are much more in the retail sector than in trading.

**Figure 2 – Share of women in the French financial sector**

![Graph showing the share of women in the French financial sector]

Source: INSEE and DADS

The French financial sector is characterized by a strong vertical segregation, i.e. few women reach the management of financial firms, and by an effective glass ceiling, i.e. traders are men in their great majority [see Meulders, 2010]. Dealing with this hiring discrimination, it must be recalled that the French financial sector still includes a large proportion of women; nonetheless, advantageous maternity vacancies and high sexism in this sector would create a discrimination that prevents women accessing to high responsibility positions (and thus to high incomes). Petit [2004] made the unique study that analyzes hiring discrimination and its determinants in the French financial sector; she highlighted that among people aged 25, women have easier access to less qualified positions while their male
counterparts have significantly higher access to more qualified positions. Indeed, in contrast with low-skilled jobs, skilled positions require a specific investment in training employees; according to P. Petit’s study, employers choose not to recruit young women for their skilled positions [this result is not found for older women] because these single childless women send a negative signal in terms of expected productivity and anticipated cost of labour.

This hiring discrimination leads naturally to wage inequality between men and women in the financial sector [see Table 1 and Figure 3].

Table 1 – Gross hourly wages in the French financial sector, men-women disparity, millions of €

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>Gross hourly wages (in €)</th>
<th>Number of worked hours (in millions)</th>
<th>Gross annual wages (in million €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial service activities, except insurance and pension funding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central banking</td>
<td>25.0 29.7 21.1</td>
<td>644.8 293.1 351.6</td>
<td>16 119.3 8 706.2 7 419.5</td>
</tr>
<tr>
<td>Activities of holding companies</td>
<td>28.9 37.5 20.4</td>
<td>134.6 66.8 67.8</td>
<td>3 890.0 2 504.7 1 383.3</td>
</tr>
<tr>
<td>Activities of financial entities</td>
<td>35.2 44.7 24.0</td>
<td>26.1 14.2 11.9</td>
<td>919.2 634.5 286.0</td>
</tr>
<tr>
<td>Other credit</td>
<td>28.0 34.9 23.0</td>
<td>6.6 2.8 3.9</td>
<td>185.3 96.3 88.8</td>
</tr>
<tr>
<td>Other financial service activities, except insurance and pension funding</td>
<td>28.9 35.4 23.9</td>
<td>43.5 18.7 24.8</td>
<td>1 257.4 663.4 591.9</td>
</tr>
<tr>
<td>Insurance</td>
<td>27.4 38.7 20.0</td>
<td>7.5 2.9 4.5</td>
<td>204.7 113.7 90.6</td>
</tr>
<tr>
<td>Life insurance</td>
<td>27.3 31.5 23.0</td>
<td>46.7 23.8 22.9</td>
<td>1 274.9 748.6 527.5</td>
</tr>
<tr>
<td>Other insurance</td>
<td>22.7 27.9 19.9</td>
<td>239.2 83.7 155.5</td>
<td>5 430.9 2 335.3 3 095.3</td>
</tr>
<tr>
<td>Reinsurance</td>
<td>35.0 42.7 28.0</td>
<td>9.2 4.4 4.8</td>
<td>321.4 185.8 135.3</td>
</tr>
<tr>
<td>Pension</td>
<td>22.8 26.2 20.9</td>
<td>2.0 0.7 1.3</td>
<td>45.8 19.1 26.7</td>
</tr>
<tr>
<td>Auxiliary activities of financial services and insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration of financial markets</td>
<td>47.4 47.9 46.7</td>
<td>2.2 1.3 0.9</td>
<td>104.1 61.1 42.9</td>
</tr>
<tr>
<td>Securities and goods brokerage</td>
<td>47.8 59.1 31.6</td>
<td>5.4 3.2 2.2</td>
<td>260.2 190.0 70.4</td>
</tr>
<tr>
<td>Legal support of movable heritage management</td>
<td>15.1 24.0 13.7</td>
<td>22.1 3.0 19.1</td>
<td>333.6 71.8 261.7</td>
</tr>
<tr>
<td>Other auxiliary activities of financial services, except insurance and pension</td>
<td>29.2 38.3 20.6</td>
<td>15.2 8.8 9.4</td>
<td>531.3 336.8 193.7</td>
</tr>
<tr>
<td>Risk and damage assessment</td>
<td>22.2 29.9 15.2</td>
<td>8.9 4.2 4.7</td>
<td>196.8 125.6 70.9</td>
</tr>
<tr>
<td>Activities of agents and insurance brokers</td>
<td>19.1 26.5 16.2</td>
<td>105.0 29.8 75.2</td>
<td>2 004.8 789.6 1 217.7</td>
</tr>
<tr>
<td>Other auxiliary activities of insurance and pension</td>
<td>21.6 28.9 19.3</td>
<td>5.4 1.6 3.8</td>
<td>115.9 43.4 72.4</td>
</tr>
<tr>
<td>Fund management</td>
<td>41.7 49.1 32.1</td>
<td>29.0 16.2 12.7</td>
<td>1 207.9 796.3 499.2</td>
</tr>
</tbody>
</table>

Source: DAUD statistics, INSEE
Figure 3 – Gross annual wages in the French financial sector, men-women disparity

Gross annual wages (in million €) of the French financial sector in 2009

Source: INSEE and DADS

One can observe that, although women’s wages are higher than men’s in some financial sub-sectors (especially those linked to retail activities, such as other insurance and insurance brokers) because of their high hiring rate in these sub-sectors, gender inequalities remain high in the French financial sector, especially for activities that are linked to financial intermediation. At the extreme, for brokerage activities, gross hourly wages are 87% higher for men than women.

Fakhfakh [2004] studies income disparities in four specific French sectors, in particularly the banking sector; he shows that the returns on individual characteristics are different between men and women in this sector: there is a gain from a long career which is strongly significant and positive for men whereas it is less clear for women; the yield on the highest degrees is more substantial for men than for women, and having children reduces significantly the hierarchical coefficient for women whereas it can increase it for men. Men employees come to value better their characteristics and obtain more advantageous hierarchical levels.
than women do. We can estimate fixed wage inequality between men and women at +7% for men in French market banks; bonus are however much higher for men than for women (+63%, according to Godechot, 2004).

3. The main reasons behind the rise in inequalities

Godechot [2013] shows that the wage distribution in the French financial sector significantly stretched between the mid-1990s and 2007. Those earning the largest wages, hence 0.1% of the French population, received 1.2% of the total payroll in 1995 and 2% in 2007 and half of this increase went to the financial sector [a phenomenon which is similar in the UK and the USA]. According to him, all indicates that this movement is the result of the “financialization of finance”, that is to say the growing influence of financial markets in the activities of banking and financial intermediation. Indeed, it seems to be strongly correlated with financial conditions (boom of the mid 1980s, setback consecutive to the crash of 1987 and to the Gulf war, boom in the second half of the 1990s followed by the 2002’s recession, boom of the mid 2000s) and the volume of transactions, as well as a heavy weight of the “financial markets seniors” within the wage elites of the financial sector.

3.1 Exogenous and partly-endogenous determinants of inequalities in the financial sector

Some explanations of the increase in inequality in the French financial sector are not specific to the financial sector per se but refer to technological change and on-going globalization. Their effects on income distribution have been well analyzed [see Meunier, 2007], especially the contraction of the lowest wages and the increase in rewards given to knowledge business. Indeed, according to O. Godechot, some correlations exist between the growth of inequality within the French financial sector during the last 10 years and the finance specific mode of remuneration: in 2001, considerable bonuses were granted after the excellent year 2000 on the market; the 2002 recession led to a stabilization of the inequality ratio, and the new financial euphoria of the mid-2000s increased it again.
Certain features of finance reinforce these effects. Indeed, finance is a service industry, at the heart of the economic system and which addresses financing, risk management and exchange of property rights. Thus, it is deeply linked to the economic world’s upheavals. The opening of the French economy has greatly increased the need for this type of service, and finance has become both the cause and the consequence of economic development. Similarly, globalization has boosted capital and currency trade, in a context of high inflation of financial assets. Yet, there is a strong link between assets prices and investment banking revenues (often expressed as a percentage of the value of these assets), such a development has had, thus, a strong impact on the level and the distribution of wages in the sector.

Indeed, the growth of volumes of traded shares has given a very favourable impetus to the financial industry’s profitability: it has caused a strong increase in commissions, brokerage, trade margins and it even triggered profits from speculative activities. With bonuses indexed on firms’ profits (and covering only a small handful of employees), they increase sharply during booms, thus raising inequalities during these periods. Similarly, a slower rate of growth or even a stagnation or decline in trading volumes may compromise the health of business finance and thus bonus distribution. O. Godechot (2004) studies the evolution of the top 10 remunerations at Société Générale during the 1990s: the sudden increase in remuneration in 1993 was probably the result of an exceptional year on exchange products (speculation around the EMS crisis), whereas lower revenues paid in 1994 were both the result of the disappearance of the exceptional situation on the foreign exchange market and of the bond market crash; the continuous increase from 1994 to 2000 is parallel to the continuously increasing volume of transaction in equity derivatives, whereas lower bonuses in 1998 was a direct consequence of the Asian and Russian crises that forced Société Générale to provision for losses and for the emergence of new risks. Finally, the decrease of 2001 and 2002 was the product of the economic downturn on the stock and derivatives markets.
As a conclusion, the swings in the remunerations of the financial actors would fit the neoclassical theory: financial sector employees would be largely paid because they operate in a high-tech, high-growth and essential-to-the-economy sector. Inequality in the distribution of wages would result from heterogeneous employees receiving their fair share, which would for some of them reflect the extremely high productivity of their human capital. The latter would depend on the heterogeneous jobs offered by the financial sector.

3.2 The own characteristics of the financial sector

The French financial sector feeds its own inequalities because of the structure of the banking model and functioning.

First, the structure of a universal bank model gives rise to inequalities as it mingles very different jobs, activities, hence different skills and wages. Indeed, the model of universal banking has encouraged speculative excesses and thus excessive salaries. Under the implicit protection of the French State66 and subjugating its retail activities, the universal bank has used its leverage on primary risks. Under the pressure of quarterly results, priority has emerged over cash income: the pressure of quarterly results has biased the behaviour of the banker towards market activities with immediate cash transactions, relegating risk and deposits managers to the back office. Bonuses have exacerbated this phenomenon by influencing securitization specialists, who aim at reaching higher immediate profits for the firm and, hence for themselves.

Second, human capital, which is necessary to practice a profession in this sector, seems to play a role in the wage distribution, but it is still unclear whether it is the financial sector per se which produces extra-salaries in comparison with other sectors, or it is a sector where the yield structure of degrees is different from other sectors. On the one hand, the pay differential between men and women, which is particularly high (+45% for men) is due more to the bonus distribution than to the

66 In chapter 2, we reported the longlasting influence of the French State on French large private banks.
fixed salary. This financial industry is indeed a world where gender discriminatory practices are common and numerous. For instance, Duguet and Petit [2003] showed that differences between men and women in access to hiring interviews are mainly due, for young women, to expectations of births.

On the other hand, Godenhut [2011b] shows that the degree produces significant effects on the wage equations of the French financial sector, especially on the fixed salary. The pay scale according to the degree is more pronounced in the banking sector than in other sectors: engineers and administrative staff in other sector earn 40% more than average graduates, whereas those in the banking sector earn 60% more. Graduates of French “Grande Ecoles”, particularly engineering ones, receive much higher salaries; the monopoly of management functions in market-based banks (heads of trading rooms) by engineers (especially those from Polytechnique) helps to increase wage differentials at the highest level of the hierarchy.

However, differentiation according to the job or task is surprisingly strong in the French financial sector. It reinforces the argument that financial market professionals, including traders and sellers, would receive substantial amounts of wages and bonuses which are then more related to their professional position than to their human skill. Indeed, there is a wide variety of positions in the banking and financial sector, from the back office to the front office, from financial expertise to financial engineering, etc. From one position to another, the structure of human capital and skill can be very similar but with very large inequalities in terms of pay. Markets front office executives, traders and salesmen receive (at graduation, age, gender and seniority controlled) approximately 2.9 times more than supports executives (back office jobs, human resources, accounting and management control), 2 times the amount earned for investment front office jobs (mergers and acquisitions), 1.5 times more than the executives. Financial market managers, people generally called “front offices” (traders, financial analysts, salespeople, portfolio managers, brokers, risk managers, financial engineers) are likely to
capture the impact of the growth of financial markets on wages within the financial sector. Godechot [2004] shows that most of the differences in pay are due to differences in bonus distribution among the various trades. The average bonus for traders and salesmen is four times the average fixed wage, 2.5 times for financial engineers, 1.3 times for origination business and 0.24 for engineers in market organization. Furthermore, traders and salesmen responsible for equity derivatives earn much more than their counterparts in charge of rates, interest rate derivatives, foreign exchange and commodities. In equity activities, growth of earnings permits to increase enrolment of juniors who start at the bottom of the bonus hierarchy and to reward largely the headed more senior elite.

Another argument that may account for anomalies in the wage distribution can relate to incentives [see Godechot 2011b and Meunier 2010]. According to the principal-agent theory, when one is in a situation of asymmetric information on the effort made by the employee, it may be optimal to pay an incentive, based on an outcome indicator, to encourage him/her to maximize his/her effort. However, it is more efficient to strongly encourage the employee to make an effort when the outcome indicator informs well on his/her level of effort. In the financial sector, performance indicators are much more efficient for market front officers than for back officers. Therefore, bonuses are higher in front office than in support functions and wages are much more unequal among the former than among the latter.

Last, an important element that may explain the very high incomes in the French financial sector and the subsequent inequality is the rent captured by employees. Indeed, the bank has little means to preserve the know-how of the employee (in the form of patents or restrictions on the labour market), because financial products, even the most sophisticated ones, are not patentable and, once developed, their production is easily transferable through employees who have the know-how. Therefore, financial sector employees gain a strong position because of the ease of transferring the intellectual capital of the firm. O. Godechot calls this model the “hold-up” [Godechot, 2006a]: the best paid in a financial company are not
the ones who have the most advanced skills (e.g. statistician capable of modelling financial products) because their knowledge is well codified and, thus, reproducible; the best paid in a financial company are rather the heads of a trading room that can implement the complex set of such assets. The mechanism of the "hold-up" is actually the mastery of transferable assets that provide the means to threaten the financial company for damages if it does not accept a renegotiation favourable to the employee. This leads to a different view of the labour market in the financial industry: less than a market of people and personal skills, it is a market for corporate assets that are collectively produced and taken by people who organize their transfer. Remuneration and inequalities that emerge from this system are thus very specific to this sector.

4. Solutions to reduce inequalities in the French financial sector

In the aftermath of the recent financial crisis, bonus remunerations have been harshly criticized by the public opinion and several EU governments have decided to crack down on excessive remunerations in the financial sector. If the bonus taxation is the most popular and mediatised reform that the EU Commission and France attempt to settle, there are other manners to limit very high remuneration and reduce remuneration inequalities within the French financial sector. We will first focus on the theoretical ways to reduce such inequalities and we will then describe the actual French regulation framework and proposals to do so.

4.1 Theoretical solutions to reduce inequalities and limit excessive remunerations

Many studies have been published concerning ways to regulate excessive remunerations and, in this way, to narrow the gap between high and low salaries within the financial sector. Nonetheless, these studies do not focus on the French case but tackle on general solutions. First, the main solution that has been discussed is the issue of bonus taxation; only a few models have been developed to determine the optimal path of taxation, notably Besley and Gathak (2011) or Von
Ehrlich and Radulescu [2012]. Another way of regulating is to reduce the incentives, which drive most of excessive remunerations, or increase the competition within the financial sector, which might homogenize the wages. These issues have been tackled by a report on the future of finance by the London School of Economics [2010].

4.2 The French regulatory framework and propositions to reduce inequalities

France has been quite a pioneer in taxing bonuses and regulating its financial sector, though the first purpose was not the reduction of wages inequalities. Such issues had previously been discussed in international committees (London and Pittsburgh G20 summits) but France has been the first to crack down on them. Since its creation in 2010, the ACP (Prudential Supervision Authority, see chapter 2 and 5) brought to the pillory excessive compensation and bonus distribution in the French financial sector, through its mission of risk management. It notably enforced the 2009 CRBF regulation (Committee on Banking and Financial Regulation):

- the payment of a portion of the variable remuneration must be spread over at least three years following the year of the variable remuneration
- a significant portion of the variable compensation should take the form of instruments that are indexed in order to create value over the long run [shares for instance].

These rules, supplemented by professional ones, have been the subject of a specific control for the six French banks that had been assisted by the State through a “SPPE”67 funding during the world financial crisis. Indeed, Michel Camdessus has been promoted “pay controller” in December 2009 in order to scrutinize “compensation systems of market professionals and the 100 highest individual compensations of market professionals” (see Camdessus and Manas, 2010) within these six banks.

France passed an “Arrêté” on traders’ bonuses in late 2010 [see also chapter 5], in accordance with the final text of the European Directive amending the Capital

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67 SPPE : « Société de Prise de Participation de l’Etat » [Company of State Equity Investment].
Requirement Directive ("CRD") as regards capital requirements for the trading book and for re-securitisations and the supervisory review of remuneration policies (known as “CRD3”). The European Commission has also given some recommendations concerning bonus’ regulation, that came into force in January 2011 and reinforce the CRBF regulation; the new EU rules envisage indeed the deferral of 50% of bonus for three to five years, half of the upfront bonus payment should be paid in shares or other securities, and the cash portion of variable remuneration should be limited to between 20% and 30%.

Many other propositions have been made by several French politicians or think tanks in order to regulate financials’ pay (see Portier, 2010), notably Institut Montaigne (2007), the Houillon report (2009) and the Ayrault proposal (September 2009).

Concerning remuneration committees, a proposal of the Houillon report is to force boards to consult shareholders on executive compensation; this proposition follows the recommendation of Institut Montaigne to adopt the British “say on pay” rule, which “moderates any unreasonable appetites”. This consultative dimension would complement the transparency approach and could promote some normative values of self-restraint.

About capping compensation amounts, the Ayrault proposal advocated a total compensation cap for executives of public companies that reaches 25 times the lowest salary in the firm (in 2007, the CEO of CAC 40 financial firms received on average the equivalent of 400 full-time minimum wage, this report reached sometimes 1000 minimum wages).

Last, in terms of variable compensation, Ayrault proposal suggested, more radically than the European Parliament in 2010, to replace the stock options as part of their “original missions, that is to help companies that come to create and support the risk taken by new entrepreneurs”; it suggested to authorize them only in companies that existed for less than 5 years.
5. Conclusion

In the aftermath of the financial crisis of 2008-2009, there was a remarkable preoccupation in the French press with wage inequalities and excessive pays in finance. Indeed, French press has highlighted the shortcomings of current concepts and methods of financial sector employees’ compensation and has made them partly responsible for this unprecedented financial crisis. More than creating a passionate debate, this crisis has revealed the growing inequalities in the French financial sector. The shock of realizing the notorious income inequality in this sector and the uneven distribution of property rights allow to detect a class structure within French finance (see O. Godechot, 2004). The employees with the most important and transferable assets can legitimately claim for the firm’s profits as a result of their assets’ return, at the expense of those less endowed. This unequal mechanism of wealth sharing is rooted in the financial work organization. Last, even if France has made a great leap forward by being the first to crack down on bonus, the recent “Kerviel affair” – Jerome Kerviel was prosecuted for having lost 5 billion € on behalf of his employer, Société Générale - shows that work remains to be done in terms of reducing incentives and risk-appetite which lead to excessive risk taking. Corporate governance in French financial firms remains an open issue.
15. **The monetary transmission mechanism: the French case**

Paul Hubert (OFCE)
Mathilde Viennot (ENS Cachan & OFCE)

1. Introduction

The analysis of the adjustment of interbank and lending interest rates and credit volumes to changes in the European Central Bank (ECB) rate is a crucial element of the monetary policy transmission mechanism, especially in France where financing of the economic activity is primarily performed through the banking system (see chapter 11 of this Report). Indeed, commercial banks play an important role in this transmission of monetary policy, through their lending rates and deposit rates (interest rate channel) or through their loan supply (bank lending channel). The articulation of these two channels is meaningful for the central bank because the loan supply and hence the transmission of monetary policy to credit conditions hinge on the speed and size of the pass-through from policy-controlled interest rates to money market rates and bank interest rates. According to Bernanke and Blinder (1992), the pass-through from the central bank interest rate to commercial bank interest rates is expected to be positive, whereas the pass-through to lending and deposits volumes is expected to be negative because of the arbitrage with bonds. The results highlight a positive pass-through to lending and deposit rates while banking volumes do not react. The transmission of monetary policy therefore appears impaired.

Nonetheless, the worldwide financial crisis of September 2008 may have affected these channels, since the financial net worth of borrowers and lenders have sharply decreased. It is thus interesting to investigate whether this financial shock may have triggered a break in the monetary transmission mechanism in France.
This chapter is organized as follows: section 2 provides a review on the literature related to the interest rate and bank lending channels of the monetary transmission mechanism, especially articles that have included France in their analysis. Section 3 reviews new results regarding the effect of the financial crisis on the pass-through to bank interest rates and credit volumes in France.

2. Literature review

Numerous studies have been conducted on the subject of the monetary transmission mechanism in order to identify quantitatively the several transmission channels of monetary policy. One of the pioneering studies of the monetary transmission mechanism is the article of Bernanke and Blinder (1992) which shows that the interest rate of the central bank (in their case, the Fed) is a good indicator of monetary policy because it records perfectly the variations of the Central Bank reserves. The transmission mechanism of monetary policy can thus be assessed through the impact of a change in this rate on retail rates (the interest rate channel) and on volumes of loans and bank deposits (the bank lending and money channels).

Regarding the interest rate channel, many econometric methods have been experimented and used in order to compute the pass-through between the central bank rate, money market rates and bank interest rates. First, Sander and Kleimeier (2004) use a VAR and a cointegration methodology that allow for asymmetric and threshold adjustment with a view to assessing the heterogeneity of the monetary transmission process in the euro zone; this article distinguishes the usual monetary policy approach, by which central bank sets the interest rate, from the balance-sheet approach, hence a cost-of-financing-fund approach. These approaches lead to opposite pass-through results. Burgstaller (2005) prefers VARs to VEC models with a view to computing as reliably as possible the Austrian pass-through. De Bondt (2002) bases its analysis of the retail bank interest rate pass-through on a marginal cost pricing model and finds that the interest pass-through is incomplete in the euro zone (50% at its highest within one month). Finally, Banerjee, Bystrov and Mizen (2010)
care about forecasts of future interest rates in determining accurately short-and long-run pass-through.

Another branch of the literature on the interest rate channel focuses on the determinants of such a pass-through. Mojon (2000) uses an error-correction model to analyse differences in financial structure across euro area countries and their implications for the interest rate channel of the monetary transmission mechanism; money market integration, growth of debt securities market and competition among banks seem to affect it. More recently, Gigineishvili (2011) examines the financial structure as a possible cause of heterogeneity that exists within the various monetary transmission mechanisms worldwide; per capita GDP, inflation or market volatility are found to be macroeconomic structural determinants whereas exchange rate flexibility, credit quality or overhead costs are found to be financial market structure variables that affect the interest rate pass-through. Wang and Lee (2009) also attest for the importance of market rates volatility in the transmission process from market rates to retail interest rates. Last, the recent financial crisis [2008-2010] may have affected the monetary transmission mechanism; Andries and Lecarpentier-Moyal (2012) focuses on the impact of the financial crisis on the transmission mechanism to non-financial corporations lending rates, while Blot and Labondance (2011) uses a SUR-ECM model to estimate the effect of the financial crisis on the global pass-through between market rates and bank interest rates.

The literature on the bank lending channel is less numerous than the one on the interest rate channel, notably because of a debate between Americans and Europeans upon its existence. Ashcraft (2003) minimizes this channel of the monetary transmission in the United States by showing that only the size of a bank explains its lending reaction. Indeed, the aggregate elasticity of output to bank lending is close to zero; affiliated banks are able to shield lending from a monetary contraction so the lending channel is not an important part of how monetary policy works. Nonetheless, Ehrmann, Gambacorta et al. (2001) show that Europe does have
its bank lending channel of monetary transmission and that monetary policy does alter bank loan supply.

A large volume of research has been devoted to the monetary transmission mechanism through European bank lending and to the heterogeneity of interest-rates pass-through within the Eurozone. Most of them have included France in cross-country analyses in order to compare banks rates and banks volumes reactions to a change in monetary policy. Regarding the credit channel, Chatelain, Ehrmann et al. (2003) focus on the bank lending and the balance sheets channels by showing that less liquid banks may have a stronger loan supply response; De Bondt (1999) insists on the size of the banks (bank lending channel) and on the size of the borrowers (balance sheets channel) through their impact on the monetary transmission mechanism; Favero, Giavazzi and Flabbi (1999) highlights some asymmetries within the European transmission mechanism regarding a squeeze in liquidity. Borio and Fritz (1995) study the interest rate channel through several econometrical methodologies (average cost of funding and marginal cost of funding); Andries (2012) studies the homogeneity of interest rates responses to a monetary policy impulse within European countries. Last, Cecchetti (1999) analyses the impact of the monetary transmission mechanism on inflation and output in France and other European countries.

3. Some results deriving from Hubert and Viennot (2012)

Hubert and Viennot (2012) performed benchmark estimations on the basis of the entire sample January 1999 – June 2012. They used Ordinary Least-Squares (OLS) estimations with Huber-White robust standard errors due to potential heteroscedasticity. They computed successively the effect of a monetary policy change on money market rates, lending rates (to government, non-financial corporations and households), deposit rates, lending volumes (to non-financial corporations and households) and deposit volumes.
To obtain estimates of the transmission of the ECB rate to market rates, retail bank interest rates and loan supply, the following equation is estimated:

\[ X_t = \alpha + \beta Y_t + \gamma X_{t-1} + \delta Z_t + \varepsilon_t \]

\( X_t \) is the endogenous variable which is chosen successively among a set of endogenous variables (respectively the money market rates, government debt rates, lending to non-financial corporations rates, lending to households rates, deposits rates sets for the interest rate channel and the loans to non-financial corporations volumes, loans to households volumes and deposit volumes sets); \( X_{t-1} \) is the first lag of the first difference of the chosen endogenous variable; \( Y_t \) indicates the first difference of the monetary instrument and \( Z_t \) is a set of controls that includes macroeconomic controls (inflation rate, growth rate of GDP, oil prices, government debt ratio, euro-dollar exchange rate, conditional volatility) and microeconomic French banking sector characteristics (number of MFIs, market capitalization of French listed companies, size of banking sector, capitalization, liquidity and leverage ratios); last, \( \varepsilon_t \) is the error term and \( \alpha \) the constant.

The effect of a change in the interest rates set by the European Central bank is positive and significant for money market rates, government debt rates and lending rates to non-financial corporations, implying that the interest rate channel is quite strong in France, especially in the short-term (the effect is weaker for rates with a maturity over 2 years); the pass-through to credit volumes seems to be no-significant.

The impact of the recent financial crisis (2008-2010) on the monetary pass-through can be assessed through a split-sample approach, by comparing the estimates of the pass-through before and after the crisis, and by rolling estimations which enables us to see its evolution through the entire period.

In this approach, the original sample has been split in two sub-samples (January 1999 – August 2008 and September 2008 – June 2012) in order to shed light on the impact of the financial crisis on the pass-through to bank interest rates and credit volumes. All in all, for all types of interest rates, the interest rate channel of
the monetary transmission mechanism has been transferred from short-term rates to long-term rates after the crisis. As for the bank lending channel, no clear-cut effect emerges; the pass-through to bank volumes remains almost no-significant.

4. Conclusion

This chapter focuses on two aspects of the monetary transmission mechanism in France which may contribute to asymmetries regards to other European countries. The first is the interest rate channel which corresponds to the pass-through from the ECB rate to bank interest rates (respectively money market rates, government debt rates, lending rates to non-financial corporations or households and deposit rates); the analysis of the French pass-through has shown that it was quite high and significant for money market rates, government debt rates and lending rates to non-financial corporations and that it has been quite doubled since the crisis. The effect of a shift in the ECB rate could be either immediate or delayed, depending on the different rates’ categories. The second is the bank lending channel, which appears to be far less important than the interest rate channel but still significant for loan supply to households. This supply has experienced a drop since the crisis. As for interest rates, the effect of a shift in the ECB rate could be either immediate or delayed.

If the interest rate channel is effective, the bank lending channel seems not to be: the banks have indeed lowered their rates in the aftermath of a drop in the ECB rate but do not have increased their loan supply so far. This conclusion supports the hypothesis that banks have reconstituted their capital ratio and reduced access to credit. The fact that there exists a significant pass-through only to interest rates (and not to volumes) may also explain the recent ECB policy of quantitative easing. This non-conventional monetary policy instrument, which consists in the ECB balance sheet expansion through the acquisition of assets (debt securities, bonds or riskier assets as agency debt, asset-backed securities or mortgage-backed securities) in order to increase the banking sector’s reserves and thus increase the
impact of the monetary policy on real economy in a low interest rates situation, has been indeed used recently by the central bank in order to avoid a European liquidity trap and to counter speculation in bond markets that finance sovereign debts.
PART III. RECENT DEVELOPMENTS AND CONCLUSIONS

16. THE MACROECONOMIC CONSEQUENCES OF THE FINANCIAL CRISIS IN FRANCE

Christophe Blot (OFCE)

The world economy has gone through a major global financial meltdown which triggered the Great Recession. In 2009, the world GDP decreased by 1.2%. For OECD countries, the fall in the real GDP reached 3.8%. France registered a slightly milder recession among industrialized countries since the fall GDP amounted to 3.1% in recession after a first decrease of 0.1% in 2008. The fundamental reasons behind this financial turmoil are still highly debated (Bénassy-Quéré et al., 2009) and the episode of the Great Depression testifies that these debates will certainly be still vivid for a sustained period. Besides, the precise transmission of financial shocks to the real sector (GDP, unemployment...) remains an open issue. There is indeed an abundant literature emphasising that financial crisis [exchange-rates crises, banking crises, stock market crashes] are generally associated with more severe recessions\(^\text{68}\), but only a few papers deal with the identification of the pass-through of financial shocks. Mainstream macroeconomic models are indeed ill-suited to tackle the issue of macro-financial linkages (Bayoumi & Melander, 2008). Even if it is always an ongoing area of research, theoretical effects are generally well-identified but applied economics models still fail to introduce them convincingly. This is notably illustrated by the difficulty to highlight the role of quantitative credit constraints (Blot & Timbeau, 2011) or to gauge the importance of the risk-taking channel. Moreover, most macroeconomic models fundamentally rely on linear behaviour and probabilistic “uncertainty” whereas there is large evidence that non linearity and radical uncertainty would better illustrate economic behaviour in periods of financial stress. Therefore, this contribution will avoid identifying

\(^{68}\) See Bordo et al. (2001), Claessens, Kose & Terrones (2008), Reinhart & Rogoff (2009) or IMF (2008) to name just a few papers.
precisely the channels through which the French GDP has been impacted by the crisis\textsuperscript{69}. It will rather adopt a narrative approach.

According to Spilimbergo et al. (2008), the financial turmoil was characterized by three shocks – a shock on financing conditions, a wealth shock and a rise in uncertainty – that dragged down internal demand. The international dimension of the crisis gave also rise to a sharp decline in world trade, which has then originated an additional shock. Starting from this, the rest of the paper is organized as follows. We first review the size of the four shocks that hit France during the crisis. Following Blot & Timbeau (2009) we then describe the main developments of the French macroeconomic variables during the Great Recession. Finally, the last section concludes with the consequences of the crisis on public finances. For the rest of the paper, we focus on the economic and financial developments during the 2008-2009 period. In this way, we only take into account the situation resulting from the subprime crisis. Even if this episode of the crisis certainly will have long-lasting effects, it helps avoiding to mix economic consequences of the subprime crisis with effects resulting from the sovereign debt crisis.

1. Four shocks ...

According to the “official” story, the triggering event of the financial crisis was the announcement made by the French bank BNP Paribas, in early August 2007, that it was unable to assess the net asset value of several investment funds\textsuperscript{70}. Even if problems in the US mortgage markets had already been recognized\textsuperscript{71}, the statement of the BNP made it clear that the rise in the delinquency rates on subprimes loans, which had already affected the CDO (collateralized-debt obligations) market and ABS (asset-backed securities), would not be painless for the banking system. Starting from here, confidence started to decline in the interbank market as it was attested

\textsuperscript{69} This task has been undertaken by Bricongne, Lapège and Monso (2011). Their results will be exposed in a subsequent paragraph.

\textsuperscript{70} This is notably the description made by Hakkio and Keeton (2009).

\textsuperscript{71} See for example the BIS (2007).
by the continuous rise of the spread between Euribor rates at various maturities and OIS (Overnight interest swap). The financial turmoil entered then a new phase of acute tensions after Lehman Brother went bankrupt in September 2008. Banks faced a liquidity squeeze and a subsequent surge in their cost of financing. Stock markets collapsed, mainly driven by the fall in the market capitalization of banks. For a few weeks, the entire world financial system entered a period of radical uncertainty. A complete collapse of the banking system has only been avoided by the interventions of central banks, which provided needed liquidities, and by the rescue plans implemented in emergency by governments. Despite these interventions, the economy suffered from three shocks which were directly related to the financial turmoil.

One shock came from the situation of the banking system which suffered from a rise of their cost of financing. It must be noticed that this shock was not mainly passed-through a rise in the retail interest rates but mostly through a tightening in the credits standards\textsuperscript{72}. Supply of credit may indeed be constrained by several factors such as the costs related to bank’s capital position, the access to market financing, the banks’ liquidity position and the general or specific economic outlook. The bank lending survey carried by the Banque de France illustrates this point (figure 1). It clearly appears that credit standards have reached unprecedented peaks in 2008. Unfortunately, this indicator is not available for a long period so that it is impossible to assess the size of the shock in comparison with others historic episodes of financial stress.

The crisis originated in the US housing market as prices started to decline in 2006 leading to a negative wealth shock. The decrease in wealth was also amplified by the sharp decline in stock markets. In France, the decline in housing prices started later and was short-lived (figure 2). The main source of the negative shock

\textsuperscript{72} In practice, a restriction in the supply of credits corresponds to a situation where credit standards are tightened either through a rise of the margins on average or riskier loans, a rise in collateral requirements or non-interest rate charges.
stems from the fall in stock prices. It must be stressed that this shock cannot be considered as an exogenous shock since it reflected an endogenous reaction of asset prices to the situation of the banking system and the expectation of the future downturn. The total market capitalization has been reduced by nearly 60% from July 2007 to March 2009. Consequently, the financial wealth of French households lost 30 percentage points of GDP in 2007 and 2008.

Figure 1. Credit standards for France

Source: Banque de France [BLS].
Note: a rise in credit standards means that credit conditions are tightened.
Then, recent analyses have pointed out to the role of uncertainty as an important driver of downturns. One common way to measure uncertainty is based on the volatility of the stock market index. The volatility of the CAC40 index is illustrated in figure 3. One can notice that there was indeed a surge in the volatility following the collapse of Lehman Brother. As for credit conditions, this episode was seen as a strong change in the perceptions of risks by investors. The peak of uncertainty reached record levels, which have not been seen during the dotcom crash. The decrease in uncertainty was then very progressive and new peaks were then observed when the sovereign debt crisis erupted in 2010.

Sources: Banque de France, Datastream.

73 See Bloom (2009) for example.
74 Gambacorta, Hofmann and Peersman (2012) suggest to measure this «fear index» by using implied volatility index (VIX).
Finally, the highly international dimension of the crisis should not be ignored. The tightening of credit standards, the decrease in wealth and the rise in uncertainty have been observed in nearly all industrialized countries. It led to a strong negative demand shock everywhere, which gave rise to an additional channel through which the crisis has been passed-through. World imports decreased which was reflected in external demand addressed to French exporting firms (figure 4).

Figure 3. Uncertainty

Source: Datastream.
Figure 4: An external trade shock

Sources: IMF and OFCE.
2. ...and a crisis...

It is now widely recognized that financial crises are associated with deep and long recessions. The burst of the subprime crisis did not make an exception. The French economic activity decreased sharply for four consecutive quarters in 2008 and 2009. Consequently, the economy went in recession for these two years (table 1). We first propose to illustrate the transmission channels of the four shocks described above on the French economy. It will indeed help to analyse its deepest recession since the Great Depression. Then, we will analyse the consequences of the crisis on labour markets.

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<th>Table 1. French GDP and its components</th>
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*Source: INSEE.*

2.1. An historical recession

The first channel through which activity has been depressed comes from the rise in the cost of financing which has triggered a demand slowdown [private investment and consumption]. Then, as banks were at the heart of the meltdown, they played a large role in the transmission of the crisis, as it is put forward by the literature on the bank-lending channel. From the very beginning of the troubles in
the banking system, there was a fear of a credit rationing that could have led to a sharp contraction of spending. No proof can be made of such a situation since it is always tricky to disentangle between supply and demand side effects in the credit markets. But it has nevertheless been recently found out that negative shocks on credit standards caused a contraction of the output\textsuperscript{75}. The effect is equivalent to a rise in the cost of borrowing since a tightening in credit standards represents a situation where banks become more reluctant to grant loans. It then puts a downward pressure on internal demand. Besides, the decrease in housing and stock market prices have also reduced spending either through a wealth effect or indirectly through a reduction in the value of collateral, which amplified the asymmetry of information and the cost of external finance. Finally, the rise in the uncertainty, generally captured by a jump in the volatility of equity index, leads firms to delay or postpone important hiring and investment decisions [Bloom, 2009].

Consequently, the rise in the cost of external finance and of the uncertainty combined with the drop in wealth led French households and non-financial corporations to cut down spending.

This was clearly mirrored in the large fall in investment decisions. The investment rate of non-financial corporations dropped by nearly 2 points between 2008 and 2009. For households, the decrease of housing investment rate reached 1.4 point. It must also be stressed that housing investment had already slightly decreased in 2008 compared to 2007. The total contribution of investment to recession, including public investment, established at 2.7 points. Households reduced spending since consumption decreased slightly for five consecutive quarters whereas from 2001Q2 to 2007Q4, the average quarterly growth rate of households’ consumption increased by 0.5%. The negative wealth effect combined with the increase in uncertainty, and notably the fear of unemployment, induced a

\textsuperscript{75} See De Bondt et al. (2010) for an application to the euro area.
rise in the households’ saving rate which gained one point (from 15.4% of real disposable income to 16.4%) between 2007 and 2009.

Therefore, the bulk of recession came from the fall in internal demand. In 2009, over a 3.1% reduction in GDP, 1.6 percent of GDP (i.e. over half) was due to domestic demand. It must be stressed that the negative impact of the downward adjustment of domestic demand was dampened by the public sector. Public consumption and public investment indeed respectively increased by 2.6% and 2.5% in 2009 compared to 2008. The rest of the recession was attributed to the net external trade (-1.2 percentage point of GDP) and to changes in inventories (-0.9 percentage point of GDP). In line with the slump in world trade, French exports collapsed. Between the peak and the trough, the fall amounted to 15.6% whereas, during the same period imports decreased by 11.9%. It may also be stressed that the negative contribution of stocks reflects the larger negative adjustment of supply [GDP] compared to the decrease in demand.

Starting from the NiGEM model, Bricongne et al. [2011] have tried to gauge precisely the impact of three of the four shocks mentioned above on the GDP. More precisely, they compute counterfactual scenarios to simulate a situation without crisis. This approach is based on a set of hypotheses on the development of some exogenous variables of the model and on residuals of the different equations describing the behaviour of households’ consumption, firms’ investment and external trade. The counterfactual scenario corresponds to a situation where stock and house prices stabilized at a pre-crisis value, where they set the path for interest rates and risk premium and where some of the equations’ residuals are fixed at a value equal to the 3-quarter average before the outbreak of the crisis.

Despite the several limits of the exercise, it remains interesting for a cross-country comparison. This is precisely what is done by Bricongne et al [2011] since they compare the contribution of wealth effect, cost of financing and world demand

76 The impact of uncertainty is recognized by the authors but not captured by their model.
to the fall in GDP for seven countries. Then it must be stressed that the total contribution of a given shock depends on the sensitivity of the economy to shock and on the size of shocks. For example, for France, in 2009 they estimate that the reduction in wealth (financial and housing) explained -0.6 point of the total cost of the crisis that is estimated at -4.2%. The contribution of the wealth effect is only slightly stronger in Spain where the housing market has adjusted more severely. Then, for France, the cost of the crisis in 2009 was mainly explained by the contribution of the shock on cost of financing [-1.6 point], the contribution of inventories [-1.7] and “unexplained” components [-1.9] reflecting the residuals of the equations of consumption, investment and external trade. The authors assign the contribution of the residuals of the equation for internal demand to financial imperfections which are usually badly captured by macro models. But by this way, it is more a question of interpretation rather than a strongly founded representation of the different transmission channels which are based on financial imperfections (balance-sheet channel, bank lending channel, risk-taking channel...).

The exercise of estimating precisely the cost of financial crisis is still a tricky issue and the recent crisis offers a new illustration. It remains that the French economy has been strongly hit by the financial turmoil that followed the subprime crisis and the collapse of Lehman Brothers. Three years after the technical end of the recession, the GDP had still not recovered its pre-crisis level and massive unemployment had not been curtailed.

2.2. Labour market

The decline in production has then rapidly entailed an adjustment on the labour market. Employment started to go down in 2008Q3 and it did not recover until the beginning of 2010. The adjustment was realized in several steps. The drop in demand and the surge in uncertainty on the macroeconomic perspectives have led

77 France, Germany, Italy, Spain, UK, the US and Japan.
78 The cost of the crisis is greater than the fall in GDP since some positive shocks or policy reactions helped to cushion the impact of the crisis.
firms to reduce first temporary employment. From a peak at 674 000 persons in 2008Q1, the temporary work was lowered to 439 000 four quarters later. Then firms reduced fixed-term contract as it is illustrated by a rapid increase in the new declarations of unemployment which was explained by the end of fixed-term contracts. But it remains that finally, the bulk of the adjustment came from the decrease in permanent employment. Actually, the impact of a recession on fixed-term contracts’ employment may be ambiguous, as this kind of contracts allows for a more flexible management of labour force. Then, on the one hand, employment with fixed-term contracts may be more easily reduced but, on the other hand the uncertainty leads firms to resort more frequently to fixed-term contracts rather than permanent employment. Overall, the turnover of employees in fixed-term contracts has increased and may even progressively substitute to permanent employment. Eventually, the total destruction of employment amounted to 365 000 persons in 2009 and still 20 000 in 2010.

Turning now to the unemployment rate, it inevitably increased from 2008Q4 to 2009Q4 (figure 5). It reached a first peak at 9.6% and then stepped back temporarily. When decomposing the structure of this unemployment rate, the youngest have been more strongly hit. The increase in the unemployment rate for people under 25 years old have increased earlier and it increased from 17.2% to 23.7%. As far as the macroeconomic outlook deteriorated it became harder for young graduates to find a job since before downsizing firms started first to reduce new hires. The bulk of the unemployment concerned nevertheless people between 25 and 49 years old. Finally, we may notice that whereas the unemployment rate of those under 25 years old moved back at the beginning of 2010, it was less marked for the unemployment rate of those over 50 years old. Thus, the probability of older people to be unemployed is less than the one for the youngest but the probability to remain unemployed as the crisis installs may be higher. As a corollary, the length of unemployment also changed with the length of the crisis. The deepest and the longest the crisis, the longer unemployment (figure 6).
However, it must be stressed how dramatic this rise of unemployment has been; it has been only partly cushioned by firms\textsuperscript{79}, that have as far as possible resorted to internal adjustment rather than lay-offs. It may have taken different forms. In the industry, French firms have indeed the opportunity to resort to partial unemployment. In such a case, the length of activity is reduced but there is no direct reduction in employment. Then firms also used others forms of flexibility by reducing the numbers of overtime\textsuperscript{80} or by imposing employees to close out their work-time management plan or their days of reduction of working time\textsuperscript{81}. These different solutions resulted in a reduction of hours worked. Consequently, it led to a sharp reduction in labour productivity which grew below its former trend. In 2008 and 2009, the annual growth rate of labour productivity decreased by 0.7\% and 1.9\% respectively whereas Cochard, Cornilleau and Heyer [2011] estimated the potential trend for the productivity growth to be at 1.1\%. But it may also be taken into account that financial crisis could have consequences on potential output so that it could also lead to a lowering of the growth rate of the labour productivity. This may work through various channels and notably through hysteresis effects on the labour market (Chetouane, Lemoine and de la Serve, 2011). It rests that this issue remains highly uncertain so that it would be hazardous to provide any estimate of the consequences of the crisis on the structural unemployment rate.

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\textsuperscript{79} See Cochard, Cornilleau and Heyer [2011] for details and for a cross-country comparison.

\textsuperscript{80} This way of adjusting working time has yet been impaired in France by the tax reductions on overtime which had been implemented in 2007. See Heyer [2012] for an assessment of the measure.

\textsuperscript{81} The legal working time is indeed 35 hours per week but in practice, the working time has not been reduced on a weekly basis for a part of the workforce. In such a case, employees benefit from more days off.
Figure 5. Unemployment rate

Source: INSEE.
Figure 6. Length of unemployment

In thousands

Source: Pôle Emploi.

3. ... partly dampened by the fiscal policy

Finally, the financial crisis had also consequences on public finances. As it was highlighted by Bricongne and al. (2011), it must first be stressed that fiscal policy helped to cushion the shock so that in 2009, the cost of the crisis would have been 1 point higher without the intervention of fiscal policy. Actually, the stabilizing effect of fiscal policy resulted both from the effect of automatic stabilizers and from a positive fiscal impulse. Several measures have been indeed undertaken by the government to cushion the shock beyond the automatic stabilizers. These measures were estimated at 0.1% of GDP in 2008 and 2 points of GDP the year after (OFCE, 2010). Thus, from 2008 to 2009, the net government lending of the general government went from 3.3% to 7.5% (figure 7). These developments in deficits have then led to an increase in public debt which went from 64.2% of GDP in 2007 to 79.2% in 2009 and it kept rising the years after, hence raising doubts about the
sustainability of public finances. Even if it has not been a real preoccupation for France so far, compared to the situation of Greece, Portugal, Spain, Ireland or Italy, it led the French government to reverse the fiscal stance from 2010 and mainly in 2011, which paved the way for a new growth slowdown. Consequently, France is now at the edge of a new recession ruling out the possibility of a return to a pre-crisis level of the GDP and the unemployment rate.

Figure 7. Public deficit and public debt

% of GDP

Source: INSEE.
CONCLUSION

In many respects, the current crisis has highlighted the unprecedented scale and nature of the challenges facing the banking system, which were fully appreciated by the French government early on. The recommendations in the report submitted by the Minister of the Economy in 2008 stressed the need for institutions to strengthen their control over their market operations. For its part, the General Secretariat of the Commission bancaire, which has sought to verify the implementation of these recommendations, began to work with the industry to help improve the management of overall risk. To ensure that this is effective, crisis scenarios were drawn up and developed covering every kind of risk, based on assumptions and methodologies that were adapted to the situation of each institution. Corporate governance is also at the heart of the Basel 2 prudent framework, which came into force for all banks on 1 January 2008. After it had given authorization in 2007 to the leading banking groups to use internal systems for measuring credit risk and operational risk, the Commission bancaire set an ad hoc requirement for core capital [tier one ratio]. Finally, more than ever, the management of liquidity risk was a key issue for French institutions, which has led to new regulations, Basel III, which will be phased in starting in 2013.

Faced with the challenges arising from the financial crisis, cooperation has been intensified at the international, European and national levels. In terms of international cooperation, the Financial Stability Fund (FSF) has contributed to improving the quality of the information provided to the markets about assets affected by the crisis. Moreover, the search for greater transparency on financial data, going beyond the FSF, came to be an important priority for international bodies, including the G20; it has also mobilized the regulators in different countries who, under the auspices of the Committee of European Banking Supervisors (CEBS), took steps to ensure that institutional practices evolve in the desired direction. The discussion begun in 2007 about strengthening Basel II also continued. The Basel III
accords will strengthen the prudential treatment of securitization and of the trading book, which the crisis has revealed as inadequate, but they also concern the numerator of the solvency ratio, the equity capital, and in particular the core capital (tier one). These developments should contribute to making the prudential framework more robust. In the same spirit, the work on managing liquidity risk, which has served as the basis for the renovation of French legislation, has led to the development within the CEBS framework of guidelines that should help encourage the cross-border banking groups to strengthen their internal controls, while also promoting a convergence between regulatory approaches. These initiatives illustrate the central role of supervisors in setting these kinds of requirements. From this perspective, although market discipline can help to promote the achievement of a certain balance in terms of capital adequacy, it cannot replace the supervisors. The need for enhanced cooperation in the supervision of large cross-border groups has also led to intensifying the exchange of information within colleges of supervisors set up by the General Secretariat of the Commission bancaire.

Since 2008, and following the establishment of a rescue package in the autumn of the same year, the priority for the banking and financial systems was to strengthen financial stability. Faced with a rapidly changing industry (a determination to separate retail and investment activities; the transformation of banks’ information system, including for their internal risk management and customer services; and shifting bank balance sheets towards less income from interest and more from the sale of services), the banking system has had to adapt its business and make in-depth changes, but its history has demonstrated its ability to rise to the new challenges it faces in a highly competitive international environment. Given the weak potential for economic growth, the priority is thus on recovery, in France and throughout the European Union. The banking sector may serve as one of the levers for this, in two ways: first of all, directly, because the banking system can now rely on its large international groups to contribute significantly to employment and value added, and secondly, indirectly, as the banks play a key role in financing
consumer and business projects, that is to say, the potential for growth. Faced with this new financial, macroeconomic and regulatory environment, the French financial system must again adapt to deal with the new situation as quickly as possible (see Prot, 2011). However, two threats are still present that hurt the financing of the economy, both in volumes and prices, namely, the phenomenon of ring-fencing liquidity by currency and the worsening sovereign debt crisis in some euro zone countries. French banks will thus have to cope with the economic challenge, but they can rely on both their experience since the 1980s and their international banking activity, where France undoubtedly has a comparative advantage globally.
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WEBSITES


Financialisation, Economy, Society and Sustainable Development (FESSUD) is a 10 million euro project largely funded by a near 8 million euro grant from the European Commission under Framework Programme 7 (contract number : 266800). The University of Leeds is the lead co-ordinator for the research project with a budget of over 2 million euros.

THE ABSTRACT OF THE PROJECT IS:

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation?; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?"
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