

How reliable and comparable are private debt measures: the French case

(Franck Sédillot¹, final version)

Introduction

Debt measurement has recently received an increasing attention with notably the publication of the new alert mechanism report by the Commission a first step in implementing the new surveillance procedure for the prevention and the corrections of macro economic imbalances (MIP). In this respect, the scoreboard attached to this report contains five indicators related to external imbalances and four indicators related to domestic imbalances². Among domestic imbalances indicators, the Commission has retained a private sector debt indicator on the ground that excessive leverage implies significant risks for growth and financial stability therefore increasing overall vulnerability of a country. For instance, overleveraged households tend to cut back their consumption spending when hit by a shock that changes their perception of permanent income and wealth. Over indebtedness can also put at risk credit institutions, triggering financial instability and creating pro cyclical effects. Investment can also suffer because companies with debt overhang become less and less willing to take up new projects.

However, there are numerous ways to compile a debt stock according to the financial instruments it might include or exclude. These differences in scope result in levels of debt that can be sizably different. In addition, the inclusion of some instruments may distort the debt level should their recording in financial accounts not adequately reflect the financial debt transactions.

This short paper tries to highlight and to explain the main features but also some of the difficulties linked to the private debt measurement³. The first section will describe how indebtedness is measured: instruments and sources. The second and the third section will illustrate some weaknesses of the Commission definition. The last section will conclude.

¹Banque de France, 43-1421 DGS-DSMF-SESOF 75049 Paris CEDEX 01 France. E-mail: franck.sedillot@banque-france.fr. I am grateful to J. Fournier, D. Nivat, B. Terrien and participants at the Sixth IFC Conference on “Statistical Issues and Activities in a Changing Environment” (BIS Basel, 28–29 August 2012) for helpful discussions. All errors and omissions are my own.

² For a detailed presentation of the procedure and the scoreboard see: http://ec.europa.eu/economy_finance/economic_governance/macroeconomic_imbalance_procedure/index_en.htm.

³ See also for a similar discussion in the case of Sweden G. Blomberg, J. Hokkanen and S. KåhreTax “Planning may have contributed to high indebtedness among Swedish companies”, Economic Commentary, 2012(3), Sveriges Riksbank.

Private debt: measure and sources

Debt measurements are derived from the national financial accounts (balance sheets). The private sector is defined as Non Financial Corporations (S11), households and non-profit institutions serving households (S14+S15). NFC include both private and public sector companies, as well as domestic and foreign-owned companies (directly and indirectly) located and operating in the country. The European Commission defines the private sector debt ratio as the (country's) total of outstanding loans (F4) and outstanding securities liabilities (other than shares, F3) held by non-financial corporations and households divided by the (country's) GDP. Similarly to the Excessive Deficit Procedure, when the debt ratio in a country's private sector exceeds an indicative threshold, the country shall be subjected to an in-depth analysis. This threshold, determined on the basis of the upper quartile in the statistical breakdown of historical values for the debt ratios in the EU member states during the period 1995-2007, is the same for all countries with a value of 160% as a percentage of the country's GDP. Debt measures can encompass a variety of financial instruments as can be seen from the table 1 below.

Table 1
Private sector debt: instruments and sources

	Sector	Source	Frequency	Reliability
Loans (F4)				
- Banking loans	S11+ S1415	Balance Sheet Items (BSI) statistics	Monthly	Reliable, no revisions
- Inter-company loans	S11	ESANE ⁴	Annual	Final data 2009, provisional data 2010, estimation 2011
- Inward FDI (loans and deposits sub- category)	S11	Balance of Payments	Quarterly	Final data 2009, provisional data for 2010 and 2011
Securities other than shares ⁵ (F3)	S11	Securities issues (SEC) statistics	Monthly	Reliable, no revisions
Trade credits (F71)	S11	ESANE	Annual	Final data 2009, provisional data 2010, estimation 2011

⁴ Elaboration des Statistiques ANnuelles d'Entreprises, annual data covering all the balance sheet items of all French non financial corporations. Individual data are provided by the National Statistical Institute. Inter-company loans are measured using item B508 ("groups and associates") from tax reports and accounting statements 2057. Trade credits are compiled using item B342 ("trade payables and attached accounts") from tax reports and accounting statements 2050.

⁵ Financial derivatives are part of this financial instrument. For French NFC their reported amount is negligible.

Some tentative comments and question marks

Banking loans: loans from monetary and financial institutions. These are highly reliable statistics compiled from monthly reports. The respondents have a banking license therefore under the supervision of the prudential authorities. These statistics are also part of M3 compilation.

Securities other than shares: monthly statistics and highly reliable covering issuances of non financial corporations.

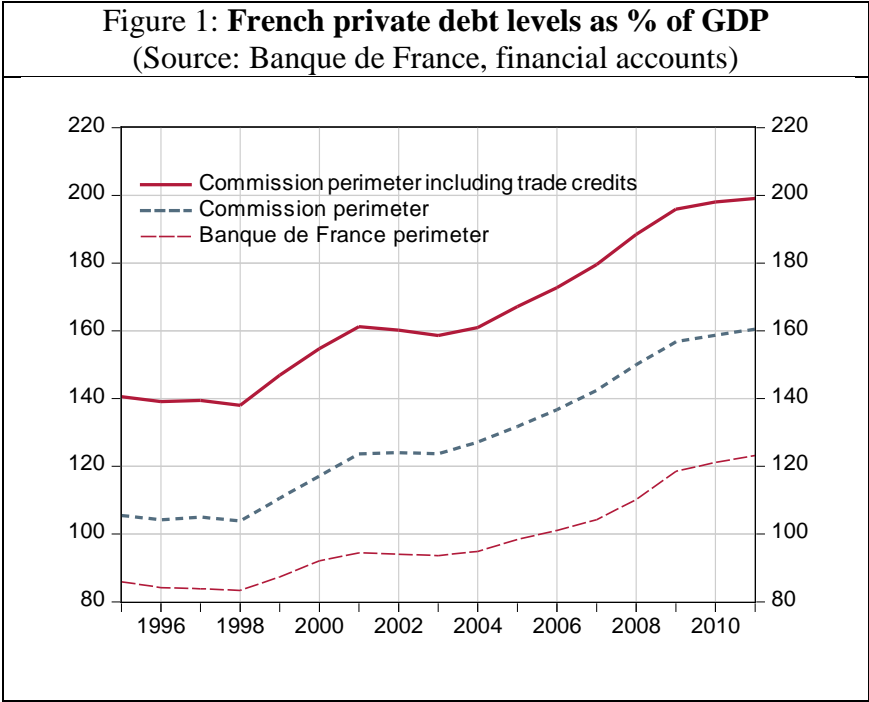
Trade payables: by analogy with private accounting, the Commission excludes trade payables (under the form of payment delays) which are captured in financial accounts by the operation F71 (trade credits and advances).

The Banque de France has been compiling and publishing since 2004 debt indicators covering households, non financial corporations and the general government⁶. These ratios derived from quarterly financial accounts are published about 120 days after the end of the quarter. The debt instrument coverage is very similar to a Maastricht type of compilation and therefore differs in this respect from the approach followed by the Commission. Notably the Banque de France measure only keeps credits granted by monetary and financial institutions whereas the Commission's measure includes all credits on the liability side of private agents. All these three definitions lead to sizable differences in the level of indebtedness as displayed in Figure 1 below, the level ranging in 2011 from 120% of GDP to 200% of GDP. The French debt level contained in the scoreboard stands at 160% in 2011.

Although the inclusion or not of trade credit can be a matter of discussion, it is worth highlighting that the Commission's measure refers to the non-consolidated liabilities in the respective sectors. In other words, the debt measure includes the total of all individual companies' and households' loan liabilities, regardless of the counterpart sector. Therefore it includes not only loans from banks, securities markets or lenders in other sectors but also loans from lenders in the same sector. If for households both measures do not differ (at least for France) this is not the case for NFC. Indeed, the total loans granted to non financial corporations in the financial accounts not only cover loans granted by resident and non-resident credit institutions but other loans. This latter subcategory refers to loans between resident affiliated companies (inter-company loans) but also covers a part of foreign direct

⁶ For more details see <http://www.banque-france.fr/en/economics-statistics/securities-loans-and-deposits/debt-and-securities/debt-ratios-of-the-non-financial-sector/debt-ratios-of-the-non-financial-sector.html>.

investment, namely “other capital” that is loans (and deposits) between resident entities and their non-resident affiliates (parent companies, directly and indirectly owned subsidiaries and fellow companies meaning enterprises with no direct ownership links between them or where one owns less than 10% of the equity capital in the other⁷.



⁷See ESA 1995 §5.81: “Category AF4 includes: a) balances on current accounts, for example intra-group balances between non financial corporations and their non-resident subsidiaries....”

Issue 1: inter-company loans

To take or not into account inter-company loans is an interesting issue for reflection. In favor of taking them into account is the idea of simplicity and ‘over compassing’ approach. At the same time, this could obviously be conducing to double counting: if a company takes out a bank loan and then lends this money to, for instance, its subsidiary in the same country, these loans are included in both stages and thus taken up twice in the debt measure. On the contrary, if the subsidiary itself chooses to take out a corresponding bank loan, this loan is only counted once. The debt level in the corporate sector is thus lower according to this measure, despite the debt level actually remaining the same. The simple T account example below will illustrate this point very simply.

Let consider a company A which raises equities for an amount of 100 and get a banking credit for an amount of 80. The balance sheet of A is:

Company A	
Assets	Liabilities
180 (cash)	100 (equities)
	80 (banking loan)

Two scenarios can be envisaged. In scenario 1, company A acquires with its cash non financial assets (productive capital) allowing it to produce goods:

Company A	
Assets	Liabilities
180 (non financial assets)	100 (equities)
	80 (banking loan)

In scenario 2, for any management reasons, the company A sets up two 100% controlled subsidiaries B and C which buy the non financial assets. For this purpose the parent company A grants credits to its two affiliates:

Parent company A	
Assets	Liabilities
20 (participations)	100 (equities)
160 (loans to B and C)	80 (banking loan)

Company B		Company C	
Assets	Liabilities	Assets	Liabilities
90 (non financial assets)	10 (equities)	90 (non financial assets)	10 (equities)
	80 (loan from A)		80 (loan from A)

National accounts depict financial operations on a non-consolidated basis. In scenario 1, indebtedness is compounded for 80. In scenario 2, indebtedness is compounded for 240. The internal financial organization of a corporate can impact the compounding of its indebtedness from 1 to 3, except if inter-company loans are not taken into account. It is obvious that alternative scenarios could be possible.

In a scenario 3 for instance, the holding would acquire the assets (as in scenario 1), but lend them to subsidiaries B and C, with a renting fee equal to the interest rates that would have been perceived in scenario 2. While scenarios 2 and 3 are obviously very similar in economic and financial terms, their impact on private indebtedness would fundamentally diverge.

Finally, in a scenario 4, the parent company would become a sheer holding and finance its subsidiaries B and C only via equity. In such a case, as touched upon before, the impact on private indebtedness would be zero...

The Banque de France view is that for reliability and comparability reasons, the internal financial structure of a corporate group should not impact at least significantly the private debt measurement. Its publications are made accordingly. The amounts at stake are not negligible.

For France, inter-company loans represent a sizeable amount of the private debt indicator as shown in Figures 2 and 3 below. In 2011, these loans reach 400 €Bn, that is around 20% of GDP. Overall, these loans should not be assessed in the same way as, for instance, loans from credit institutions. Indeed, often motivated by fiscal reasons they do not reflect the “economic reality” of acquiring money to finance a real investment and therefore do not indicate any excess of leverage but rather do reflect the internal organization of a firm.

Figure 2: French inter-company loans €Bn
(Source: Banque de France, financial accounts)

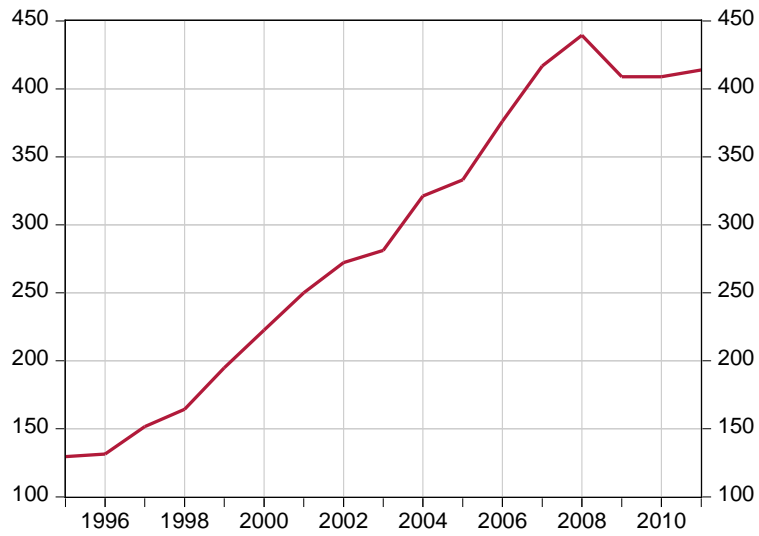
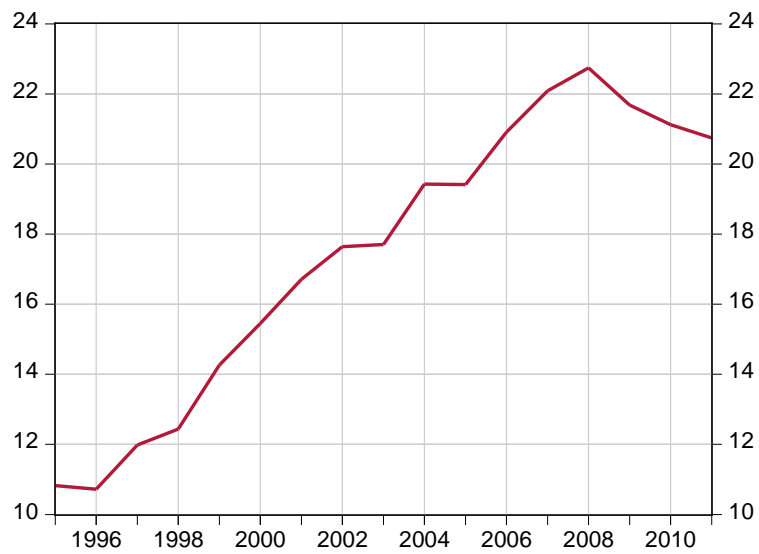


Figure 3: French inter-company loans % of GDP
(Source: Banque de France, financial accounts)



Issue 2: foreign direct investment in other capital

This issue relates to the fact that loans in financial accounts also include part of foreign direct investment operations, more specifically all of the loans and deposits between resident entities and their non-resident affiliates⁸. Direct investment statistics include all of the financial transactions between enterprises deemed to be in a “direct investment relationship” i.e. a relationship where a resident entity in one economy acquires or holds a lasting interest in an entity resident in another economy. According to convention, direct investors are deemed to hold a lasting interest in an entity when they own at least 10% of the equity or the voting rights in an enterprise that is resident in another country. These statistics cover transactions between companies that are indirectly linked, as well as transactions between companies with direct ownership links that meet the 10% criterion. This means that a financial transaction between a company and a subsidiary that is more than 10% owned by majority-owned subsidiary of the first company counts as direct investment, even though there is no direct ownership link between them. Similarly, all of the financial transactions between fellow companies, meaning companies where the same ultimate investor directly or indirectly owns more than 10% of the equity, but that do not have direct ownership links between them, count as direct investment. The remaining of this section is devoted to financial operations between fellow companies.

Until recently, in French BoP statistics (as in many other countries) loans between fellow companies are recorded under the asset/liability principle. Loans made by resident companies to non-resident fellow companies are counted as outward direct investment, while loans from non-resident companies to French fellow companies are counted as inward direct investment. This rule did not raise any particular problems when the current methods for compiling and recording balance of payments flows and international investment position stocks were first defined, but, today, it inflates direct investment notably because of the creation and growth of special purpose entities (SPEs). Some of these entities were created by international groups to provide the necessary financing to the other companies belonging to the group by issuing securities on international markets or by obtaining bank loans. These structures are usually not located in the country where the ultimate investment is made. In this case, the funds are transferred from the countries where they have been raised to countries where they will be

⁸ As can be seen below in the text affiliates is a general term covering parent companies, directly and indirectly owned subsidiaries and fellow companies meaning enterprises with no direct ownership links between them or where one owns less than 10% of the equity capital in the other.

used, with a possible detour via the group's home country or a third country. Each transfer of funds corresponds to an inter-company loan that is recorded as direct investment in BoP statistics and loans in national accounts. SPEs may also be given the task of centralising the group's disposable cash. In this case, they receive funds from companies with cash surpluses and distribute them to companies with borrowing needs. All such transactions are recorded as direct investment transactions. SPEs also affect direct investment through payment transactions, as in the case of an acquisition by one country in another country that gives rise to payments made to or from cash management centers located in a third country. Ultimately, SPEs' impact on the financing and payment flows for FDI transactions makes the circulation of funds between affiliates increasingly complex. Two phenomena are growing in importance:

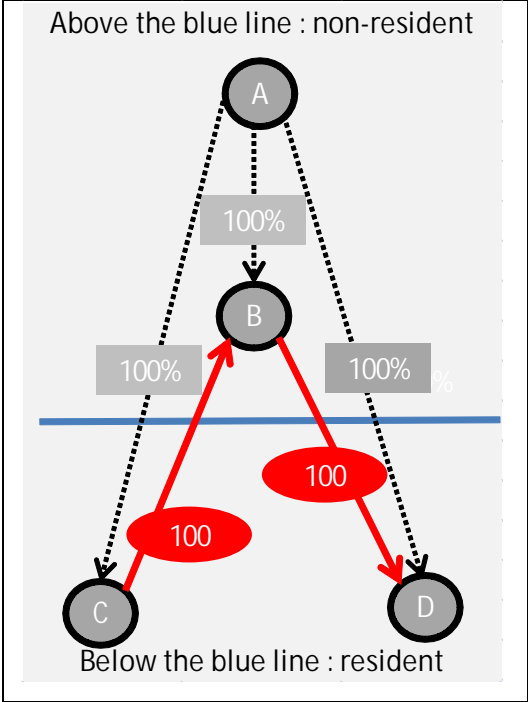
- “capital in transit” (or pass-through capital), which refers to funds channeled from one affiliate to another through one or more other affiliates. The entities in the middle of the chain merely channel the funds that they receive to other affiliates. Cash pooling facilities are one example of such intermediate entities, since they channel funds from affiliates with cash surpluses to affiliates with cash needs;
- “round-tripping”, which refers to capital that is transferred from one affiliate to another, non-resident, affiliate and then returned, in part or in whole, directly or indirectly, to the original entity.

A clear effect of these entities in statistics is to artificially inflate direct investment flows and stocks by multiplying the loans between companies belonging to the same group and located in different countries. Increasing share of recorded FDI transactions are no longer related to actual investments (in the traditional sense), but to various types of pass-through transactions where multinational enterprises channel funds through their affiliates in one country to those in other countries for the purpose of facilitating group financing or gaining administrative, tax, regulatory or other such advantages. This disconnection of real transactions from payment flows is all the more pronounced as the degree of regional economic and financial integration increases.

A simple example will illustrate this point (see Figure 4 below). A company A fully owns three companies B, C and D. C and D are residents whilst B is non-resident (controlling arrow in black). For the time being the location of the ultimate parent company is not important. B, C and D are therefore fellow enterprises i.e. enterprises with no direct ownership link involving more than 10% of equity capital. C lends 100 to B which in turn lends 100 to D (red arrows). Under the asset/liability principles, the operation from C to B is recorded as an

outward direct investment for the resident country and the operation from B to D as an inward foreign direct investment for the resident country. In the financial accounts they are recorded on both the asset and the liability side of the NFC sector under the F4 operation (loans). Therefore, this increases the indebtedness in the national accounts by 100 whereas this is only a transit of money without any real operation behind. In BoP statistics of the resident country both assets and liabilities have also increased by the same amount.

Figure 4: capital in transit example



The OECD and the IMF defined a new method called “extended directional principle,” which is set out in the OECD Benchmark Definition of Direct Investment, 4th edition (2008) and in the IMF Balance of Payments Manual, 6th edition (2008). In the case of the “round-tripping” and funds in transit transactions described above, which mainly concern fellow enterprises, all of the flows for the entities in a given group would be reclassified in the same category, either inward or outward FDI. This means that when a resident entity sends funds to a non-resident fellow enterprise that then lends the funds to another resident fellow company, the two transactions are no longer classified respectively as outward and inward FDI; instead, they are classified as outward FDI, in the case of a resident group, or as inward FDI, in the case of a non-resident group. Lending and borrowing between fellow enterprises thus offset each other, either completely or partially, instead of artificially inflating outward and inward FDI flows. In our simple example, if the ultimate controlling parent enterprise A is non-resident then the

flow between C and D is recorded as a positive inward direct investment whilst the flow between B and C is recorded a negative inward investment flow. Conversely if the UCP is resident then the flow between B and C is a positive outward investment and the transaction between C and D a negative outward investment. Overall this amounts to net out the two operations recorded under the asset liability principle⁹.

For France the amounts at stake are not negligible as show in the figures 5 and 6 below. In these figures both inward and outward FDI for loan and deposits operations compiled according the asset liability principle are displayed in value or in GDP percentage points. As already mentioned these BoP amounts are taken at their face value in the national financial accounts and classified as loans on the asset side of the non financial corporate sector for outward FDI and loans on the liability side for inward investment. Between 1995 and 2011, FDI amounts have been multiplied by almost 6; outward FDI increased from 50 €Bn to 325€Bn. The evolution of inward FDI is roughly similar to that of outward FDI, its stock level reaching 270 €Bn in 2011 after 40 €Bn in 1995. Their respective shares in GDP percentage points are now substantial. In 2011, the mount of private indebtedness imputable to inward FDI is 14 points of GDP. Figures 7 and 8 present outward and inward FDI for loans and deposits complied according both principles. The compilation of loans and deposits operations between fellow companies according to the extended directional principle rule leads to sharp and simultaneous decreases in the stocks of French inward and outward inter-company loans. For instance in 2011, the stock of inward FDI is divided by 10 from 275 €Bn to 30 €Bn. Overall, taking one figure or the other significantly impact the private debt ratio.

⁹ For a detailed approach on the implementation of this new principle see for instance D. Nivat and B. Terrien “French outward and inward foreign direct investment in 2009: new presentation”, Quarterly Selection of Articles (20), Winter 2010-2011 and B. Terrien “A new standard for compiling and disseminating foreign direct investment statistics”, Quarterly Selection of Articles (16), Winter 2009-2010.

Figure 5: French FDI loans and deposits sub category, €bn
 (Source: Banque de France, BoP and financial accounts)

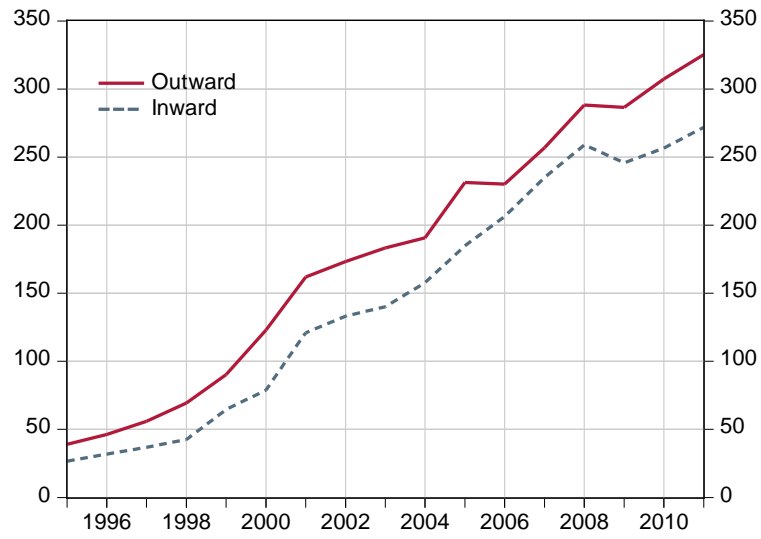


Figure 6: FDI loans and deposits sub category, % of GDP
 (Source: Banque de France, BoP and financial accounts)

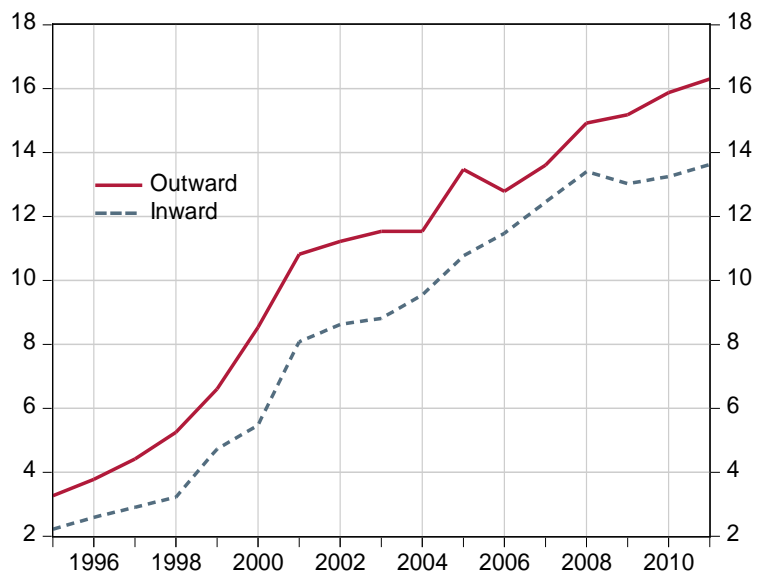


Figure 7: outward FDI loans and deposits sub category, €Bn
 (Source: Banque de France, BoP and financial accounts)

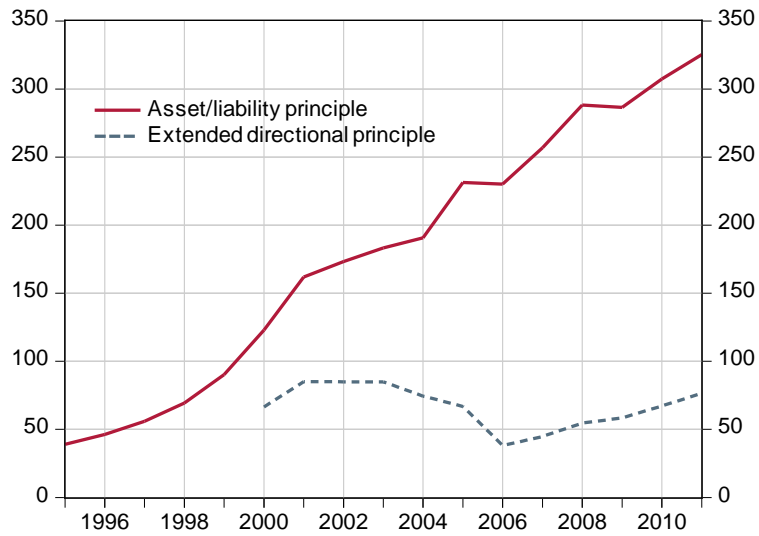
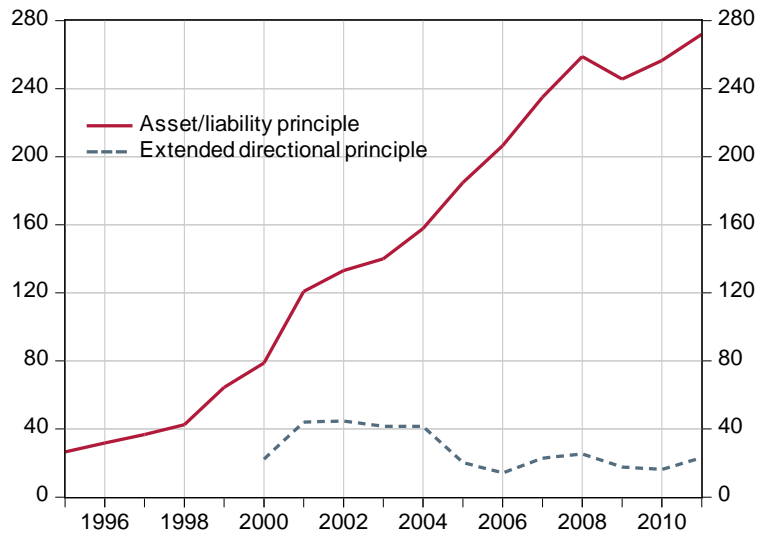


Figure 8: inward FDI loans and deposits sub category, €Bn
 (Source: Banque de France, BoP and financial accounts)



Conclusion

This paper has raised number of issues in the view of illustrating the possible major impact of choices that appear technical on the private indebtedness ratios, hence on the macro-economic assessment at the country level.

A few more general conclusions could be tentatively outlined:

- ‘the devil is in the details’ applies also for statistical measurement,
- therefore, apparently simple, ‘blind’, solutions can be misleading...
- further work seems both necessary and urgent at the international level in the field of private debt measurement.