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THE CASE OF DEVELOPED COUNTRIES**

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Disintermediation or financial diversification? The case of developed countries¹

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Résumé

La mesure d'un taux d'intermédiation est un bon moyen de caractériser de manière synthétique l'importance du rôle des intermédiaires financiers dans l'économie et leur positionnement face à l'essor de la finance de marché. On observe un recul assez sensible du taux d'intermédiation financière en France sur la période étudiée, marquée par un fort développement des marchés de capitaux et un recours croissant des agents non financiers résidents aux financements désintermédiés.

Cette évolution mérite néanmoins d'être relativisée pour plusieurs raisons. D'abord, parce qu'elle découle en fait largement du mouvement d'internationalisation des opérations de financement et de placement des institutions financières (IF) résidentes comme des financements de marché reçus par les agents non financiers. Ainsi, une part de plus en plus élevée de l'actif des institutions financières résidentes est détenue sur des non-résidents et une part croissante des financements reçus par les résidents provient du « Reste du monde », et notamment des institutions financières non résidentes. Ensuite, parce que l'analyse de la formation des revenus des intermédiaires financiers confirme la transformation de leurs modes de tarification et le redéploiement de leurs activités. Enfin, parce que le choix qui se présente aux agents non financiers ne se résume pas en une alternative entre passer par un intermédiaire ou s'adresser directement au marché.

Le présent article s'attache, dans un premier temps, à analyser l'évolution du taux d'intermédiation financière en France et à l'international. Le rôle croissant du Reste du monde a comme contrepartie la baisse de la part des financements apportés par les IF résidentes à l'économie nationale. Réciproquement, les IF résidentes ont développé leurs opérations avec le Reste du monde. Un élargissement du concept d'intermédiation est alors proposé afin de dépasser le premier constat d'un déclin apparent de l'intermédiation financière. Une analyse complémentaire des revenus d'intermédiation permet de mesurer l'évolution des rémunérations perçues par les intermédiaires financiers résidents et d'appréhender les adaptations qui leur ont permis de maintenir leurs revenus.

Mots clés : Taux d'intermédiation financière, agrégats d'intermédiation, intermédiaires financiers, intégration financière internationale, diversification géographique des placements, tarification bancaire, revenus d'intermédiation, services d'intermédiation financière indirectement mesurés (SIFIM), production des institutions financières

Codes JEL : E01, E21, F36, G2

Abstract

Measuring an intermediation rate is a good way of capturing the importance of the role of financial intermediaries in a given economy and their position in the face of the growth in market financing. Results show a quite sizeable decline in the financial intermediation rate in France over the period concerned, characterised by the strong growth of capital markets and the increasing use made by non-financial agents of non-intermediated financing.

This development should nevertheless be treated cautiously, for several reasons. First, because it stems largely from the internationalisation of the financing and investing movements of resident financial institutions (FIs) and of market financing received by non-financial agents. Thus, an increasing proportion of resident FIs' assets are held vis-à-vis non-residents and a growing share of the financing received by residents comes from the "Rest of the world", mainly from non-resident FIs. Second, because an analysis of the revenue of financial intermediaries confirms the change in their price setting practices and a shift in their activities. Lastly, because the choice by non-financial agents is not only made between intermediaries and direct-market access.

First of all, this article analyses the changes in the intermediation rate in France and abroad. A growing share is accounted for by the Rest of the world, while the financing of the national economy by resident FIs has declined. Conversely, resident FIs have developed their operations with the Rest of the world. A broader concept of intermediation is then proposed in order to deal with the so-called decline in financial intermediation. A complementary view of intermediation revenue makes it possible to measure the developments in resident FIs' earnings and to understand the changes that have enabled them to maintain their revenue.

Keywords: financial intermediation rate, intermediation aggregates, financial intermediaries, international financial integration, geographical diversification of investments, banks' price scale fixing, intermediation revenue, financial intermediation services indirectly measured (FISIM), production of financial institutions

JEL codes: E01, E21, F36, G2

I. Introduction: financial intermediation called into question

Great attention has been given to the measurement of financial development with a view to linking it to the expansion of the real economy, with the most representative author of this strand probably being Goldsmith (1969). A number of studies like the late of Levine (2005) have thus shown the role that both financial intermediaries and markets can play in explaining growth, this relationship not being due merely to a reverse causality. In this respect, the latter author percentage points to the fact that more developed financial systems make it possible to alleviate the external financing constraint, whether the financing is intermediated or not. The two financing channels are not necessarily placed in opposition in this literature and can also complement each other. In the same vein, but with the aim of getting to the core of financial systems, Rajan and Zingales (1995) and also La Porta, Lopez-de-Silanes and Vishny (1999) have contributed to a taxonomy of financial systems ranked according to the importance of these two financing channels for companies and the modes of corporate governance that spring from them, while Beck, Demirguc-Kunt and Levine (2003) and La Porta, Lopez-de-Silanes and Vishny (2008) have proposed a legal basis for this taxonomy.

Financial development can be understood using two approaches: a quantitative approach which underlines the importance of an overall indicator of the development of the financial sphere (its size and breadth for instance) and a qualitative approach, which tries to shed light on the origin differentiation within this financial sphere, or its sophistication. When Focusing on the qualitative approaches to the financial sphere, one has to take a position vis-à-vis the opposition between direct financing and intermediated financing because this opposition has long been the backbone of a qualitative description of the financial sphere. For instance, it guided Gurley and Shaw in the writing of their famous book in 1960 (*cf.* the biblioCharty). This vision proved very useful in establishing a typology, which was at its height in the 1960s and the 1970s with the categories of debt economy and financial market economy. The situation has got more complicated with the growth of market intermediation⁴, but this view has still inspired recent work (Levine, 2002), where are put into competition ratios about intermediaries development (or banks alone) and others showing markets' development.

Views about the role of banks have become much more sophisticated since Gurley and Shaw (1960). In particular, Allen and Santomero (1998) underlined two functions of financial intermediaries to justify their lasting role, which are risk management and the access given to increasingly complex financial markets. One may cite for example derivatives markets, whose access is more usual for financial intermediaries than for households or companies. For this two-fold reason, in spite of decreasing transaction costs and information asymmetries, intermediation has rather increased or, at least, adapted. Far from being in opposition to one another, the use of financial intermediaries and access to markets appear to be complementary, with the increasing sophistication of markets generating new branches of activities for banks and non-bank intermediaries, and hence numerous financial innovations introduced by intermediaries (Allen and Santomero, 2001). These developments encouraged Allen and Gale (2000) to revisit the issue of the comparison of financial systems referred to above.

Studies that endeavour to divide the financial sphere into two main components, characterised on the one hand by intermediation and on the other hand by market operations based on normalized representations are less numerous. These include those made possible by the *tableaux d'opérations financiers* (financial operations tables) or financial assets accounts (Schmidt *et alii*, 1999). However, this approach was explored in France at the end of the 1980s (Monfront-Moncomble, 1989) and pursued in the reports of *Conseil national du crédit et du titre* (CNCT, *cf.* Wilhelm, 2002). The calculation of financial intermediation rates has also been picked up by the academic world (for example, Boutillier *et alii*, 2002, and Capelle-Blancard and Couppey-Soubeyran, 2003). Given the interest generated, the *Conseil national de l'information statistique* (CNIS) has proposed that this work should be taken over by the Banque de France, this time using financial accounts whose quarterly publication is now regular.

The purpose of this article is to set the calculation of the financial intermediation rate for France into the wider context against the background of the taxonomies of the financial sphere outlined above: does the apparent disintermediation indicated by the fall in the intermediation rate mean a decline in the role of financial intermediaries and a trend towards the dominance of financial markets? Indeed, on the one hand,

⁴ Mutual funds and pension funds whose management is transferred de facto to other intermediaries, among others.

we generalise the concept at the European and international level and, on the other hand, we make use of other indicators based on revenue, rather than outstandings. The second section will Focus on financial intermediation rates and their developments in France and a number of developed countries, while the third section will make the link between the growing financial integration of developed economies and the international diversification of portfolios that is its most striking consequence. This growing opening to the Rest of the world leads us to propose a broadening of the concept of intermediation, by drawing on both national accounts and balance of payments statistics, which is one of the original features of this article. In the fourth section, we examine another aspect of the diversification of financial institutions, namely the diversification of their sources of revenue, which is not completely independent from geographical diversification, which fostered investment in securities rather than loans. The fifth section concludes.

The intermediation rate represents the proportion of resident financial intermediaries (excluding financial auxiliaries), namely credit institutions, mutual funds and insurance companies, in the total financing of non-financial agents (NFAs)⁵. If we only consider the loans granted by financial intermediaries, this is a narrow definition of the intermediation rate. If we also take into account securities issued by NFAs and bought by these intermediaries, we have a broad definition of the intermediation rate. By construction, the difference between total financing received by resident NFAs and those intermediated by resident financial institutions corresponds to the financing directly extended either by resident NFAs themselves or by non-residents, whether financial or non-financial. Over the past few years, the Rest of the world has played an increasing role in the financing of resident NFAs, whereas resident financial intermediaries have substantially increased their financing to non-residents, with the amounts involved being roughly equivalent amounts. As we shall see, this growing internationalisation of financing is reflected in the evolution of intermediation rates.

II. Financial intermediation maintains its dominant position

The calculations for the developed countries under review are mainly made using national financial accounts, in the case of France the quarterly national financial accounts compiled by the Banque de France and published on its site⁶, and balance of payments (cf. Annex for the methodological aspects of the rate in France and in these other countries). These calculations aim to distinguish the proportion of financing in the form of loans, debt securities or shares granted or acquired by resident financial institutions.

To cancel out the valuation effects of the financing, cumulated flows are calculated for all operations based on initial outstandings. This amounts to a calculation “in volume terms” such as the one used in Capelle-Blancard and Couppey-Soubeyran (2003). Our article however differs from this in several respects, which explains why the calculations are not entirely consistent. In particular, the granting of financing to resident financial institutions (FIs) is not based on the implicit assumption that “*la part des titres d’une certaine nature, émis par les ANF et acquis par une catégorie d’IF donnée, est supposée égale à la part des titres de la même nature détenus par l’IF considéré quel qu’en soit l’émetteur*” (“the proportion of securities of a given type issued by NFAs and bought by a given category of FIs is assumed to be equal to the proportion of securities of the same type held by the FIs in question, irrespective of who the issuer is”). Our article does not use this general assumption, but rather sources that are complementary to national accounting data, mainly balance of payments and surveys data. The cross-referencing of these different sources is one of the original aspects of our article, which avoids using a general assumption that is questionable by its very nature.

The other main difference is that the “Rest of the world” is not considered here as an NFA but as a sector distinct both from NFAs and resident FIs. Capelle-Blancard and Couppey-Soubeyran (2003) indeed underlined the two shortcomings of this assumption: “*d’une part, parmi les concours apportés par les intermédiaires financiers résidents aux non-résidents, certains le sont à d’autres intermédiaires financiers (non résidents). D’autre part, cela suppose que tous les concours dont ont bénéficié les résidents proviennent d’intermédiaires financiers résidents alors qu’une partie d’entre eux provient d’intermédiaires financiers non résidents*” (on the one hand, among the financing granted by resident FIs to non-residents, some is

⁵ NFAs: non-financial corporations (NFCs), households including non-profit institutions serving households and general government (GG).

⁶ These series are available at: <http://www.banque-france.fr/fr/statistiques/base/cptsnatfin.htm>, intermediation rates series are via the link: http://www.banque-france.fr/fr/statistiques/base/tif_trim/html/tif_trim_fr_tif.htm

The methodology can be found at: <http://www.banque-france.fr/fr/statistiques/base/methodologie.htm>

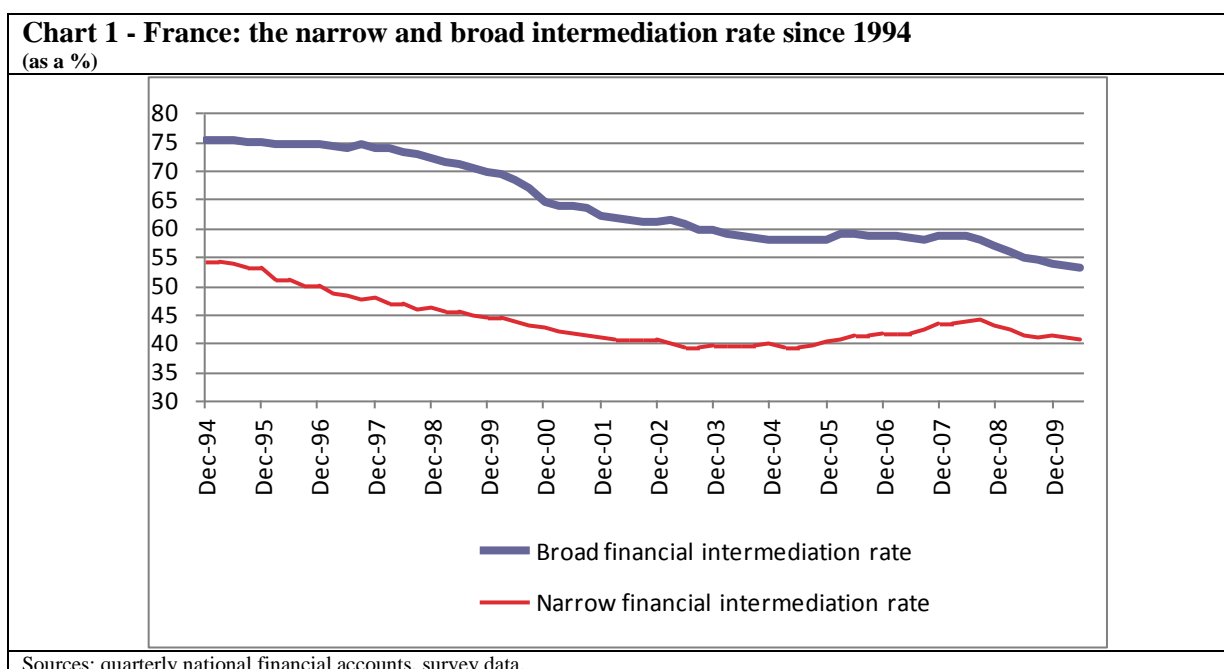
granted to other (non-resident) FIs. On the other hand, this assumes that all the financing received by residents comes from resident FIs, whereas a proportion of it comes from non-resident FIs). We will show in our article that a sizeable and growing share of NFAs' financing is granted by the Rest of the world, mainly by FIs. This is one of the other important conclusions of our article.

A. The intermediation rate appears to have stopped falling in France after several years of substantial decline

Chart 1 shows the changes in the intermediation rate (IR) over time for two different definitions: the narrow IR, including the loans of mutual funds and insurance companies (adding these two categories of resident FIs to credit institutions only adds one or two percentage points at most to the narrow IR), and the broad IR taking into account the resident FIs holdings of securities issued by NFAs (shares, bonds and short-term debt securities).

Both the narrow and broad IR steadily declined from the mid-1990s to the mid-2000s (cf. Chart 1). Between the fourth quarter of 1994 and the first quarter of 2005, these indicators thus fell:

- from 54.2% to 39.0% for the narrow IR;
- from 75.3% to 57.8% for the broad IR.



The narrow IR then rose slightly until 2008 due to the acceleration in lending granted by resident FIs to NFCs and households. It reached 43.9% in September 2008, after 39.0% in the first quarter of 2005.

Also on the decline from the end of the 1990s, the broad IR almost stabilised over the same period (58.0% in the first quarter of 2008, after 57.8% in the first quarter of 2005), with the increase in loans granted to NFAs by resident FIs almost offsetting the reduction of their net investments in securities issued by NFAs.

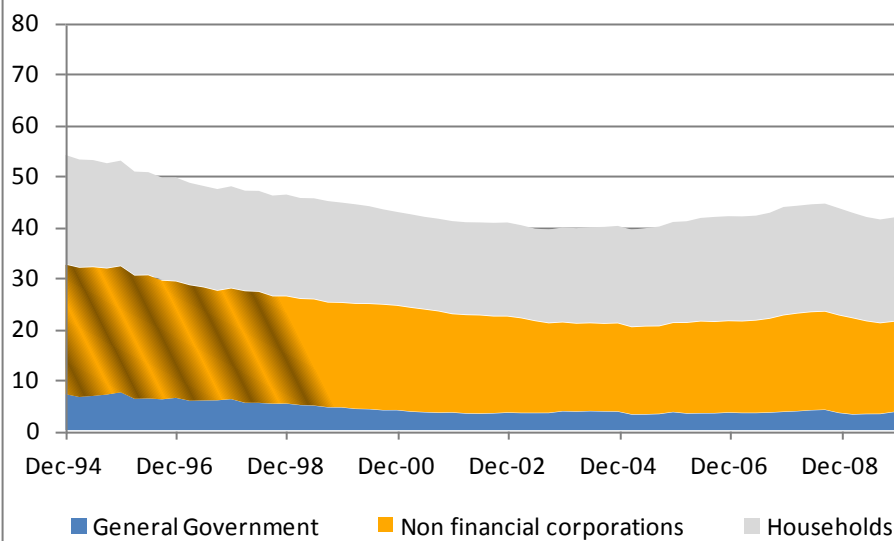
The financial crisis however saw a substantial decline in both concepts of IR from the end of 2008, with the narrow and broad IR falling by 3.4 and 5.1 percentage points respectively between the third quarter of 2008 and the second quarter of 2010. The bulk of the decline related to NFCs, which are experiencing a credit crunch in the context of a public deficit (financed almost exclusively by securities issuance) that has been exacerbated and is largely financed by the Rest of the world.

An analysis of the contribution of each financed sector (cf. Chart 2) shows that the decline in the narrow IR is mainly attributable to the smaller share of NFCs and, to a certain extent, to the fall in the proportion of general government (GG) in the total, with the share of households diminishing only slightly up to the end of

2002. By contrast, the contribution of households rose significantly between 2003 and 2008 (by around 3 percentage points), even if it remained lower than in other countries (Spain, United States, cf. below)

Chart 2 – France: narrow IR of non-financial agents

(as a % of the total financing granted to resident NFAs)

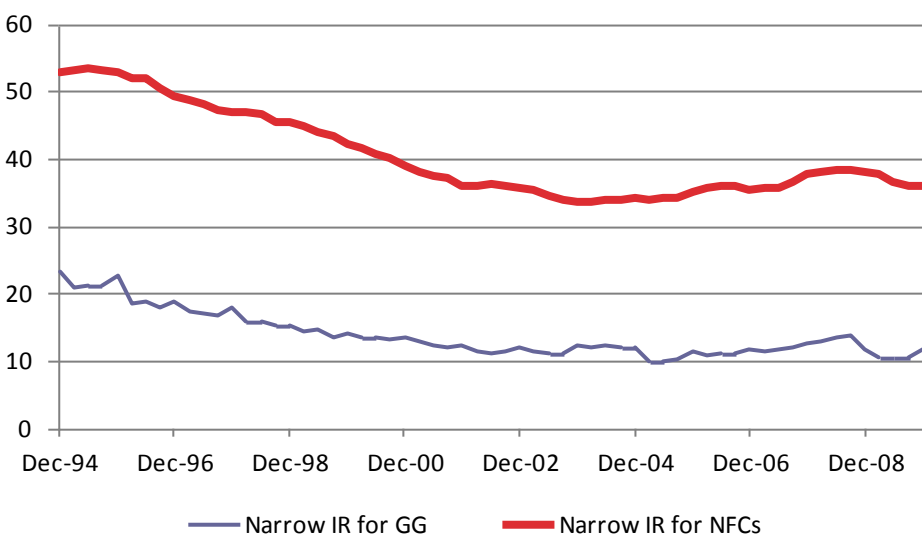


Sources: quarterly national financial accounts, survey data.

To complement the foregoing analysis, and examination of the narrow IR for each sector⁷ (cf. Chart 3) confirms that the IR fell until around 2003/2004, before rising slightly again, a rise that was interrupted by the crisis⁸. Unlike what we will see in the rest of the article, the introduction of the euro did not involve a strong downward break in 1999 for the narrow IR, for NFAs as a whole or for NFCs and GG taken separately. This was probably due to the fact that, while the introduction of the euro led to financing flows for debt securities between the different countries of the euro area, the granting of bank loans has remained predominantly national.

Chart 3 – France: narrow IR for NFCs and GG

(as a % of the total financing received by each of these resident NFAs)



Sources: quarterly national financial accounts, survey data.

⁷ The denominator is thus equal to the sum of the financing of the sector concerned only, and not of all NFAs, as was the case for the calculation of the contributions of each NFA to the financial intermediation rate of all NFAs (Chart 2). For households, the total, or virtually total, absence of recourse to markets or to non-resident financial intermediaries means that their narrow IR is close to 100%.

⁸ Let us remind that we consider IRs in volume terms, which therefore are unaffected by the substantial losses in the value of shares during the crisis.

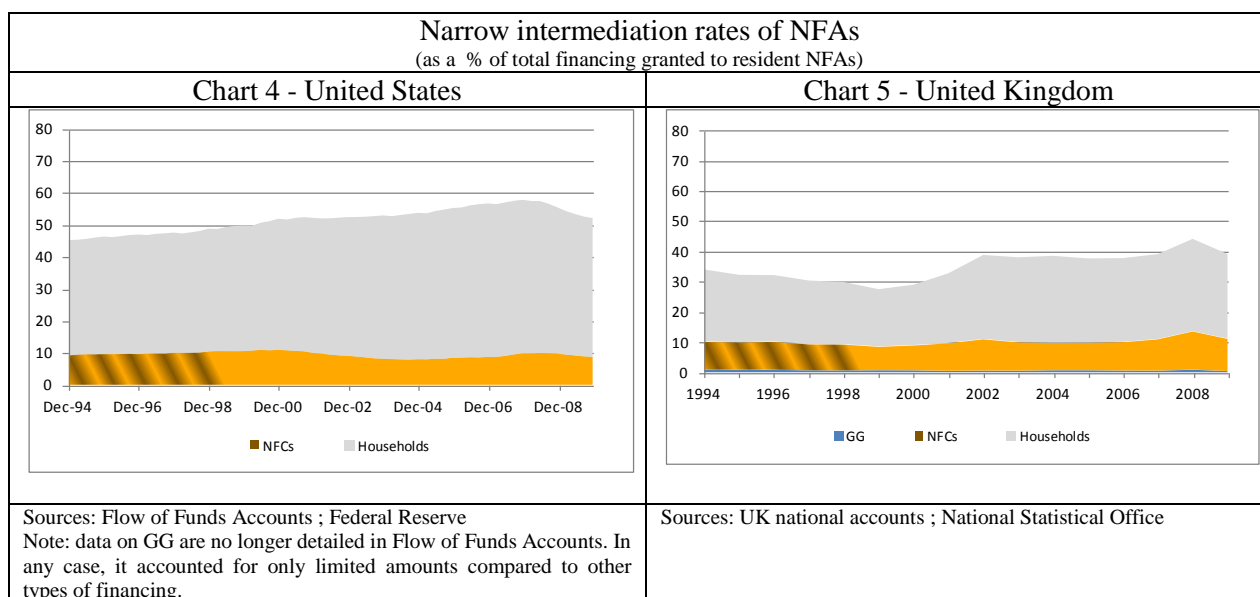
B. The intermediation rates of several developed countries have now overtaken the French rate, mainly due to household debt

Given the constraints of data availability⁹, this comparative section will be limited to the analysis of narrow intermediation rates (even if, as we will see in what follows, the developments in narrow IR should be considered relative to the broad IR, they give some interesting pointers as to the comparability of trends and the contributions of non-financial sectors to these trends). This section is also limited to four countries, namely Germany and three other countries –the United States, the United Kingdom and Spain- whose financial structures should *a priori* give more room to market financing (cf. Charts 4 to 7). For these latter three countries, it is interesting to note that:

- Over the decade 1994-2004, IRs at the beginning of the period were lower than in France but they subsequently increase up to 2008;
- For the United States and the United Kingdom, the rise in the IR can be almost exclusively explained by the increase in the share constituted by loans to households (long-term but also short-term)¹⁰. In the same way, the share of long-term loans to households, which corresponds overwhelmingly to housing loans, remained predominant for Spain;
- The share of intermediated financing (mainly bank loans) granted to GG is no and/or decreasing.

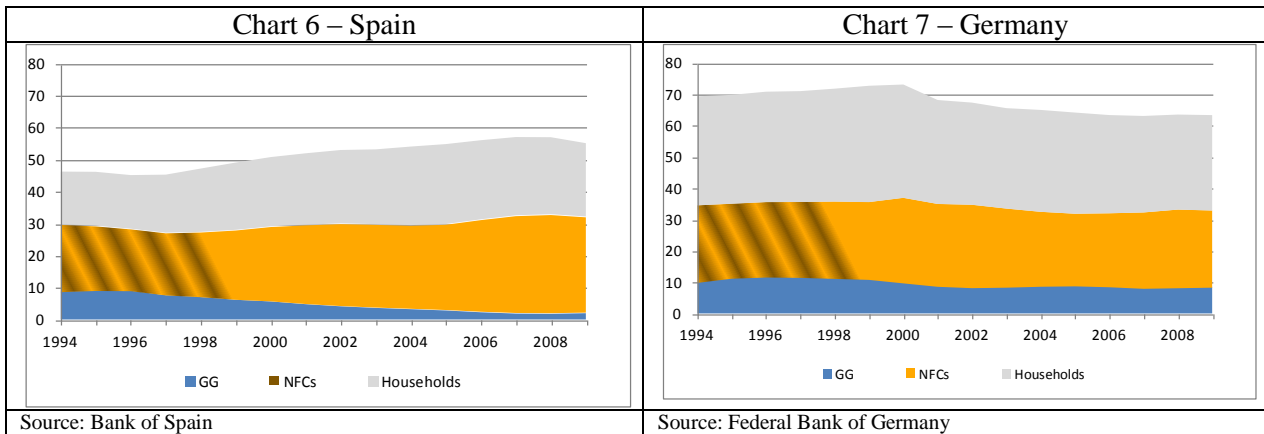
By contrast, the findings concerning Germany are significantly different:

- Already higher than in other countries (including France) at the beginning of the period, the IR rose until 2000, fell up to the mid-2000s and then stabilised;
- The respective shares of each sector intermediated financing nevertheless developed somewhat differently: GG's share reached a peak in 1996 whereas those of households and NFCs only reached their maximum levels in 1999 and 2000 respectively. The fall in the contribution of GG's intermediated financing, which started in 1997, was significant (from 11.5 percentage points in 1996 to 8.3 percentage points in 2009). There was also a fall of about three percentage points in the contribution of NFCs, but with a higher peak (from 27.3 percentage points in 2000 to 24.6 percentage points in 2009);
- Unlike in other countries, there has been no rise in the intermediated financing granted to households. This particularity is linked to the relative lack of dynamism of lending for house purchase in Germany, which is attributable to the poor state of the residential housing market since the shock of reunification. The contribution of households thus declined by almost 7 percentage points over the 10 years from 1999 to 2009.

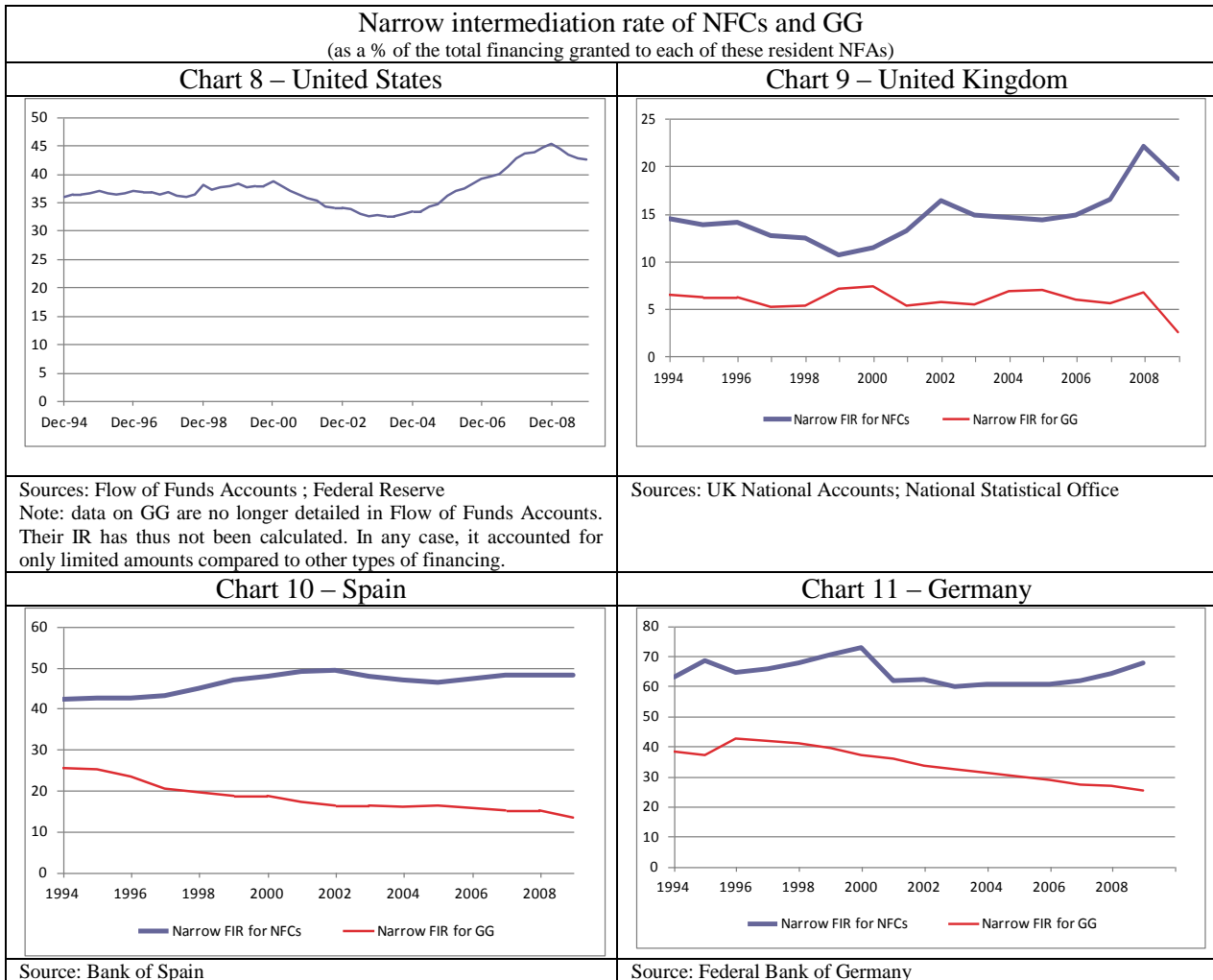


⁹ For instance, for countries other than France, survey data are lacking to be able to distinguish by sector the financing received by NFAs or to know which sectors FIs invest in.

¹⁰ This share corresponds here to the proportion of loans received by households compared to the total financing received by resident NFAs.



The current crisis environment involving a generalised restriction on lending is nevertheless likely to call these developments into question. Thus, in the United States, which was partly at the root of the subprime crisis, household debt contracted from the end of 2008, which led to a downtrend in the narrow IR for NFAs across the board. This is also true for the United Kingdom and Spain. Germany is the exception, with the financial IR (FIR) of NFAs being stable whether one considers the total of the contributions of each of the three categories of NFAs. In this country, the lack of impact of the financial crisis may be explained by the moderate debt levels of households and NFCs during the 2000s.



By examining the narrow FIR for NFCs and GG taken separately (*cf.* Charts 8 to 11), we can observe that there is no clear downward trend of FIR for NFCs. On the contrary, this was either stable (Spain, Germany) or on an upward trend during the 2000s in the United States and United Kingdom, even if the crisis led to a

fall in these latter two countries at the end of the period. For the United States, share buybacks played a particular role by reducing the “shares” component of the dominator in the calculation of FIR.

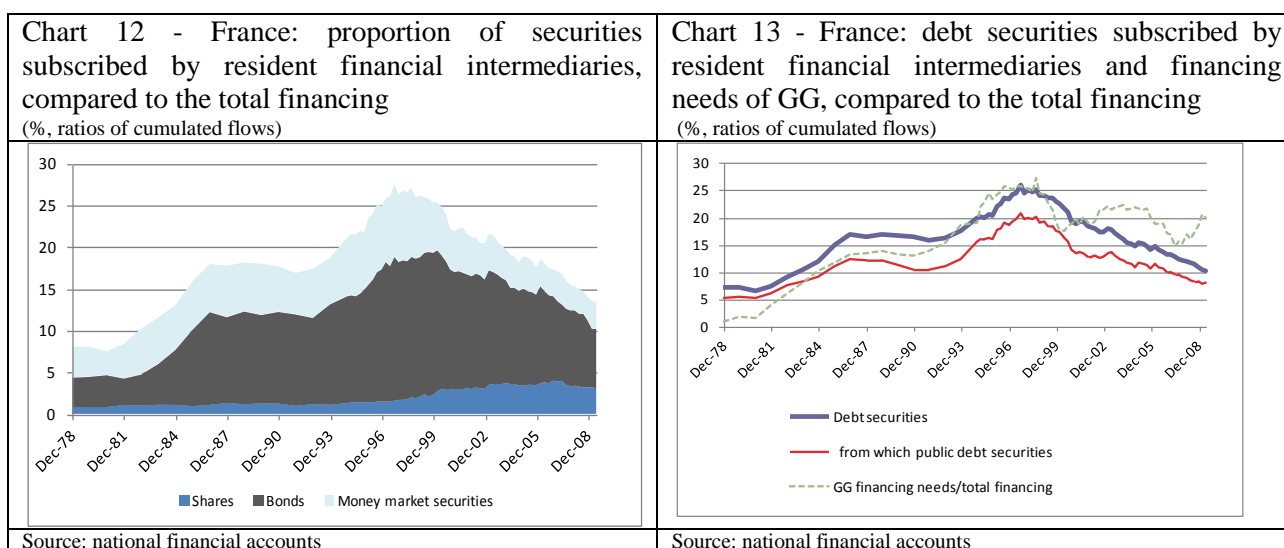
For GG, by contrast, the trend was downward in Spain and Germany over almost all the period because of the increasing recourse to market financing, which was further facilitated by European integration and the greater liquidity of Member States' public debt. The FIR of GG was fairly stable in the United Kingdom, but at a low level (around 6%), and fell in 2009 in the context of the crisis.

III. The internationalisation of financial intermediation

A. The rest of the world plays a growing role in financing in France

Charts 12 and 13 give a few more indicators in the case of France as to the kind of instruments used for financing:

- Since 1978 the trend is downward for financing granted by credit institutions, apart from periods where it has stabilised due in particular to peaks in the housing markets (the late 1980s, the 2000s) and/or a shift of NFCs and GG towards borrowing, at the expense of securities, given the interest rate differential (*cf.* Chart 21, Focus 2 of the Annex).
- The broad FIR remains at a high level until the 1990s, with financial intermediaries replacing on their assets side loan outstandings by securities issued by NFAs. The different categories of securities however expanded at different paces: shares portfolios grew steadily but remained limited as a proportion of total financing. The main developments concern debt securities, particularly bonds, with short-term debt securities representing smaller amounts (*cf.* Chart 12). The fall was however spectacular from the launch of the euro onwards for debt securities, irrespective of their maturities. We will see that this fall is deceptive as these lower investments were offset by equivalent purchases of foreign securities, especially from the euro zone. The impact of the introduction of the euro was not however apparent with respect to purchases of shares, which remained relatively dynamic after 1999.
- The total amount of debt securities issues subscribed by resident financial institutions is to a large extent determined by the volume of public securities issuance, whose variations were closely linked to the financing needs of GG (*cf.* Chart 13). This relation however became less close at the end of the period (growing importance of financing granted by non-residents, a phenomenon that was amplified by the launch of the euro).



The fall in the narrow IR is a sign of NFCs and GG's greater recourse to market financing over the period. However, it does not reflect an expansion of the role of resident NFAs in the non intermediated financing of the economy. This remained limited, for several reasons:

- The relative scale of the shares holding by GG decreased, because of the opening of the capital and privatisation of NFCs by the French State during the period under review;
- The direct holdings of securities by households remained limited, whether they were issued by GG or NFCs.

Market financing provided by non-residents expanded strongly, as from 1998 they represented, in cumulated flows, around two-thirds of non-intermediated financing of resident NFAs. Thus, it was above all the scale of the market financing provided by non-residents, whose investment flows concern all categories of securities, that constitutes the main explanatory factor in the fall in both the narrow and broad FIR over the period.

The end of the 1990s appears to be a key period for several reasons. First, the launch of the cashless euro on 1 January 1999 was an important date since it has fostered the geographical diversification of financial investments in euro, owing to the disappearance of currency risk for investors in euro area countries, and it facilitated the formation of a euro-denominated debt market on a large scale. Moreover, the financing of very large cross-border operations at the end of the 1990s and the beginning of the 2000s gave rise to huge direct investment and portfolio investment flows, which led to a fall in the FIR over the key 1998-2000 period. This phenomenon was not specific to France since, over the same period, very strong growth in cross-border mergers and acquisitions was observed (cf. for instance the UNCTAD reports).

B. Resident FIs apparently account for a smaller proportion of financing...

The apparent fall in resident FIs' share of financing in France since 1978 (and in comparison with some other countries) can be understood by taking together the different trends, cycles, and particular events.

1/ Over the analysed period in France, a trend of GG and NFCS to limit their recourse to credit can thus be observed.

The rise in market financing has mechanically led to a decline in lending. It was in general, at least for a few years, fuelled by resident FIs, through the development of some financial products. One thinks first of all of life-insurance (and, outside France, of pension funds) that structurally invest in securities, and that foster the expansion of some specialised institutions (insurance companies/pension funds and mutual funds), also when these institutions are owned by banks and their products are sold by bank branches, as is the case in France with the dominant system of bank-insurance.

However, in France, resident FIs have ended up being replaced by non-residents. This phenomenon may have been accelerated by particular events such as the “euro changeover”. This financing of resident NFAs by non-residents has developed in parallel with the investment by resident FIs in securities in the Rest of world.

2/ These trends are modified by cyclical effects. For households resident in France, they have been impacted first and foremost by housing cycles, as these housing loans represent the largest share of their liabilities. To these can be added consumer credit, which can be sizeable (in the case of the United States, they represent some 20% of total loans to households) and that vary, to a certain extent, in accordance with the business cycle.

GG, and NFCs even more so, can modify their recourse to borrowing depending on economic conditions (spreads on financing costs between loans and bonds, debt restructuring episodes by some large companies, possible crowding-out effects when GG issue large amounts of bonds...).

3/ The impact of the trend or cyclical developments of IR of each agent on the aggregate IR depends on the weight of its debt. Indeed, the bigger the proportion of an NFA's debt in total financing, the greater the impact of the developments in the NFA's IR on the overall rate.

This can be formalised in the following way by denoting the financial intermediation rate as FIR, intermediated financing IF, total financing TF (by sector or for all the sectors) and households “hou”:

$$\text{Total FIR} = \text{IF}_{\text{NFA}} / \text{TF}_{\text{NFA}}$$

$$\text{Total FIR} = (\text{IF}_{\text{NFCs}} + \text{IF}_{\text{GG}} + \text{IF}_{\text{hou}}) / \text{TF}_{\text{NFA}}$$

$$\text{Total FIR} = \text{TF}_{\text{NFCs}} / \text{TF}_{\text{NFA}} * \text{IF}_{\text{NFCs}} / \text{TF}_{\text{NFCs}} + \text{TF}_{\text{GG}} / \text{TF}_{\text{NFA}} * \text{IF}_{\text{GG}} / \text{TF}_{\text{GG}} + \text{TF}_{\text{hou}} / \text{TF}_{\text{NFA}} * \text{IF}_{\text{hou}} / \text{TF}_{\text{hou}}$$

$$\text{Total FIR} = \text{TF}_{\text{NFCs}} / \text{TF}_{\text{NFA}} * \text{FIR}_{\text{NFCs}} + \text{TF}_{\text{GG}} / \text{TF}_{\text{NFA}} * \text{FIR}_{\text{GG}} + \text{TF}_{\text{hou}} / \text{TF}_{\text{NFA}} * \text{FIR}_{\text{hou}}$$

The total IR is thus the sum of IR by agent, weighted by their proportion of total financing.

Since households have recourse almost exclusively to loans granted by resident FIs, their IR is close to 100%. Changes in their contribution to the total IR thus reflect the developments in the share they account for in the total financing of NFAs.

In France, where GG are relatively indebted and where household debt remains moderate, although it has increased significantly in the past few years, the impact of housing cycles on the total IR (contribution to the stabilisation at the end of the 1980s and the mid-2000s) is smaller than in the United States, the United Kingdom or Spain (which contributed to a sharp rise in the 2000s, at least until 2008).

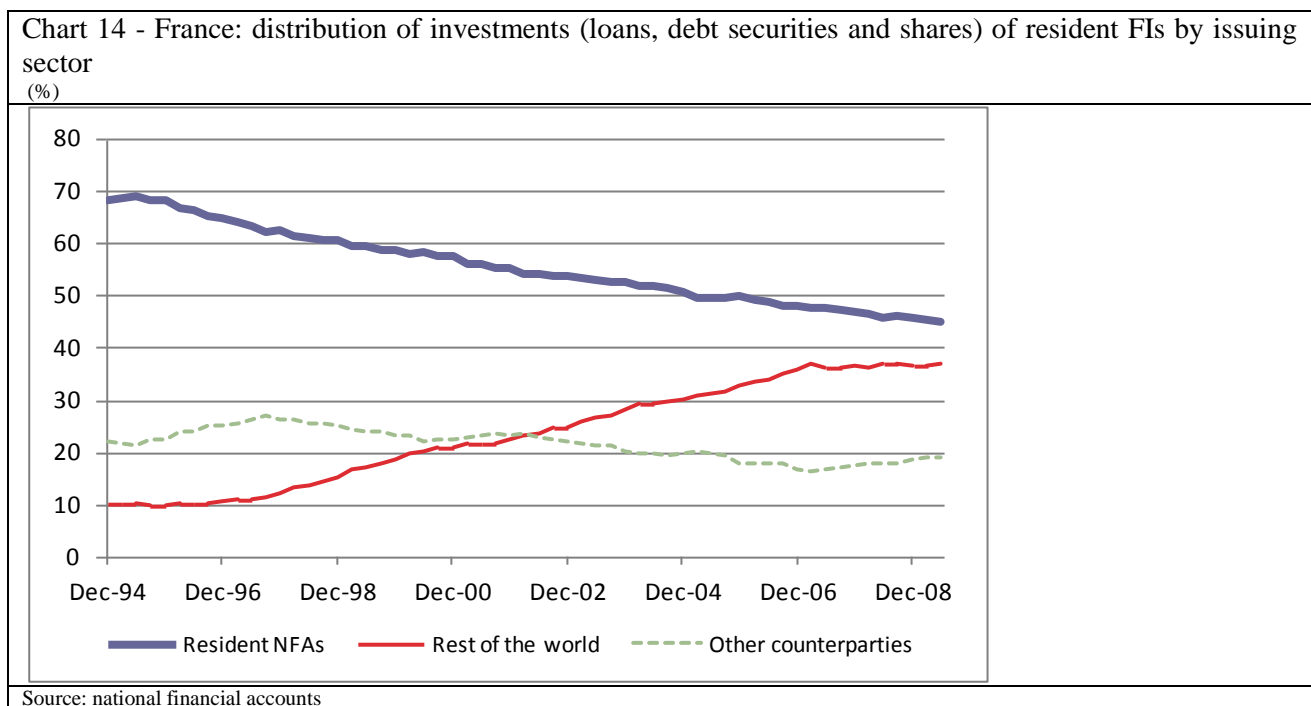
In countries where household debt is high, housing cycles can thus affect NFAs' FIR, contributing to increasing the weight of resident FIs. Conversely, the decrease in the use made of debt by households in the context of the subprime crisis worked in the opposite direction, with households' loan outstandings even diminishing in the United States from the end of 2008.

In any case, in spite of the smaller use made of borrowing by NFAs in France, the weight resident FIs has not diminished, as they have diversified their activities, mainly in geographical terms.

C. ... but this needs to be qualified because of the international diversification of FIs' investments

In this part of the article, we study the two-way investment flows of loans and securities with the Rest of the world: the investments of FIs abroad and the financing granted to NFAs by non-residents. To do so, we mainly crosscheck national accounting sources with balance of payments data. Regarding financing received by NFAs, apart from the GG sector that is available on its own, we use the "others" sector of the balance of payments that groups together households and NFCS, but also financial entities that are not monetary financial institutions (MFIs – mainly insurance companies and mutual funds other than money market funds). We then make the assumption that financing in the form of debt securities and shares is mainly received by NFCs (but subtracting the amounts corresponding to large operations involving insurance companies and mutual funds other than money market funds that have been identified, such as AGF's acquisition by Allianz) and that financing in the form of loans is received by NFCs and households. Indeed, generally speaking, financial sectors that are not MFIs have only marginal recourse to loans for their funding¹¹.

The analysis made for resident NFAs' financing can be accurately complemented by a symmetrical approach focusing on the structure of investments by resident FIs.

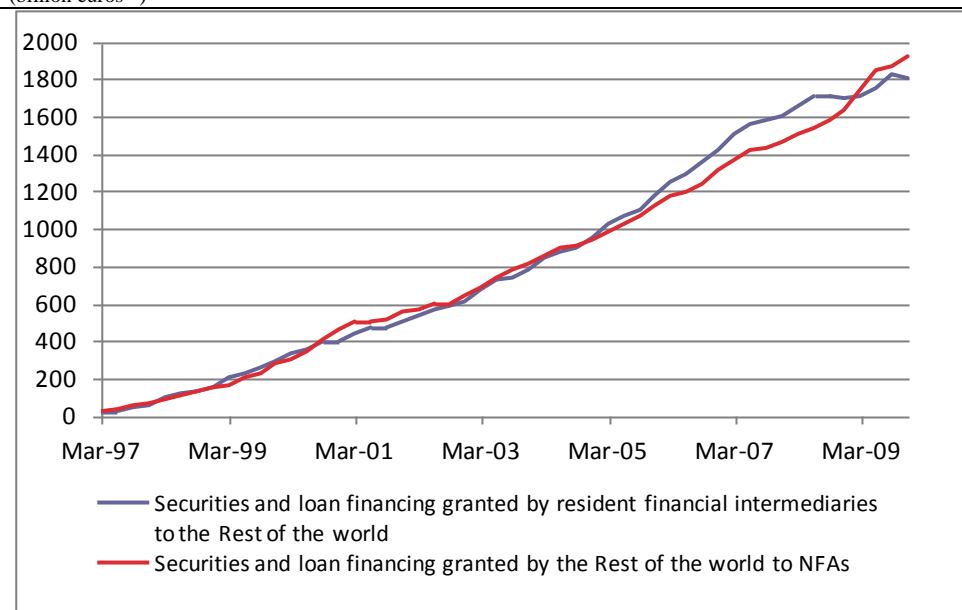


¹¹ The time series thus calculated are available for any interested researchers, while the respecting the confidentiality of the data used for their calculation.

If one focuses on the sectors benefiting from resident FIs' investments, it can be observed that the part of resident NFAs decreased to the benefit of the Rest of the world with a slight anticipation of the launch of the euro, with other counterparties (namely resident financial agents) recording a less marked downtrend (cf. Chart 14). Resident FIs' investments have thus been increasingly directed towards the Rest of the world.

This relative decline in resident financial intermediaries' share of the financing of resident NFAs is counterbalanced by the growth of their purchases of foreign securities and their lending to the Rest of the world. Over the period 1997-2009, resident FIs' investment flows abroad were overall equivalent to the investment flows to France from the Rest of the world in the form of loans granted to resident NFAs and purchases of securities issued by the latter (cf. Chart 15). A generalised trend of the international diversification of the investments of financial institutions, both resident and non-resident, can thus be observed.

Chart 15 - France: financing provided to NFAs by the Rest of the world (RoW) via securities and loans, and financing through securities and loans provided by resident financial intermediaries to the RoW (billion euros¹²)



Source: Balance of Payments ; quarterly national financial accounts

Rather than being "subjected to" disintermediation, which would mean the role of resident financial intermediaries being supplanted by foreign investors, we are looking at a reform of disintermediation that is "chosen", giving rise to two-way flows of investments between resident and non-resident financial intermediaries, of which a predominant share is probably also made up of financial intermediaries.

The symmetry of FIs' inward and outward investment flows is however not always borne out. A study over a longer period of data concerning the United States illustrates, in this very particular case, different phases of the development of capital international movements:

- From 1952 to the end of the 1960s, resident FIs in the United States invested more in the Rest of the world than non-residents did in resident NFAs.
- From the end of the 1960s (imbalances connected to the Vietnam War...) until the beginning of the 1980s, after a rapid catch-up of the spread between the two series, flows were balanced overall.
- From the beginning of the 1980s (restrictive monetary policy and beginning of the expansionary fiscal policy of the Reagan Administration), inward flows invested in NFAs became very predominant.

This almost symmetrical growth of inward and outward financial flows observed in France and, in the 1970s, in the United States should probably be analysed more systematically for a greater number of developed

¹² In cumulated flows from 1998 onwards.

countries. It seems therefore as if, at least in some developed countries, growing inflows from the Rest of the world cannot be viewed as enabling agents to meet financing needs linked to the lack of capacity of resident financial intermediaries.

This result partly puts into question the results of the earlier work in this area by Feldstein and Horioka (1980) and, more recently, Kang and Stulz (1997), on domestic bias. Thus, financial globalisation and of the development of the euro area appear to have helped to reduce the bias of investors for national financial products, notably debt securities.

D. A financing structure by “intermediation aggregates” that makes it possible to take into account the share of the Rest of the world

It has been seen that the traditional concept of the intermediation rate used in our article leads to a classification as non-intermediated financing of all the investments of non-residents, in spite of the fact that many of the latter are financial institutions. This remark leads us to qualify, from another point of view, the opposition exposed between intermediated financing and non-intermediated financing. It seems in fact more relevant to think in terms of a continuum of financing channels, ranging from the most intermediated (loans granted to resident NFAs by resident credit institutions) to the least intermediated (direct purchases of NFAs' securities by NFAs, whether they are resident or not).

To this end, one can construct an approach in terms of "intermediation aggregates", according to a breakdown by the degree of intermediation of investments provided to resident NFAs (cf. Chart 16):

- I1 = loans granted by resident credit institutions, mutual funds and insurance companies to resident NFAs;
- I2 = I1 + securities issued by resident NFAs bought by resident credit institutions;
- I3 = I2 + securities issued by resident NFAs bought by resident mutual funds and insurance companies;
- I4 = I3 + financing provided to resident NFAs by non-resident financial intermediaries in the form of loans and securities holdings;
- The complement of I4 vis-à-vis total financing thus corresponds to the sum of securities issued by resident NFAs held by other NFAs¹³, and also deposits with the Treasury.

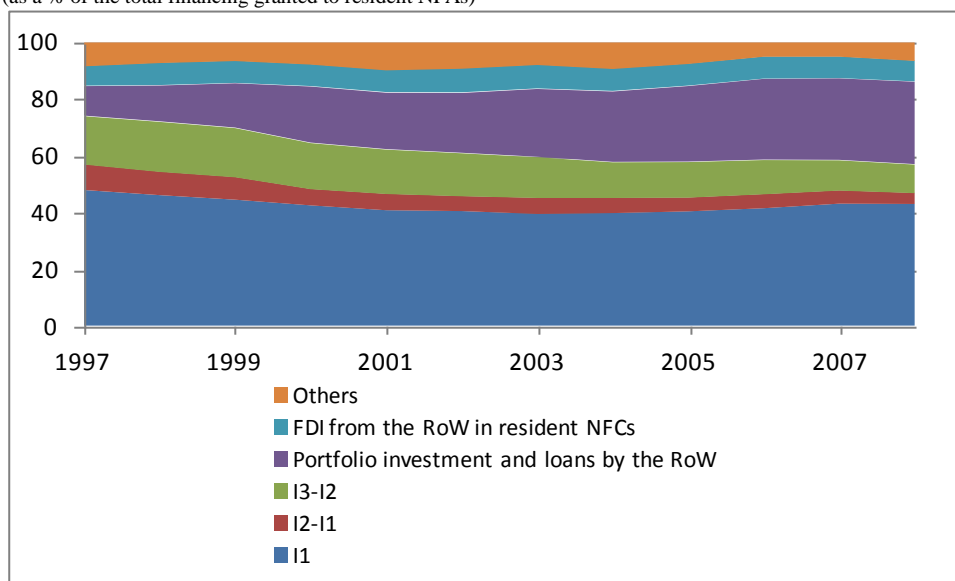
The statistics currently available on financial relations between France and the Rest of the world however do not enable us to distinguish between the operations of non-resident financial intermediaries and those of other non-resident investors or lenders. As a result, the I4 aggregate cannot be measured accurately. However, it can be proxied by adding to I3 the financing granted by non-residents to resident NFAs in the form of loans and portfolio investment. In the latter, the weight of non-resident financial institutions is probably predominant because these are *a priori* more active than non-resident NFAs regarding this kind of operation. This intuition seems to be borne out by the CPIS¹⁴ survey: among the countries that invested significantly in France through portfolio investment in 2003 for example, are among others United Kingdom (for which more than 80% of total flows in 2003 concerned financial institutions) and Luxembourg (where the financial sector is dominant compared to NFAs). On the other hand, the financing provided to resident NFAs by the Rest of the world via direct investment are in general made ultimately by non-resident NFAs (i.e. NFCs). With the securities of resident NFAs held by resident NFAs, they constitute the core of disintermediated financing.

Looking at Chart 16, one can observe that the sum of the share of direct investment from the Rest of the world and “others” is virtually unchanged over the period, which tends to confirm that the disintermediation observed in France in section 2 has not led to an increase in financing provided by NFAs, whether they are resident or not, but rather in those which are intermediated by non-resident financial agents.

¹³ Inter-sectoral financing is not consolidated, except for shares issued and held by resident NFCs (cf. Annex).

¹⁴ Conducted annually by the IMF, the Coordinated Portfolio Investment Survey compiles the outstandings of residents' portfolio investment in debt securities and quoted and unquoted shares (direct investment is excluded from the scope of the survey).

Chart 16 – Stratigraphy of the categories of financing received by French resident NFAs¹⁵
(as a % of the total financing granted to resident NFAs)



Sources: Balance of payments; quarterly national financial accounts

While bearing in mind the assumption underlying the representation of these “intermediation aggregates”, these have the advantage of giving an overview of the degree of intermediation of the financing used by NFAs. This concept thus enables us to fill the “void” left by a single calculation of an intermediation rate, however broad, because the latter does not solve the issue of the sources of “other” financing.

Lastly, this concept has the advantage of fully capturing the share of the Rest of the world, whose importance has grown over the last few decades, by setting it apart, whereas other articles group it together with other sectors (grouped together with NFAs in Capelle-Blancard and Couppey-Soubeyran (2003) for example).

IV. Confirmation of the stability of intermediation through the analysis of revenues

Given that the foregoing sections are based in fact on financial institutions’ balance sheet data, and the distortion of their balance sheet structure due to the concept of an intermediation rate, it seems logical to reinforce the analysis of the diversification of FIs’ activities by focusing on their profit and loss accounts. As underlined above, FIs have effected a geographical diversification of their financial investments. At the same time, we will see that they have modified the structure of their revenues, with the fees replacing traditional intermediation revenues received in the form of interest rate margins, as observed notably by Allen and Santomero (2001). All in all, banks and other intermediaries appear therefore to have accompanied the transformation of the other financial sphere by diversifying:

- the nature of their revenues;
- the geographical destination of their financial investments and their settings

The case of France which we have analysed in detail to calculate the narrow and broad FIR indicates that the transformation of intermediation, including that for which non-resident agents are involved, is taking place due to intense interaction with the markets, first and foremost through market intermediation. But this involves other forms of remuneration and this is why it is necessary to examine developments in intermediaries’ incomes. This analysis thus appears to complement FIRs and we will check later on that the distortion of FIRs and of revenues go hand in hand. Lastly, this analysis is all the more interesting as it uses a recent innovation in national accounting that is still ongoing: FISIM.

An assessment of the position of financial institutions within the national economy can be obtained by considering the description of their activities by the production account of national accounting. In particular,

¹⁵ In order to make calculations in terms of cumulated flows starting from nominal outstandings, figures were available both in nominal and market value terms for FDI, and in market value terms only for portfolio investment. Market values were converted into nominal terms.

the latter distinguishes within financial institutions' production, the production of intermediation services remunerated by an interest rate margin called FISIM (cf. Focus 1). The measurement of FISIM has been harmonised to a great extent at the European level (INSEE, 2005, within the framework of "base 2000") and at the global level with the SNA 2008 international standards; this has opened up new opportunities for international comparisons. The stress is thus placed here on a comparative analysis with several major European countries, made possible by the relative homogeneity of available data in this area, but also with the United States and, as far as possible, with Japan.

Focus 1: FISIM

For a long time, the production of the financial institutions sector has been a "black hole" in national accounting. Following on from Gorman's ideas (1969), pursued among others by Fixler (1993), the idea of a measure of value added by financial intermediaries has progressively emerged, in order to take into account the specific service provided by these intermediaries when they are the counterparties of loans granted and deposits collected. The intrinsic difficulty of this value added is that it can only be considered indirectly via assumptions concerning particularly one or more benchmark rates. This thinking led to the introduction of FISIM by SNA¹⁶ 1993 and to important additions when SNA 2008 was implemented, in particular in France during the setting in place of "base 2000" (INSEE, 2005).

Thus, within national accounts, the production account of financial institutions has been particular in that it includes inside FIs' production fees received as payment for services voiced. Since recently, the production account of financial institutions also includes an interest rate margin levied by financial institutions on their deposits and loan operations, a margin that remunerates their intermediation services. This production of "financial intermediation services indirectly measured" (FISIM) is calculated as the sum of:

- The surplus of interest paid to intermediaries on loans granted compared to market conditions for comparable financing,
- And the surplus received by intermediaries on the reward of collected deposits compared to market conditions for comparable investments.

For some countries, including France, the interbank refinancing rate sums up information about market conditions. In this case, the spreads on market rates are justified by the particular services that intermediaries deliver to NFAs by engaging in transformation (as defined by Gurley and Shaw, 1960), by managing credit, liquidity, currency and rate risks (as defined by Allen and Santomero, 1998). These spreads generate a net interest rate margin that still constitutes the main source of banking institutions' revenue and that is quite directly apparent within the net banking income (NBI) of French bank accounting. Fournier and Marionnet (2009) make a detailed decomposition of the transition from the NBI published by French banks to the amount in terms of production (including FISIM) published by national accounts.

The shortcoming of previous options as regards the calculation of FISIM is that they can lead to a certain volatility in bank production and especially of NBI, notably during the recent crisis. More generally, they are criticised because the reference rate for a loan to a given company, for a given maturity and a given currency should be a market rate for the same credit risk, a comparable maturity and the same currency, and not a national interbank rate (which is, in general, without credit risk, currency risk and short-term, hence without maturity risk); not doing it would mean inappropriately including a credit risk, maturity risk and currency risk premium (these three being valued by markets) as part of the remuneration of the specific intermediation service, which would be questionable. These are the terms of the current debate taking place among national accountants and economists, a debate whose main features have been summed up by Keuning (2009) within the framework of the *Irving Fisher Committee on Central Bank Statistics*.

This debate took more concrete form at the 2010 conference of the IARIW (cf. Fixler and Zieschang, 2010, Hood, 2010, or Inklaar and Wang, 2010) and has led (in 2010-2011) to new research on the one hand under the direction of the ECB and Eurostat and on the other hand under the aegis of the OECD.

¹⁶ SNA = *System of National Accounts*.

FISIM correspond to the remuneration of traditional intermediation activity - loans and deposits – in the form of interest rate margins. They therefore do not include the services involving explicit pricing in the form of fees (services mentioned briefly in Focus 1). However, over the last two decades, in France but also in other developed countries (cf. Allen and Santomero (2001)), financial institutions have developed the explicit detailing of the charges for services provided to their customers, a policy that notably enables them to reduce the subsidising of some products by others and to promote more efficient competition conditions between institutions. In the whole of Europe, the share of these in the value added of financial institutions has increased and is now close to that of traditional intermediation revenues.

To take this development into account, the analysis of the indicator "FISIM as a ratio of GDP" is completed by the analysis of the ratio of the total production of all financial institutions as a ratio of GDP. This production includes, as well as FISIM, services explicitly remunerated in the form of fees. However, some other traditional revenues of financial institutions are still excluded such as the revenues of operations involving securities (dividends or capital gains) and also the bulk of the earnings of property and casualty companies' results. Both indicators thus focus on banking intermediation activity – i.e. the granting of loans, the collection of deposits and the management of payment instruments– and non bank intermediation – brokerage, life insurance, etc. It should be noted that, if the former concerns only bank institutions (and equivalent), the latter is linked to financial institutions across the board, bank and non-bank; it takes thus into account all of the diversity of FIs, which has increased. Lastly, our analysis will conclude by considering, again for all financial institutions, the ratio of their value added to GDP; this last analysis is justified by the fact that the growing complexity of the financial sphere has led to substantial growth in operations within the sector and thus to a parallel increase in production and inputs. To assess the positive impact of financial institutions on the "real" economy, we therefore need to focus on value added, by subtracting these inputs¹⁷. The availability of these three indicators now enables us to examine from another point of view the weight of financial intermediation in the economy.

A. Traditional intermediation revenues of resident FIs have decreased

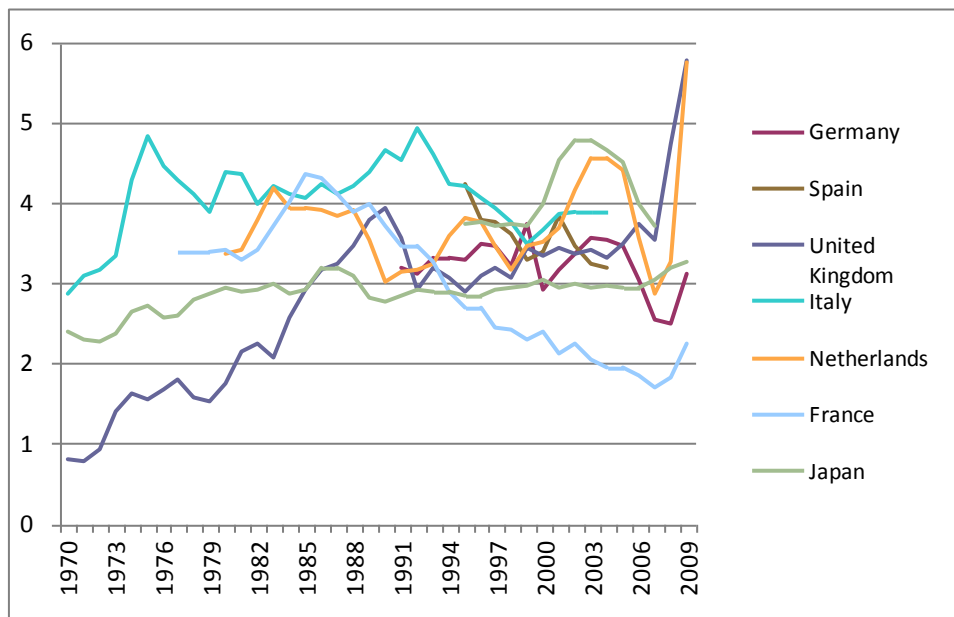
Let us begin the analysis of intermediation revenues with the analysis of the first ratio: FISIM to GDP over the period 1970-2009 for Germany, France, the Netherlands, United Kingdom and the United States, but only up to 2004 for Spain and Italy and up to 2007 for Japan (cf. Chart 17).

An analysis of the changes in the ratio of FISIM to GDP over four decades underlines important differences of levels and developments between European countries. Overall, over a much longer period than that considered in the first sections of our article, we still cannot conclude that traditional activity has disappeared, including and even especially in Anglo-Saxon countries, as already shown by the developments in the narrow FIR. This situation should not obscure the fact that these highly condensed indicators mask very diverse situations. Indeed, as already shown by the analysis set out above, some banking systems are strongly based upon their individual customers (United Kingdom) whereas others maintain a strong link with the industrial network (Germany and also Italy).

Putting France aside, it can be observed that intermediation revenues, considered as the proportion of FISIM in GDP, are stable (United States) or have even increased in some countries (United Kingdom) because of large volume effects, which have counteracted negative price effects during the phases of interest rate cuts. This was particularly the case from the end of the 1990s, with high levels of lending granted to households (notably in the form of housing loans) and to companies, which enabled NFCs to raise their narrow intermediation rates. While the erratic developments of the end of the period do not call into question the previous conclusions, they may reflect methodological biases that should be further analysed and corrected (cf. Focus 1).

¹⁷ Which are not only consumptions within the financial sector.

Chart 17 - FISIM (as a % of GDP)

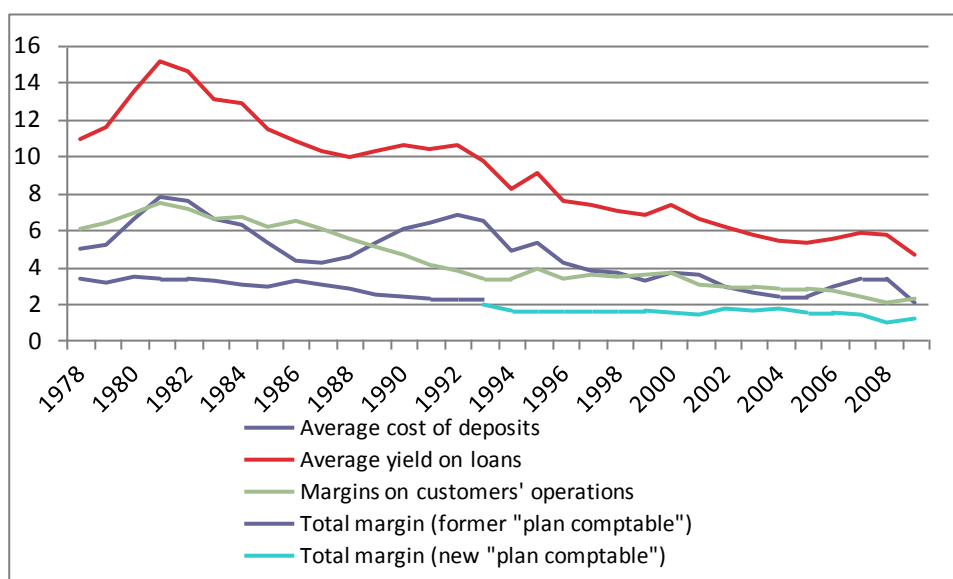


Sources: national accounts (national data)

In the case of France, one can see again the increase in intermediation revenues earned via the interest rate margin following the rise in inflation of the 1970s, because of the lower elasticity to inflation for deposit rates than for lending ones, and the decline that followed the fall in interest rates but also the apparent disintermediation observed from the 1980s onwards (even if we have seen that this fall in the lending volumes granted to residents was compensated overall by international financing). This latter information can be usefully compared to statistics regarding credit institutions' margins on all of their lending and deposit operations (cf. Chart 18, available over a long period only for AFB – Association française des banques – banks).

We can observe that the fall in lending rates was greater than that in deposit interest rates, leading to a clear downward trend in the “margin on operations with customers”. The overall margin (taking into account all the forms of credit institutions' revenues) also followed a downtrend; even if this trend was less marked, it corresponds to a division of this overall margin by two or three over the whole period. This observation suggests that the fall of traditional revenues encouraged financial institutions to develop other sources of revenues from other financial products. This finding leads us to consider the total production of financial intermediaries, and not only FISIM, to assess their weight in the economy.

Chart 18 – Banks’ margins (France excl. French overseas departments and territories): AFB (“Association française des banques”) banks (%)



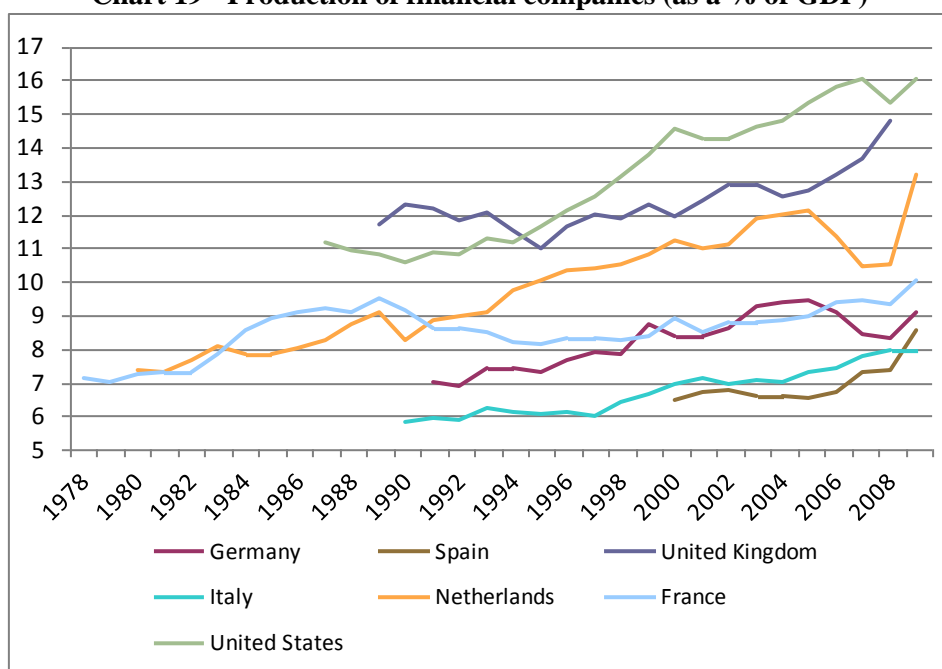
Sources: Commission bancaire (French banking supervisory authority) and authors’ calculations

B. Other sources of revenue have replaced the intermediation margins of financial institutions

When the indicator linked to production is examined, it is even less possible to conclude that financial intermediation is on the decline, with this indicator following generally an upward trend, including in France (cf. Chart 19). With the production of financial institutions calculated in national accounts also including fees¹⁸ and taking into account a wider population of institutions (whereas FISIM relate *de facto* only to those practicing banking intermediation), the levels reached are well above those discussed above. For Germany and France, and also for Spain and Netherlands, but for shorter periods, this indicator is consistent with the changes made during the last rebasing of national accounts ("base 2000" in France). US national accounts include a comparable indicator because they comply with the rules of SNA 2008, whereas Japan's accounts do not include production at the level of FIs, which obliges us to exclude Japan from our analysis. Lastly, for Spain, Italy and the United Kingdom, published information that we have used do not always comply with the rules of SNA 2008.

¹⁸ Whose diversity was briefly analysed in Focus 1. From this, we can also say that FISIM and fees are by far the two major categories of financial intermediaries' production within national accounting. The lesser relative importance of one of them is thus very likely to derive from the greater relative importance of the other.

Chart 19 - Production of financial companies (as a % of GDP)



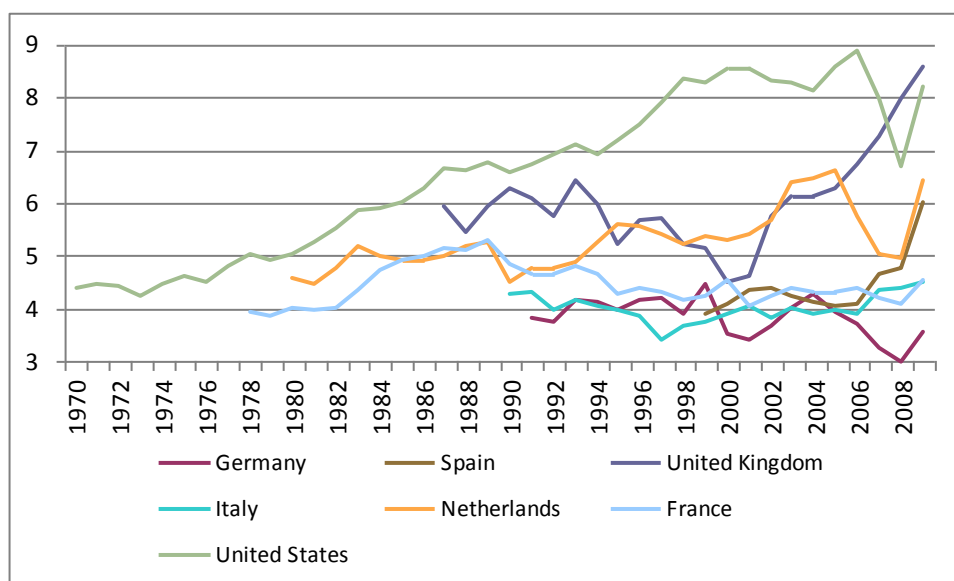
Sources: national accounts (national data)

Beyond level differences that should be interpreted with caution, especially because of the likely heterogeneity of available data, we can observe that, regarding the latest periods, this indicator stabilised in most countries after a large rise over the preceding periods. This rise was not really called into question by the recent crisis in spite of the already mentioned erratic movements over the very latest periods, including 2009 (only 2008 for United Kingdom). This is especially the case for France where the downward trend observed in the previous Charts can no longer be seen. These developments thus do not point to a weakening of banking and financial activity but rather underline that the relative (and not always absolute, see above) decrease in FISIM corresponds to the growth in fees (cf. Focus 1), and in particular to the increase in the market activity revenues generated by banks and in market intermediation revenues (insurance, management of mutual funds). The fall in bank credit in financing (large) companies that may be illustrated by the fall in the narrow FIR over the last decade (see above), does not call into question the position of banks and other intermediaries in the economy since other customers and other products may also fuel their earnings. It is still possible to think that traditional activities, in spite of their decreasing weight, possess significant advantages, notably in attracting and keeping customers, or even being used as “loss leaders”, as shown by bank practices on certain credit market segments and particularly housing loans in France. More generally, the expansion of the financial sector does not mean that some segments have replaced others (for instance, the growth of markets at the expense of banks). On the contrary, it is based on the growing differentiation and sophistication of players in the financial sphere: the emergence of agents with diverse specialisations has generated complementarities and synergies to ensure the efficient and profitable financing of the economy (cf. Allen and Santomero, 2001).

Lastly, as has been seen above, to have a full picture of the role of intermediation in the economy, this analysis of revenues should also take into account the growing importance of operations between financial agents, included in national accounts in the inputs section¹⁹. By subtracting the latter from production, we obtain value added, the most significant variable in the amount of services provided to other agents by the financial sector. That is why we conclude this section with an analysis of a final ratio: that of the value added of financial institutions to GDP.

¹⁹ All the inputs in the financial sector do not occur in this sector alone.

Chart 20 – (Gross) value added of financial companies (as a % of GDP)



Sources: national accounts (national data)

By construction, this ratio is lower than the previous one, but in proportions that vary from country to country. The adjustment is substantial for Netherlands which thereby approaches the ratio in other continental European countries (cf. Chart 20). This confirms that, in countries where financial services are particularly important, the revenues derived from transactions between intermediaries are significant. In spite of this adjustment, the relative importance of the financial sphere is much more marked in the United States and in United Kingdom than in any other country; moreover, the contribution of this sphere is growing, pointing to a process of specialisation within the world economy. This is the opposite from what has happened in Germany, the only country in our sample, where a long-term trend towards the erosion of the financial sphere's revenues may be observed. Everywhere else, the stability or growth of these revenues confirms that banks and financial intermediation more generally continued to play an important role.

Thus, a thorough analysis, based on sectoral accounts of national accounts, of the revenues derived from financial intermediation, confirms and completes our analyses of intermediation rates. The growing complexity and sophistication of the financial sphere underline the growing interdependence between financial intermediaries and markets; the expansion of the latter thus does not mean the disappearance of the former, but rather their repositioning. In conclusion, the weight of financial intermediation has stabilised or grown in most developed economies and intermediation therefore plays an essential and lasting in the economy.

V. Disintermediation that is neither general nor irreversible

Many of the observations in our article lead us to reject the idea of a generalised trend towards disintermediation that is at work in developed countries. The contrast is indeed stark between France where traditional intermediation has waned over the last three decades and the United States where intermediation has been growing since the 1950s. By contrast, even though most of the countries considered in our article saw their narrow FIR rise until the middle of the 2000s, with the notable exception of Germany, one should not conclude that this trend will last, as the housing debt of households has been significantly affected by the current financial crisis.

Beyond the differences, some common features can be underlined:

- GG have had a tendency to reduce, in relative terms, their financing by credit over time, even if this trend is not limitless (example of France, where local government administrations do not all have the means to issue debt securities and mainly get financing by credit).

- NFCs – because of their diversity as regards their size and strategies, and given their constraints – use financing by credit or debt securities as it suits them over time, sometimes with negative net issues of shares (in the case of the United States), thus fuelling the rise in the IR.
- The growth in the demand for lending from households has contributed most often, over residential housing cycles, to a large (case of France) or overwhelming (case of the United States or United Kingdom) extent to the developments in the IR²⁰.

Comparisons made between developed countries, developments over the past few decades, and the levels reached at the end of the period by aggregate IR and the share of intermediaries' revenues in GDP **lead to a more nuanced view of the opposition between “intermediated financing countries” and “market financing countries”**. Indeed, the United Kingdom and the United States, which are regarded as belonging to the second category, have an IR and a share of intermediation revenues to GDP that has grown, overtaking France. The developments in loans to households are not the only explanatory factor, since NFCs' IR also rose at the end of the period in the United States.

In the case of France, the somewhat strange fall in FIR over most of the period, should be put in perspective for several reasons. First, we should note that the IR was quite high at the beginning of the period, that the broad IR remained above 50% over all of the period under review and that the opening up to international capital movements took place later than, say, in the United States, and took longer for its effects to be felt. Yet, the internationalisation of financing and portfolios has been the main factor to explain the apparent decrease in the FIR in France. In fact, the fall in the IR in France is largely due to the geographical diversification of the investments of resident financial intermediaries: the amounts invested abroad would have been more than enough to keep the FIR in France constant had they been allocated to resident NFAs. An analysis of financial intermediaries' revenues also confirms that the developments in their pricing policies and the shift in their activities have contributed to maintaining, and even reinforcing, their weight in national economy.

Thus, financial intermediaries continue to play an essential role in raising funds for NFCs and GG. The possibilities on offer, particularly to NFCs, cover in fact a very wide range of services from these intermediaries, which go well beyond the simple choice between intermediated financing and market financing. If FIs' share in financing has been maintained, it is also due to the growing role of the Rest of the world, above all non-resident FIs. This is what can be observed particularly from the analysis of “intermediation aggregates”, which shows that the gap left by resident FIs has been filled by non-residents, and not by resident NFAs' investments.

The concept of financing aggregates that we have proposed seems to complement appropriately the intermediation rate approach, as it offers a more complete overview of the scope of the financing agents can draw on. It also enables us to qualify the apparent conclusions that might be drawn from merely observing intermediation rates, whether narrow or broad, and supports the findings of our in-depth analysis of FIs' production in the economy. Our main conclusion is hence that FIs, whether resident or not, maintain their weight, which makes it possible to replace the view whereby banks, and more generally financial intermediation, are destined to die out with an approach that analyses the lasting and diverse adaptation of this intermediation. Thanks to our work using most recent findings of national accounts and balance of payments statistics, following on from Allen and Santomero (1998, 2001), we stress the essential nature of financial intermediation.

²⁰ To get a more complete view of their situation, one should compare households' debt with their assets. On this topic, cf. the Focus “Developments in the wealth position of households in France”, Banque de France Monthly Bulletin (2007).

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Annex: methodological elements

I. Methodological elements regarding France

The main source for our calculations are the quarterly financial accounts (QFA) produced by the Banque de France, according to the national accounting rules and consistent with annual national financial accounts up to the “semi-definite” account, or even until the "provisional" account for certain series.

Given that the related to bonds and shares are not available with all the required detail by counterparties sector, assumptions (calculations of ratios...) are made where necessary to obtain a breakdown by holding sector.

Principles of valuation and calculation

Outstandings of securities are valued at their value at issuance. For the calculation of outstandings of bonds and shares, flows are cumulated from initial outstandings (which are themselves usually calculated by cumulating older data, most often annual data that can date back to 1978).

In order to make sectoral consolidations of data related to financial markets, holding rates (coming from sources such as the “Fichier bancaire des entreprises” (FIBEN: companies database) and the Banque de France’s surveys on securities holdings (“enquête-titres”), particularly) are applied to cumulated flows series relating to financial markets operations. While FIBEN data are confidential, the surveys on securities holdings are published in the Banque de France releases. In the Fiben database, percentages of holdings of quoted and unquoted firms’ capital by sector of the economy (mutual funds, banks, financial auxiliaries, insurance companies, insurance auxiliaries, the State, NFCs, households, Rest of the world) are available. As regards the survey on securities holdings, which is conducted among the main securities custodians of credit institutions in France, it details the holdings of the main financial products (bonds, shares, mutual fund securities) by holding sector (financial or non-financial, resident and non-resident), with certain details related to the nature of the securities held, which can give some information about the counterparties (government securities are distinguished from other securities, securities held are distinguished according to the holder's residence, etc.). Given that the series are available from 1997/1998, previous periods have been obtained by extending the available series.

Let us also underline that from the second half of 2000s, the PROTIDE source, which is a survey on securities held, has progressively replaced the “enquête-titres” and also the compilation of outstandings of own portfolios and customers’ portfolios of foreign securities held by residents and French securities held by non-residents previously conducted by the Department of balance of payments by making them more detailed. This new source makes it possible to have greater detail about counterparties (who-to-whom) which will render possible the updating of the calculations made in the current study.

Use of balance of payments data

As regards operations with the Rest of the world, balance of payments data are used and cross-referenced with national accounts data.

While the main conventions are identical between the two sources (concept of residence, definition of operations), the main problem that arises is the difference in the sectoral divisions used in balance of payments and national accounting. Indeed, the balance of payments uses a breakdown into four sectors: public administrations, the central bank, MFIs and a sector designated “others”, that includes households and NFCs, but also financial entities which are not MFIs (mainly insurance companies and mutual funds other than money market funds).

As regards financing received by NFAs, we make the assumption that financing received in the form of debt securities, shares or loans are mainly granted to NFCs and households.

Chosen scope

Credit institutions include monetary financial institutions (MFIs, excluding S122F (money market mutual funds)) and the 123A sector (miscellaneous financial institutions and equivalent, which notably include investment companies).

Mutual funds include money market (S122F) and non-money market (S123B) mutual funds.

The 124 sector (financial auxiliaries) is excluded from the scope of analysis.

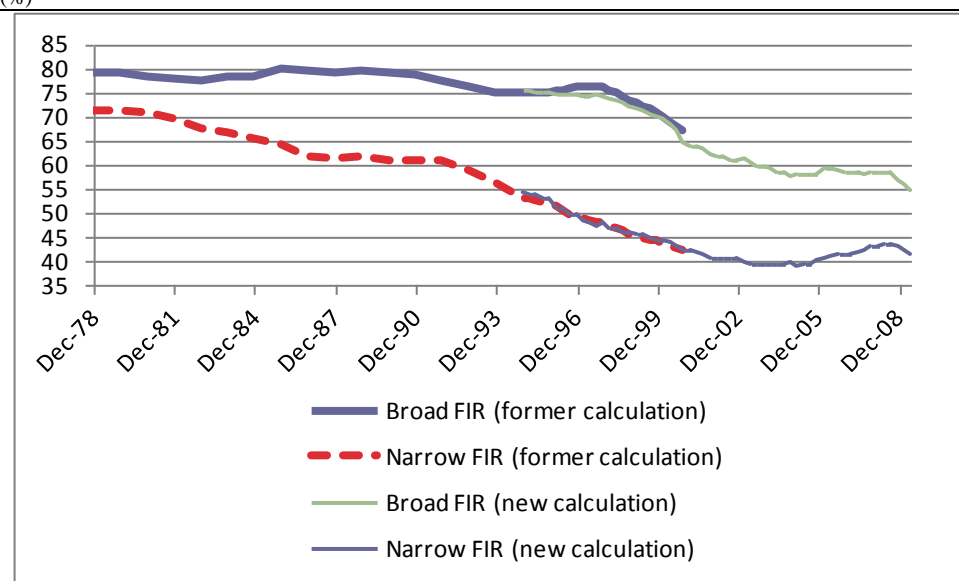
Regarding operations:

- The loans of credit institutions to NFAs and those granted by mutual funds and insurance companies are taken into account. Trade loans and loans between non-financial agents (partners' current accounts, subsidiaries' accounts...) are thus excluded;
- GG's deposits on the liability side are not consolidated;
- The issuing of shares by NFCs are netted from their holdings of shares issued by resident NFCs. Thus, only the balance between the flows of shares issued by NFCs and those of shares bought by these NFCs is taken into account in financing, with the development of internal holdings within the NFCs sector corresponding more to changes in groups' structuring than to new sources of financing. This operation also makes it possible to neutralise the buy-back by a NFCS of its own shares. This calculation mode is the main innovation compared to the previous approach of the CNCT ("Conseil National du Crédit et des Titres").

Focus 2: Comparison of the newly calculated intermediation rate and the one previously calculated for the CNCT (“Conseil National du Crédit et des Titres”)

Chart 21 - France: narrow and broad financial intermediation rates (FIR)

(%)



Source: Annual and quarterly national financial accounts

The two series of intermediation rates coming from the ancient and the new calculation method show trajectories which are comparable overall, with a few differences in level that can sometimes amount to 1 or 2 percentage points.

These differences are above all linked to different sources and conventions for recording or calculations.

Thus, data used in the new calculation method come from national financial accounts whereas those used previously came from monetary statistics. In particular, national accounting data on general government are now supplied by the Ministry of Finance and may also include, in addition to data reported by credit institutions, loans granted by other sectors.

Moreover, in the previous calculation method, flows of shares issued, net of redemptions, used to be reduced by a bankruptcy rate. This convention is no longer used in the current calculation. However, flows of shares issued to recapitalise or buy a company in the same national accounting sector are now consolidated in order to avoid double recording.

Lastly, national accounts were the subject of rebasing over the period, which has sometimes led to substantial changes for some series.

II. Methodological elements relating to the foreign countries under review

A. The United States

Concerning loans, consumer loans, mortgage loans, and other categories of loans notably are taken into account. To deal with these loans broken down by sector, whatever the sector (lending or borrowing), the available detail in Flow of Funds accounts is in general greater than in French national accounts, and compatible with it. Regarding financial institutions, commercial banks, mortgage credit companies and miscellaneous other institutions (saving institutions, credit unions...) are included. The available data make possible the distinction between loans granted to NFAs by financial institutions and those granted by other NFAs.

Given that shares issued are consolidated between resident NFCs, do not require any calculation assumptions or reprocessing.

B. The United Kingdom

The financial database of the Bank of England provides data on loans granted to NFAs by resident financial institutions and by the Rest of the world. We then cumulate flows starting from initial outstandings.

Resident shares held by NFCs are also available and allow the same reprocessing as for France to obtain shares issued "net" of the holdings of other resident NFCs.

C. Spain

Loans between non-financial agents (short-term: F419 and long-term: F429) are not distinguished from loans granted by financial institutions to non-financial agents (short-term: F411 and long-term: F421). To cancel loans between non-financial agents, the calculation is based on the liability side of non-financial agents rather than on the asset side of resident financial intermediaries, with the latter including loans to the Rest of the world, which is problematic.

Total loans (F411+F419+F421+F429) on the liability side of resident non-financial agents are thus used as the basis for calculation. Thus, in order to obtain only loans granted to these agents (F411+F421) by financial institutions, it is necessary to subtract the loans granted by resident NFAs themselves (not including the loans recorded as direct investment). However, loans granted by non-resident NFAs are not subtracted.

D. Germany

Reprocessing is more or less the same as that carried out for Spain, apart from the fact that outstandings of shares owned by NFCs are subtracted from the outstandings of shares issued by NFCs. It should also be pointed out that the starting year for outstandings, from which flows are cumulated, is 1995.

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