

**THE FINANCIAL AND REAL
PERFORMANCE OF NON-FINANCIAL
CORPORATIONS IN THE EURO AREA:
1999-2015**

2017

Vicente Salas, Lucio San Juan
and Javier Vallés

**Documentos Ocasionales
N.º 1708**

BANCO DE ESPAÑA
Eurosistema



**THE FINANCIAL AND REAL PERFORMANCE OF NON-FINANCIAL
CORPORATIONS IN THE EURO AREA: 1999-2015**

THE FINANCIAL AND REAL PERFORMANCE OF NON-FINANCIAL CORPORATIONS IN THE EURO AREA: 1999-2015 ^(*)

Vicente Salas

UNIVERSIDAD DE ZARAGOZA

Lucio San Juan

BANCO DE ESPAÑA

Javier Vallés

BANCO DE ESPAÑA

(*) We thank Pablo Hernández de Cos, Manuel Ortega, Ana Esteban and Ignacio González for comments on a previous version. The final text is solely the authors' responsibility.

The Occasional Paper Series seeks to disseminate work conducted at the Banco de España, in the performance of its functions, that may be of general interest.

The opinions and analyses in the Occasional Paper Series are the responsibility of the authors and, therefore, do not necessarily coincide with those of the Banco de España or the Eurosystem.

The Banco de España disseminates its main reports and most of its publications via the Internet on its website at: <http://www.bde.es>.

Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

© BANCO DE ESPAÑA, Madrid, 2017

ISSN: 1696-2230 (on-line edition)

Abstract

This paper documents the aggregated performance of non-financial corporations in the largest euro area economies and compares it with the performance of the US corporate sector as reported by National Economic Accounts and Financial Accounts. We find significant cross-country structural differences in the behaviour of real and financial indicators that remain long after the creation of the single currency, although there has been convergence in the average cost of debt paid by corporations and in the deleveraging process unfolding after the financial crisis. German corporations stand out, with higher productivity of operating capital and profit margins. Moreover, a lower average cost of debt and also a lower average corporate tax rate have contributed to a higher return of equity in Germany compared with the return in other EU countries and the US. Since the crisis years, German and Spanish companies have joined the US corporations in saving more than they invest. We also find some evidence of a declining proportion of cash-flows allocated to capital investment.

Keywords: Non-financial corporations, Sectoral National Accounts, financial performance, rates of return of assets and equity, euro area.

JEL classification: G30.

Resumen

Este trabajo documenta el comportamiento agregado de las empresas no financieras en las principales economías de la zona del euro y lo compara con el de Estados Unidos a partir de la información de las Cuentas Nacionales Sectoriales y las Cuentas Financieras. Encontramos diferencias muy significativas entre países en un conjunto de ratios financieras y reales, diferencias que se mantienen tras la creación del euro, aunque tras la crisis financiera ha habido convergencia en el coste de la deuda pagada por las empresas y en el proceso de desendeudamiento. Las empresas alemanas presentan una mayor productividad del capital y mayores beneficios. Además, un menor coste medio de la deuda y de los impuestos en las empresas alemanas ha contribuido a que estas presenten una mayor rentabilidad del capital en comparación con las empresas de otros países de la zona del euro y de Estados Unidos. Desde los años de la crisis tanto las empresas alemanas como las españolas han pasado a tener un volumen de ahorro superior al de su inversión, igual que las empresas americanas. También encontramos evidencia de que en la actualidad las empresas dedican, en general, una menor proporción de su *cash-flow* a inversión.

Palabras claves: Empresas no financieras, cuentas sectoriales, evolución financiera, rentabilidad de activos, zona del euro.

Códigos JEL: G30.

INDEX

Abstract 5

Resumen 6

1 Introduction 8

2 The links between National and Financial Accounts and accounting statements 10

2.1 Income statement 10

2.2 Balance sheet and generation and uses of funds 11

2.3 Flow of funds 12

3 Real and financial variables from the income statement and the balance sheet 14

3.1 Contribution of NFCs to Income and to GDP 14

3.2 Output Growth 15

3.3 Output/ Inputs Composition 16

3.4 Assets and Liabilities 20

3.5 Composition of assets 22

3.6 Composition of liabilities 24

4 Sources and Uses of Funds 29

5 Rates of Return, Cost of Debt and Income Taxes 32

5.1 Returns on assets 32

5.2 Cost of debt and income taxes 36

6 Conclusions 39

DATA APPENDIX 43

1 Introduction

This paper examines the performance of the non-financial corporate (NFC) sectors in Germany, France, Italy and Spain since the creation of the euro in 1999. For comparative reasons the examination will also include performance indicators of the US corporate sector during the same sample period. The creation of the euro and the end of national currencies contribute to financial integration and the approximation in the financial cost of capital of firms in euro area members, given the elimination of exchange rate risks. The goal of this paper is to examine how the creation of the euro affected the convergence of selected financial and real indicators for the aggregate of corporate sectors of the four largest euro area countries. The global and the European economies have undergone years of severe financial and economic crisis during the sample period. Hence, another issue examined in the paper is how the corporate sectors of the different countries compare in their performance in the years running up to the crisis, and in the following period, including the more recent recovery. That analysis seems relevant, for example, for understanding the weak recovery of business investment since the crisis both in the euro area and in the US (ECB (2016) and Döttling et al. (2017)).

The data used in the analysis include the income statement and the balance sheet of the NFC sector in each country, as reported by National Economic Accounts and by the Financial Accounts, respectively, to EUROSTAT. Data on the corporate sector of the US are taken from the Bureau of Economic Analysis. The analysis covers the distribution of gross value added in terms of labour and non-labour income; the composition of balance sheet assets and liabilities; the calculation of profit margins and rates of return on capital; and the evaluation of flows of funds, including investment in gross capital formation. The countries considered are the largest in the euro area and the focus is on the performance of NFCs during the period 1999-2015. Other components of the market economy such as the financial corporate sector (banks, insurance companies and so on) and the activity of unincorporated firms and self-employed individuals are excluded. To appreciate the relevance of the non-financial corporate sector in the national economies, notice that in 2015 the gross value added of the NFC sector represented between 57% (Germany) and 44% (Italy) of each country's total GDP, while in the same year NFCs contributed to gross capital formation in the economy in a range from 71% (Spain) to 52% (Italy). These proportions would be substantially higher if the comparisons were made solely with the market economy.

The evaluation of the financial and real indicators contemplates the consolidated accounts of the non-financial corporate sector as if they were the accounting statements that a single corporation uses to report on the results of its business activity. Thus the first step in the analysis will be the organisation of the flows and stocks as reported in National Accounts so as to match as closely as possible the organisation of accounts in the income statements and the balance sheets prescribed by financial reporting accounting standards at the firm level. The time period covered in this study (1999-2015) includes the years of economic expansion, until 2007, the years of severe contraction in economic activity due to the great recession, 2008-2013, and

the years of recovery, 2014 and 2015. This means that we will be able to compare differences in performance for corporate sectors in different stages of the business cycle. Moreover, it provides the opportunity to investigate how the different corporate sectors of the euro area countries adjust to the single currency, and particularly to the monetary policy of the ECB. The paper describes what happens in the aggregated corporate sectors of the four countries during the sample period, with special attention to convergence or divergence in the values of the selected variables. However, it avoids possible explanations for the observed cross-country differences, and for the observed changes in the variables over time, left for future work.

Two significant limitations of the dataset need to be kept in mind in the interpretation of the results. The first is that the income statement and the balance sheet are prepared independently and using different data sources (transactions of the National Accounts and balances of the Financial Accounts, respectively), while accounting statements of individual corporations are drawn from the recording of transactions using double-entry bookkeeping. The internal consistency between stocks and flows assured by double-entry accounting of firm-level transactions cannot be assured at the aggregate level and certain adjustment between National Accounts and Financial Assets have to be made. The second issue relevant for the proper interpretation of the results is that the Financial Accounts with the raw data used in the preparation of the balance sheet includes information only on financial assets and liabilities, including net worth. No specific information on the operating assets of corporations, i.e. on the assets the NFCs deploy to produce goods and services in the country, is directly available. The assumption we make here is that, in an initial approximation, the (market) value of the operating assets of NFCs in each country is equal to the difference between liabilities and net worth minus financial assets, as reported in the Financial Accounts.

The rest of the document is organised as follows. Section 2 presents some methodological issues on how to link the National Accounts with accounting statements such as the income statement, balance sheet and flow of funds. Section 3 contains the results of the analysis of the income flows and the balance sheet of the corporate sectors. Section 4 focuses on the flow of funds data, including the investment rate, and in Section 5 flows and stocks are related to indicators of corporate rates of return. The conclusions summarise the main results of the analysis.

2 The links between National and Financial Accounts and accounting statements

This section explains how accounts from National Statistics sources will be organised to produce an income statement, a balance sheet and a flow of funds of the NFC sector in each country during the period 1999-2015.

2.1 Income statement

Corporations obtain their revenues mainly from selling the goods and services they produce on the markets. Production activities consume resource inputs that firms purchase, like labour and intermediate goods and services, together with others directly supplied internally from long-life resources previously purchased or internally built up, e.g. capital services from machinery and equipment. The value of production can be decomposed into the value of goods and services that the NFC sector purchases from other institutional sectors of the economy, including imports from abroad, and the value added to these externally supplied inputs within the corporate sector when combined with labour and capital services. Hence, the *gross value added* (GVA) by NFCs is the difference between the monetary value of producer goods and services minus the purchase cost of inputs purchased outside the corporate sector.

The difference between the revenues from the production and sales of goods and services, and the explicit costs incurred in such production and sales, gives the *operating profit*; these profits represent the accounting profit (before interest and taxes) from operational activities of production and sales conducted within the boundaries of the national economy. Operating profits are also the residual of gross value added net of production taxes and subsidies, compensation of employees, depreciation of capital and other expenses.

Corporations can, and actually do, generate income from financial investments, from real estate assets, and from production and sales activities abroad; in the latter case income is most often received in the form of royalties, interests and dividends. Throughout this paper, we group all income from investments and transactions other than the production and sale of goods and services within national boundaries, under the single heading of *financial income*.

Firms that use debt from banks or from other sources to finance their investment will pay prearranged interest on this debt; these interest expenditures are tax-deductible, meaning corporations pay taxes on total profits, from operations and from other activities, net of the interest paid on debt. Accounting conventions do not attribute a financial cost (opportunity cost) to own funds, so the *net profits* reported on the bottom line of the income statement are not equal to the economic profits. The reason is that the calculation of net profits ignores the opportunity financial cost of the own funds – equity – that, together with debt, finance all corporate assets.¹

¹ Barkai (2016) presents an estimation of the user cost of capital for the NFCs of the US economy to obtain the implied economic profit measure.

Given all these considerations, the items on the income statement, from the value of production to the net profits of NFCs, are presented in Box 1.

| INCOME STATEMENT OF NFCs | BOX 1 |
|---|-------|
| <hr/> | |
| Value of production | |
| - Consumption of goods services from outside the NFC sector | |
| = Gross Value Added (GVA) | |
| - Production taxes + subsidies | |
| - Labour compensation | |
| = Gross operating profit | |
| - Amortisation and other expenses (net) (a) | |
| =Operating profit | |
| +Financial income | |
| +Other property rents (net) (b) | |
| = Earnings before interest and taxes (EBIT) | |
| - Interest on debt | |
| - Corporate and property taxes | |
| = Net profit | |
| a Other net expenses are obtained from other current transfers. | |
| b Other net property rents includes income from investment funds and insurance policies, net withdrawals from income of quasi-corporations and net rents. | |
| <hr/> | |

2.2 Balance sheet and generation and uses of funds

We write the equality between assets and liabilities in a simplified balance sheet as follows:

$$FA + OA = D + E$$

Where *FA* indicates financial assets, *OA* indicates operating assets, *D* is the amount of debt and *E* is the amount of equity. The operating assets are those used in the production and sale of goods and services within national boundaries, together with labour and intermediate inputs purchased outside the corporate sector. The operating assets can be separated into tangible and intangible fixed assets, and current assets; the current assets, in turn, include inventories, accounts receivable minus accounts payable², and cash and cash equivalents for the normal operation of the business activity. Thus we have:

² The accounts receivable represent sales already delivered to customers but still pending payment; accounts payable represent the money value of goods and services purchased by the firm from its suppliers, also pending payment. Both are directly tied to the activity of producing and selling goods and services within national boundaries, and the reason for obtaining the difference between the two is to avoid double counting in the sense that what a supplier records on its balance sheet as accounts receivable appears on the balance sheet of the buyer as accounts payable. Another reason to net out accounts payable from accounts receivable in the modified balance sheet is because accounts payable are debt without explicit financial cost that is determined mainly as part of the commercial policy of the company, while bank loans and bonds have an explicit financial cost and are the result of financial leverage policies and decisions.

Operating Assets (OA) = Fixed Assets + Inventories + Accounts Receivable - Accounts Payable + Cash and cash equivalents.

The *Financial Assets (FA)* include all the assets that represent claims on income from investments other than those that turn into operating assets of the business. They may include bank deposits additional to cash and cash equivalents, bonds, loans and equity. Some of these loans and equity will be the financial counterpart of assets in subsidiaries and other corporations abroad, on the balance sheet of the national headquarters.

2.3 Flow of funds

The equivalent to the simplified balance sheet above, in terms of flows, may be written as³:

$$\Delta FA + \Delta OA = \Delta D + \Delta E$$

The equation expresses the identity between flows of sources and uses of funds in a given period of time. Most often, for growing firms, the flow on uses of funds includes positive changes in the stock of financial assets, ΔFA , from new financial investments, and changes in the stock of operating assets or productive capacity, ΔOA . Firms invest in tangible and intangible capital to replace the loss in productive capacity from depreciation of capital assets, and possibly expand that capacity. The change in operating assets is affected positively by the new capital investment, I , and negatively by depreciation, AM , so $\Delta OA = IN - I - AM$, where IN is the net capital investment. Firms generate internal funds from retained earnings, RE , equal to profit B minus dividends paid, DI , that expand the equity base, and change directly the equity base either with new issues or with share buy-backs, ΔC : $\Delta E = B - DI + \Delta C$. Finally ΔD is the change in debt needed to balance the flow account. We then re-write the balance flow equation as:

$$\Delta FA + IN = \Delta D + B - DI + \Delta C$$

Therefore, profit B can be written as,

$$B = (DI - \Delta C) + IN + (\Delta FA - \Delta D)$$

The second equation expresses the identity between the net profits generated in the period and the distribution to three possible uses: pay dividends to the shareholders (net of shares issues or cancelations), net investment in operating assets, capacity expansion, and modify the difference between financial assets and corporate debt to balance the flows account. Instead of profits one could use cash flows (CF), profits (B) plus amortisation (AM), a cost but not a cash outflow, in the balance of flows equation. The new equation is:

$$CF = B + AM = (DI - \Delta C) + I + (\Delta FA - \Delta D)$$

³ This way of writing the generation and uses of businesses' cash flows is taken from Gruber and Kamin (2015).

In National Accounts it is common to use the measure of excess (+) or need (-) of funds as an indicator of whether the corporate sector generates internally more funds than those needed to finance capital investment and the dividends paid to the shareholders, *excess*; or, on the contrary, the corporate sector needs funds additional to those generated internally to finance investment and dividends paid, *needs*. From the previous notation,

$$\text{Excess (+)/ Needs (-) of funds} = (B - DI) - IN = \Delta AF - (\Delta D + \Delta C) = CF - DI - I$$

Net profits minus distributed dividends (BDI) gives the amount of corporate savings (S). Thus the excess of funds corresponds to a situation where corporate savings are greater than investment. As we will show below there is evidence of positive corporate lending for some countries in recent years, i.e. savings higher than investment, a phenomenon called “corporate savings glut”.

3 Real and financial variables from the income statement and the balance sheet

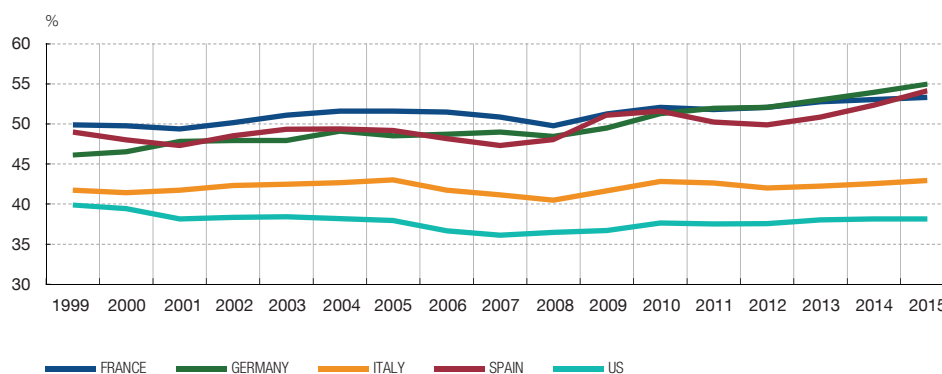
Table A1 in the Appendix shows the values of the items listed as part of the income statement aggregate for all NFCs of France, Germany, Italy, Spain and the US from 1999 to 2015. The items included in the income statement are the same as those listed in section 2.1 (Box 1). For each country the Table shows the values in absolute terms (current euro/dollars). At a later stage, the analysis of the contents of the assets and liabilities of the balance sheet are based on the items from Table A2 of the Appendix.

3.1 Contribution of NFCs to Income and to GDP

The corporate sector contributes to the national income of the economy from two main sources: the *gross value added (GVA)* from production and sales activities conducted within the country; and the *financial income plus other property income*, earned by holding domestic assets, financial and non-financial alike, outside the boundaries of the NFC sector, and by holding financial and non-financial assets resident in foreign countries. Overall, the sum of GVA, financial income and income from property assets gives the total *income* with which the NFCs contribute to the Gross National Income of the country. Figure 1 shows the evolution over time of the ratio of the gross income of the NFC sector to the Gross National Income for each country in the sample.

NFCs INCOME AS A PROPORTION OF GROSS NATIONAL INCOME
(CURRENT PRICES)

FIGURE 1



SOURCE: Own calculations.

Germany, France and Spain are the countries where the contribution of income generated in the NFC is the highest, around 55% of their total income by 2015. The remaining national income comes from households, governments and financial institutions. It is interesting that in these countries the NFCs income share moderately increases in the pre-crisis years and continues that trend with the recovery. In Italy the corporate sector only contributes around 43% of the national income and has been stable around that value. In this country households income share is much higher (around 10 percentage points) than in the other European countries and that may be explained by the relative importance of self-employed business⁴.

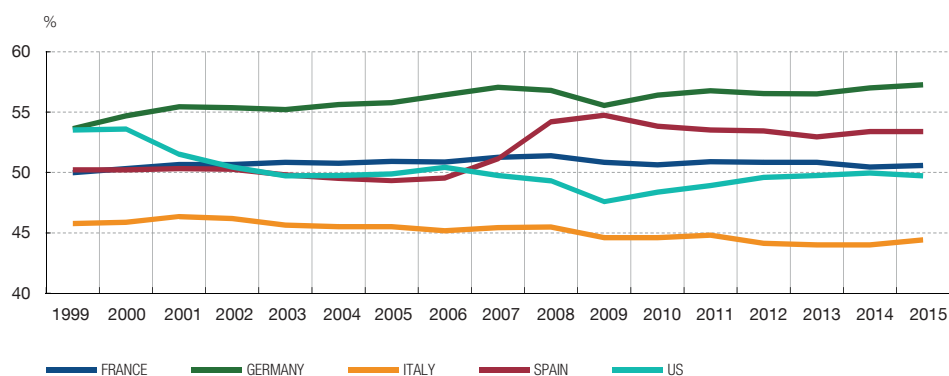
⁴ For example, in Italy self-employed businesses account for 23% of the total employment whereas that ratio in Germany and France is 10% and in Spain is 17% for the average 1999-2015 period.

The NFCs income share in the US is around 38% of the national income but that only takes into consideration the non-financial corporate business. If we were also considering the non-financial non-corporate business (as it is reported for the European countries by Eurostat) then the average income share were around 50% in the sample period, close to the European values in Figure 1 with the exception of Italy.

Although the contribution of GVA to the National Income is much more significant than the contribution of financial and other property rents, the composition is not the same in all countries. Figure 2 shows the separate contribution of GVA in relation to GDP. Now the GVA contribution to GDP in Germany and France is more stable over time than the contribution of total income. Comparing Figure 1 and 2, the gross income contribution of the corporate sectors in Germany and France is quite similar but the GVA relative to GDP of the French corporate sector is 7 pp lower than the contribution of that of Germany. That may be explained by the higher importance of financial rents in France over the sample period.

GVA OF CORPORATE SECTOR AS A PROPORTION OF GDP

FIGURE 2



SOURCE: Own calculations.

3.2 Output Growth

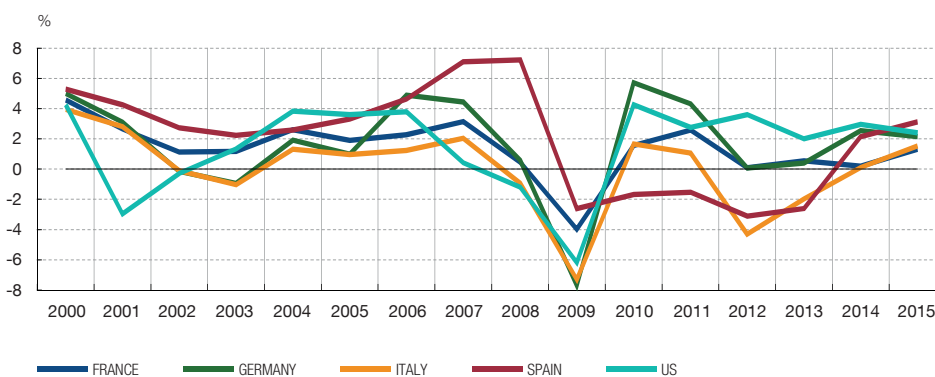
The annual real rate of growth of GVA (nominal minus the inflation rate measured by the GDP deflator) in Figure 3 shows high volatility, which is as expected given that all the countries were affected by the financial and economic crisis. But this variable also shows significant differences across countries over time. The GVA of the Spanish NFC sector was growing at 7% in real terms in 2007, just before the start of the financial crisis; in fact, since the introduction of the euro, the real growth rate has on average been more than twice the growth rate of the corporate sectors in other European countries.

The severe contraction in corporate sector activity is clear from Figure 3. In 2007, GVA in Germany and France was growing at an annual real rate of 4% while in 2009 their respective rates were negative at 6.5% and 4%. The Spanish corporate sector's rate of growth fell from 7% in 2007 to 2% in 2009. The second recession had also very significant real effects. In France and Germany the growth rate in the second recession, around 2012, was close to zero. The double dip in the Italian and Spanish corporate sector was notable, with growth rates of 4%

and -3% respectively in 2012. Again, this highlights the heterogeneous effects of the recent crisis in Europe, due partly to the accumulated vulnerabilities in some of these countries in the precrisis years of economic expansion. In 2014 and 2015, annual growth rates are positive in all countries, with Spain and Germany leading the recovery, and concentrated in the range of 1% to 3%.

REAL (GDP DEFLATOR) ANNUAL GROWTH RATE OF GVA

FIGURE 3



SOURCE: Own calculations.

The growth rates of GVA of the corporate sector in the US shows as much volatility as that of the European countries in the years in the run-up to the last crisis, but a more stable path since 2010. With the dot com crisis at the start of the 2000s the growth rate turned negative, standing at almost 3% in 2001; the recovery was fast and in 2004 the US corporate sector grew at 4%, substantially higher than the growth rates of the European countries. The GVA of the US corporate sector started to decelerate in 2007 and the growth rate turned negative in 2008 and 2009, when it was close to 6%, similar to the growth rate of the German and the Italian sector. The corporate sector in the US has been growing above 2% since 2010 whereas the European corporate sectors did not catch up with a similar growth rate until four years later.

3.3 Output/ Inputs Composition

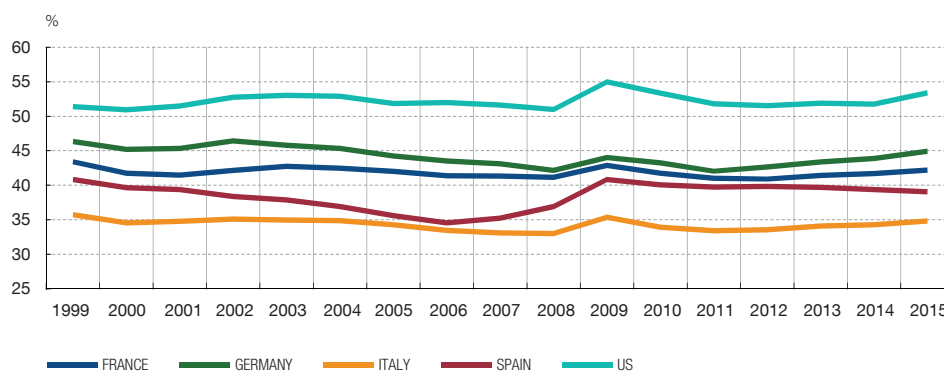
The output produced by NFCs consumes different inputs. One distinction is between inputs purchased from suppliers outside the corporate sector, intermediate inputs, and inputs from primary resources, labour and capital, incorporated into the process of adding economic value within the corporate sector. On the basis of this distinction, the value of production is decomposed into monetary value of intermediate inputs and the gross value added, GVA. The ratios of GVA to the value of production in Figure 4 offers information on the relative significance of “make” versus “buy” in the value chain of the different corporate sectors, and its evolution over time.

Among the European countries, the Italian NFC sector has the lowest ratio of GVA to value production and the German NFC sector the highest, meaning the Italian NFC sector is that where the intermediate inputs purchased from outside the sector have more weight in the value of production and the German the one with the lowest weight of intermediate inputs in production. One could say then that the German NFC sector is more vertically integrated,

making more and buying less than Italy's. In particular, 35% of the value of everything produced by the Italian NFC sector comes from value added within the sector, while in German NFCs GVA represents 45% of the value of production. GVA as a proportion of total production in the French NFC sector is slightly lower than in Germany's, while in the case of Spain the proportion is somewhere between that of French and Italian corporations. Finally, the US companies have a much higher GVA ratio than their European counterparts, and it represents more than 50% of their production in the entire sample period.

RATIO OF GVA TO VALUE OF PRODUCTION

FIGURE 4



SOURCE: Own calculations.

In the five countries the composition of the value of production undergoes some changes over time. The common pattern in Europe is a decrease in the share of GVA and therefore an increase in intermediate inputs consumption in the precrisis years, 1999-2007. In 2009 the trend changes and GVA increases its weight in total production. By 2015 the corporate sectors of all the countries have practically reached the GVA/total production ratio they had in the year 2000, and the significant cross-country differences in the initial years of the sample period remain. The Spanish NFC sector is that where the two trends during the sample period are more pronounced: in 2007, GVA as a proportion of the value of production was 5 p.p. lower than in the year 2000, and two years later, in 2009, it was back to the 2000 level. The years of a disproportionate increase in the value of intermediate inputs relative to the value of production in the Spanish NFCs coincide with the extraordinary expansion of the construction and real estate sub-sectors, an increase in imports and huge external current account deficits, all fuelled by an unprecedented increase in credit to the private sector of the economy. By contrast, the share of GVA in the US corporate sector only deviates from the general stability over time with the rise in the crisis years of 2008-2009.

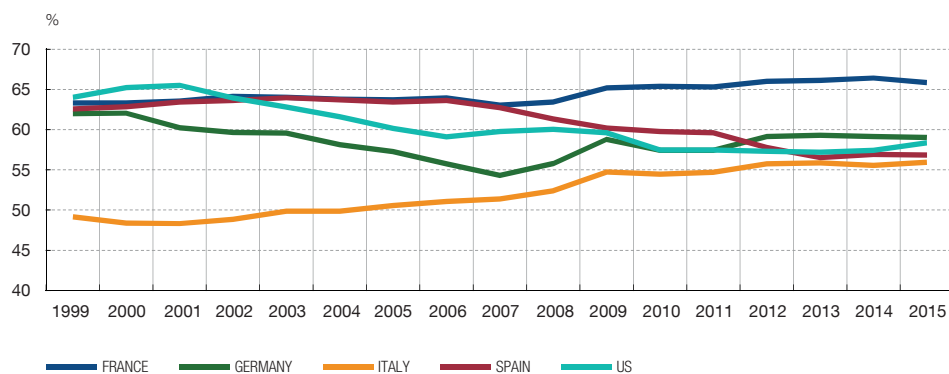
Labour compensation and profits

Gross Value Added is divided into the compensation of employees, the compensation of capital services, and the compensation of entrepreneurial inputs, used in the production of goods and services. At this point of the analysis, the separation between capital input costs and economic entrepreneurial rents/economic profits has not been made since it would require

having an estimate of the user cost of capital that is not available. Therefore, we will simply decompose GVA into labour and non-labour inputs compensation. Figure 5 shows the proportion of labour compensation relative to GVA. The non-labour compensation includes taxes net of subsidies on production (around 1%), and the sum of gross capital services compensation and entrepreneurial rents not included in labour compensation.

LABOUR COMPENSATION AS A PROPORTION OF GVA

FIGURE 5



SOURCE: Own calculations.

The Italian corporate sector has the lowest proportion of labour compensation relative to GVA, while the French corporate sector is that with the highest proportion. In 1999 the differences between the two countries was 15 p.p.; in 2015 the difference is only 10 p.p. because Italian corporate sector labour compensation has been gaining weight throughout the sample period. In 1999 the proportions of labour compensation relative to GVA of the corporate sectors of France, Germany and Spain were all very similar (around 62%) and also similar to the US labour share. The labour ratios for France and Spain remain practically identical until 2007, in the years prior to the crisis, and have diverged since 2008. In France the ratio increases to over 65% and in Spain falls to 57% in 2015. The German share of labour compensation decreases in the pre-crisis period and in 2007 is almost 10 pp lower than in 1999. Since 2008 the trend has changed sign and in the final years of the sample period this ratio stabilises to a value close to 60%. The corporate sector in the US is the only one where the labour share moves on a decreasing trend throughout the sample period. Thus, in 2015 the share of labour compensation converges to values 5 p.p. lower than its value in 2000 for the corporate sectors of Germany, Spain and the US. But the French corporate sector remains removed from this converging trend, while the Italian labour share converges to this value but with an increasing time trend.

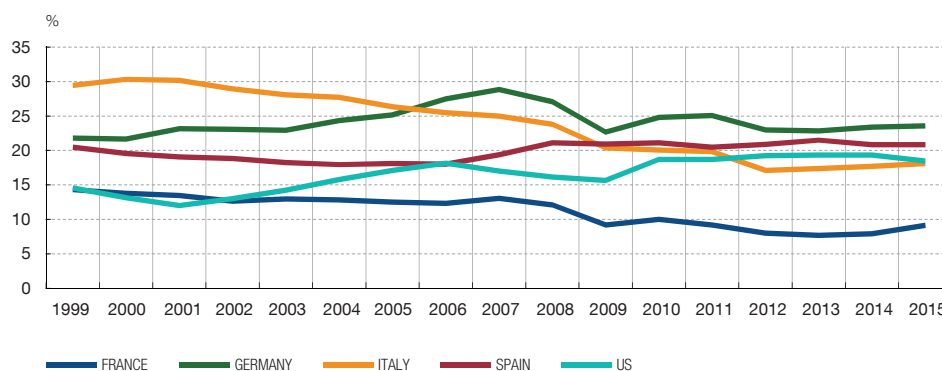
In any case, these differences on the pattern of labour share trends relative to GVA shown in Figure 5 with a homogenous dataset do not conform exactly to the generally accepted view that the share is moving on a decreasing trend in most developed countries around the world (Karabarbounis and Neiman, 2013).

As for the profits share in GVA, we shall focus on two measures of accounting profits: the *operating profit* and *net profit* in the income statement outlined in section 2.1. The operating

profit includes the capital services (operating assets) compensation and the entrepreneurial compensation, net of depreciation allowances and other costs, with all of these concepts originating from production activities within domestic boundaries. It is equal to GVA minus production taxes and subsidies, minus labour compensation and minus depreciation and other expenses. The net profit, the bottom line of the income statement, gives the amount of shareholders' free disposable income after all revenues and explicit costs of the corporations are accounted for. Figures 6 and 7 show the ratios of operating profits to GVA and net profits to all corporate income (GVA plus financial and other property income, since part of the net profit arises from other income other than GVA) respectively, for the NFCs of the selected countries.

OPERATING PROFIT RELATIVE TO GVA

FIGURE 6



SOURCE: Own calculations.

The ratio of operating profits in Italian NFCs decreases over time from a high of 30% in 1999 to 17.5% in 2015; this decline in the operating profit margin is parallel to the increase in the labour share from Figure 5. In French NFCs something similar occurs but with profit margins between 15 p.p. and 10 p.p. lower than in the Italian NFCs. The operating profit margin of German NFCs first increases until 2007 and decreases thereafter to values similar to those in the initial years of the sample period, just the opposite of the profit margin of Spanish NFCs, although at lower level values (20%). The operating profit margin of US corporations in 2015 is 5 p.p. higher in 2015 than in 1999⁵. The course of operating profit margins is determined mainly by changes in the share of labour compensation and amortisation expenses in total GVA; in countries like Spain, the operating margin does not increase in parallel with the decrease in the share of labour compensation during the crisis because the decrease is offset by an increase in amortisation expenses.

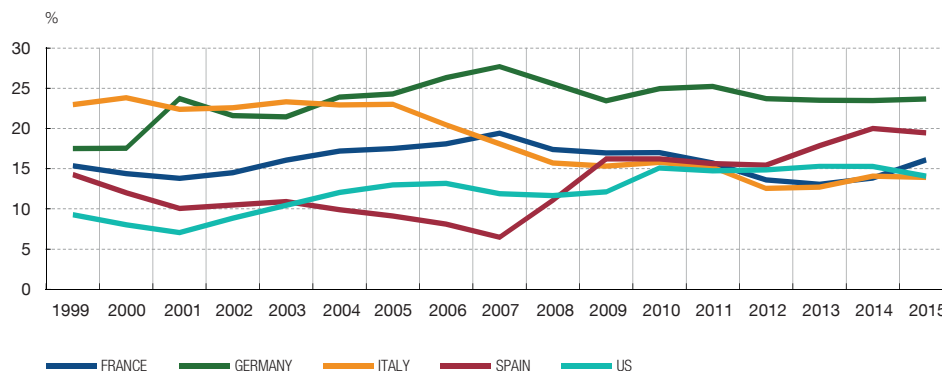
The profit margins calculated as the ratio of net profit to total corporate income (see Figure 7) do not always coincide in their time trend with that of the net operating margins in Figure 6. The net profit margin increases in the pre-crisis years in Germany, France and the US, while it decreases in the corporate sectors of Italy, starting in 2005, and especially in Spain (from 15% in 1999 to 7% in 2007). Spanish NFCs is also the corporate sector where net profit margin

⁵ Cette and Villette (2015) report a similar pattern of profit margins for the European and the US corporates, but showing a higher level of that ratio.

increases most sharply during the crisis years, to a value close to 20% in 2015. In the corporate sectors of France, Italy and the US the net profit margin stabilises during the crisis around 15%, while German corporations earn a net profit margin almost 10 pp higher, up to a level of 24%.

NET PROFIT RELATIVE TO ALL INCOME

FIGURE 7



SOURCE: Own calculations.

Revenues and costs other than those used to obtain the operating profits in the income statement contribute differently, in quantity and sign, to corporate net profits among the countries compared. In the Spanish NFC sector the net contribution is increasingly negative until 2007, and increasingly positive in the following years. Therefore, the time evolution in the net profit margin of Spanish corporations is explained in part by interest expenses and corporate profit taxes, increasing in the period of expansion, and decreasing after the crisis.⁶ This is also the pattern observed in interest expenses in US corporations (see section 6.3 below). Italian NFCs' net profit margin follows a decreasing path, very similar in size to that shown by the operating profit margin. Thus Italy, out of the five countries, had the highest net profit margin rate in 1999 (24%) whereas it presents the lowest rate in 2015 (14%).

Thus, the share of operating profits and net profits in GVA and total income, respectively, show large difference across countries, with German corporates presenting the largest values before and after the crisis, and Spanish corporates posting the biggest recovery, i.e. 13 pp in the period from 2007 to 2015.

3.4 Assets and Liabilities

We now examine the balance sheets of NFCs in the selected countries during the same time period in which we examined the income statement, namely 1999-2015. The Financial Accounts of the NFC sector for the European economies (ESA 2010) come from the statistical office of the European Union⁷. The information provided in the National Income and Product Account (NIPA)

⁶ For example, the 2016 Annual Report of the Banco de España documents how the positive effects stemming from the additional easing of ECB monetary policy since mid-2014 and the decrease in the taxation of households and companies contributed to aggregate economic growth in the most recent period and, in particular, to the recovery of Spanish corporate profits.

⁷ This information can be found at the following link: <http://ec.europa.eu/eurostat/web/sector-accounts/data/database>

for the US non-financial corporate business is taken from the Bureau of Economic Analysis⁸. In the composition of assets and liabilities we will follow the exposition in section 2.2. The balance sheets of German, French, Italian, Spanish and US NFCs, in absolute values, appear in Table A2 of the Appendix⁹. The reported values of the corresponding accounts are consolidated figures, meaning that the assets and liabilities from transactions affecting NFCs within the same country are netted out. The financial assets, along with equity, are valued at current prices, while debt is recorded at face value.

In the case of European NFCs, the ESA reports only the stocks of financial assets and financial liabilities, including net worth, held by NFCs at the end of the respective year. No reference is made to the stock of tangible and other operating assets that corporations own and use in the production of goods and services. Liabilities and net worth exceed financial assets so it is reasonable to assume that the difference between the liabilities side and the assets side of the balance sheet reported in the ESA has as a counterpart on the assets side the non-financial assets – tangible and intangible alike – that corporations use for production and sale. This is precisely the case for the US NFCs, for which this breakdown of information is available in the NIPA tables of the BEA. The reported balance sheet information is presented in Box 2.

| ASSETS AND LIABILITIES OF NFCs | | BOX 2 | |
|--------------------------------|--|--------|---|
| | Total Assets | | Total Liabilities |
| Operating assets | Tangible and intangible assets, accounts receivable minus accounts payable, cash and short-term deposits | Debt | Including bank loans and other interest-bearing debt and excluding accounts payable |
| Financial assets | Excluding accounts receivable, cash and short-term deposits | Equity | Net worth |

According to the information in Table A2, in the four European countries the total assets of NFCs increase in the fifteen-year period, albeit with differences among them. Spain is the country where total assets experienced the highest increase, and in 2015 they are 2.5 times the value in 1999. In German NFCs the ratio of total assets in 2015 to total assets in 1999 is 1.4, the lowest among the selected countries, while in France and Italy assets multiply by two during the same period. The value total of assets of US NFCs in 2015 is also twice the value in the year 1999.

Figure 8 shows the growth rates of total assets, expressed in real terms (nominal growth rate minus CPI inflation). The most pronounced differences in growth rates across countries

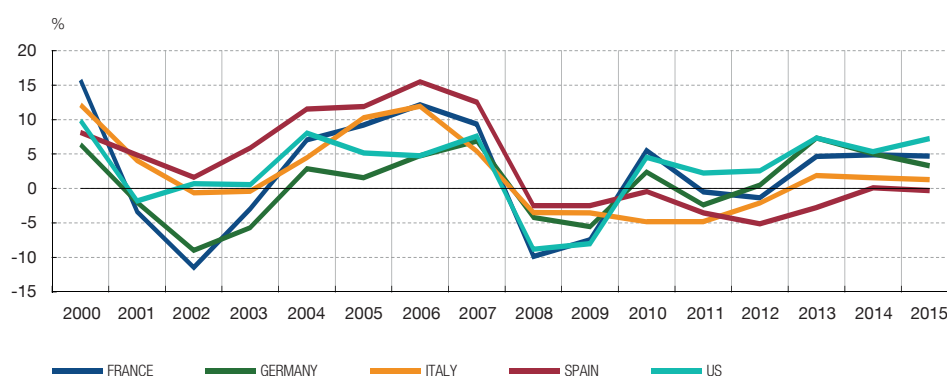
⁸ The information can be accessed through the following link: https://www.bea.gov/iTable/index_nipa.cfm.

⁹ The values of assets and liabilities shown in Table A2 for each year are calculated as an average of two consecutive year-end values: the current and the previous year.

occur in the years prior to the crisis. Total corporate assets decrease sharply in 2001 and 2002, probably as the consequence of the dot-com crisis, especially in Germany and France. Starting in 2003 the growth rates recover and reach maximum values for the sample period in most of the countries in 2006/07. With the crisis they fall sharply again and the recovery to positive territory does not seem to firm until 2013, in line with the doubledip recession that some European countries affected by the sovereign debt crisis experienced during this period. The assets of Spanish corporations experience the highest growth rates in the years of expansion with a value of 15% in 2006. Two years later that rate is negative and remains there until 2014 and 2015 when the growth rate stabilises at zero. Since 2010 the US corporate sector has been that with the highest total assets growth rate in real terms, consistent with an earlier and more vigorous economic recovery compared with the European one.

REAL ANNUAL GROWTH RATE OF TOTAL CORPORATE ASSETS

FIGURE 8



SOURCE: Own calculations.

3.5 Composition of assets

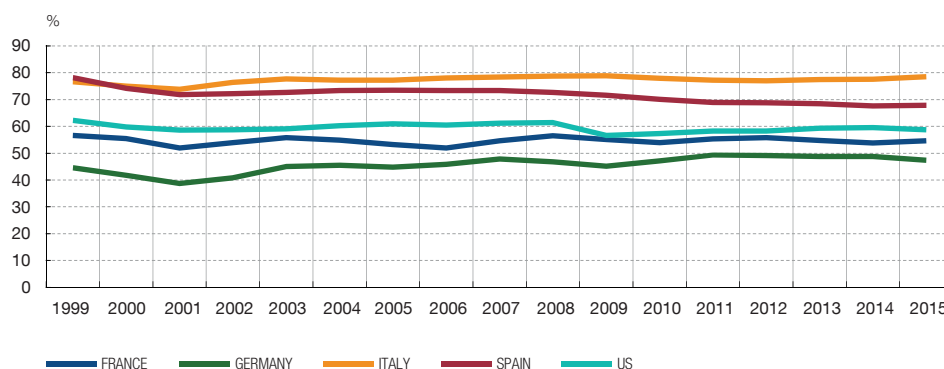
On the assets side of the balance sheet a distinction is made between operating assets and financial assets (as defined before). Figure 9 shows the time evolution of operating assets as a proportion of total assets; the complementary value is the proportion of financial assets. The Italian and Spanish corporate sectors have the largest proportion of operating assets relative to total assets, and the German sector the smallest, with the French in between. The differences are important: in Italy close to 80% of the total assets of NFCs are operating assets while in German NFCs the proportion is close to 50%¹⁰. In the corporate sectors of France and the US, operating assets as a proportion of total assets is around 50%/60%. The proportion of operating assets in the Spanish corporate sector has moved on a moderate declining trend since the start of the crisis whereas the German corporate sector has shown a positive trend

¹⁰ We are aware that other international statistical sources, like the Financial Soundness Indicators of the IMF, report for Germany values of operating and total assets in the 2010-2015 period different from those reported by Eurostat. We decided to maintain the same source of data for all EU countries to preserve homogeneity. In particular, German operating assets with IMF data reach 63% over total assets during the average period 2010-2015, i.e. 15 p.p. higher than those obtained with Eurostat and reported in Figure 9. Therefore, according to IMF data, operating assets as a proportion of total assets of NFCs in Germany would be in an intermediate range among the countries analyzed, while with Eurostat data they are in the lowest band. We did not find such large differences in the other countries considered. The higher German operating assets according to IMF data has a counterpart on the liability side, specifically in capital and reserves, while the rest of balance-sheet items (financial assets and debt) are practically the same between IMF and Eurostat statistics.

since 2001¹¹. In the rest of the corporate sectors the proportions stay stable over time. The particular evolution of Spanish operating assets may simply be the consequence of the larger excess capacity built up in the precrisis years, when the operating assets of Spanish corporations grew at higher rates. Similarly, the fall in the weight of Spanish NFCs' operating assets could be in line with the important reduction in gross capital formation in the years of the crisis jointly with the contraction in the internal demand. At the same time, Spanish corporations have maintained practically unchanged the financial assets during the years of the crisis.

OPERATING ASSETS AS A PROPORTION OF TOTAL ASSETS

FIGURE 9

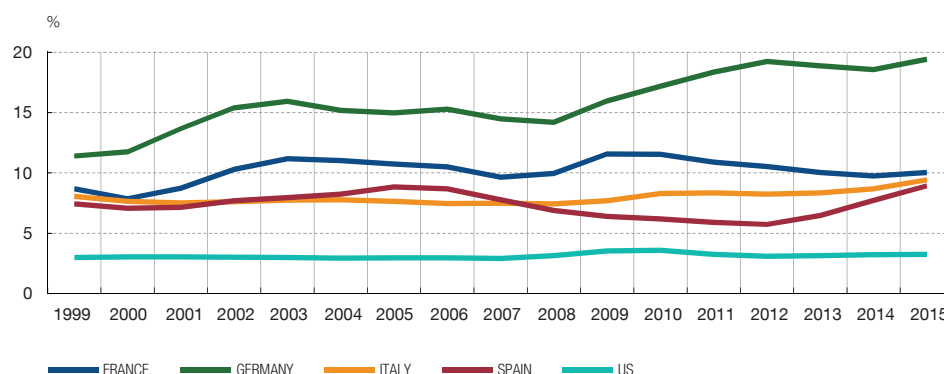


SOURCE: Own calculations.

After the financial crisis there have been policy and academic discussions about the issue of corporations “hoarding” cash rather than investing, especially among large US firms. Figure 10 depicts a ratio of liquid assets to total assets for the NFCs of the five economies analysed. We define the liquidity ratio as: ((cash + shortterm deposits + mutual funds)/total assets). The liquidity ratio shows substantial differences across countries in overall levels and in changes over time. Interestingly, the German corporate sector shows the highest liquidity ratio and presents a clear positive trend, starting with a value of 11% in 1999 that steadily increases

LIQUID ASSETS RELATIVE TO TOTAL ASSETS

FIGURE 10



SOURCE: Own calculations.

11 The lower proportion of operating assets of NFCs in Germany could also be partly linked to their higher share of holdings abroad since they are classified as financial assets (equity holdings).

over time to almost 20% in 2015. The other EU countries show a lower and more stable liquidity ratio (around 5%10%). The Spanish corporations present a more volatile ratio, increasing in periods of expansion and decreasing in periods of contraction.

Contrary to what might be expected from the corporate “hoarding” claim, US corporations show lower liquidity ratios than corporations in EU countries, namely 3% compared with a much higher ratio in the case of German corporations. Moreover, the liquidity ratio of US corporations remains quite stable over time with a minor blip only in 2009.

3.6 Composition of liabilities

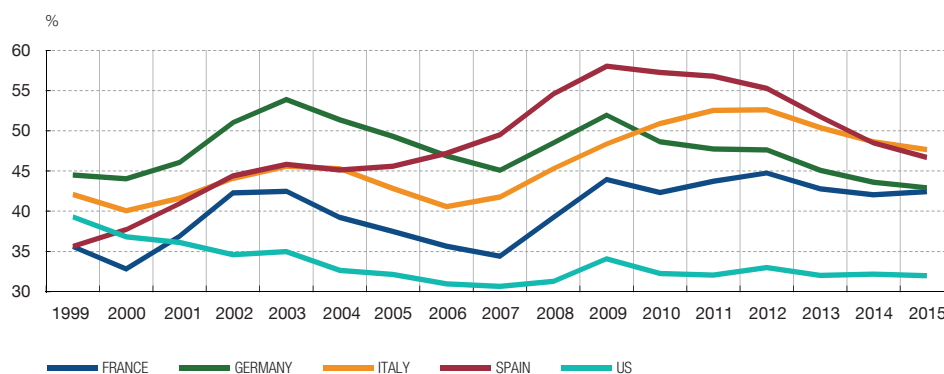
On the liabilities side of the balance sheet we first focus attention on three different leverage ratios, one relating to the level of total leverage and the other two to the composition of leverage. Later we propose a modified leverage ratio that takes into account the liquid financial assets and two stock-flow ratios, and that also analyses corporate debt.

The ratio of debt to total assets is shown in Figure 11. French corporations show the lowest leverage ratio among EU corporate sectors throughout the time period, around 40% on average. The German and French corporations also show the highest stability in the leverage ratio over time, the German ratio slightly decreasing and the French one slightly increasing to converge at a value of 42% in 2015. The leverage ratios of Spanish and Italian NFCs show more volatility over time. Spanish corporations started with a leverage ratio similar to that of French firms in 1999, at 35%, and in 2009 the ratio was 57%, almost double that in 1999. Since 2009 deleveraging has been significant and gradually approaching that of the other countries, and similar to the course of the leverage ratio of Italian corporations since 2012; however, by 2015 the leverage ratio of corporations in the corporate sectors of Italy and Spain is still 5 pp above the ratio of German and French corporations.

US corporations are less leveraged than their European counterparts practically throughout the sample period; the US leverage ratio has been decreasing and in 2015 it is at

DEBT RELATIVE TO TOTAL LIABILITIES

FIGURE 11



SOURCE: Own calculations.

32%, 10 pp lower than the leverage ratio of corporations in Germany and France and 15 pp lower than the leverage ratio of Spanish and Italian corporations.

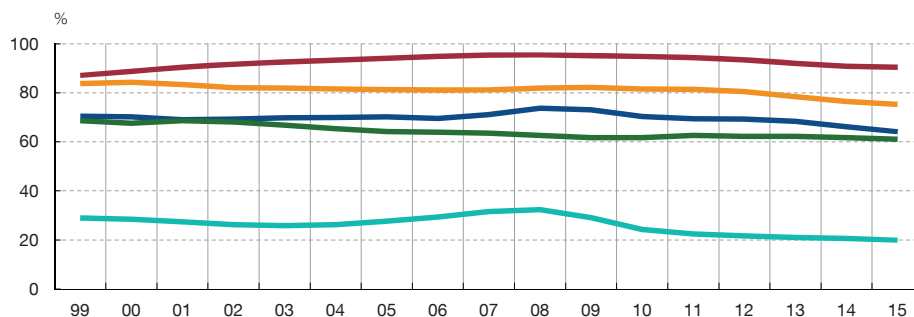
Figure 12A depicts loans as a proportion of total debt. In the EU countries, between 60% and 90% of total NFCs' debts are in the form of loans. Spanish corporations hold the largest proportion of debt in loans, at 90%, and Germans the lowest, at 60%. The leverage ratios of French and Italian corporations are in between. Loans represent a much lower proportion of all debt of NFCs in the US, at 20% in 2015, than in the EU countries. However, examining the phenomenon of "bancarization" among the economies compared requires a closer look at bank debt. Figure 12B represents the ratio of bank loans to total loans. Normally, bank loans account for most of the loans received by non financial firms in Europe, ranging between 70% and 80% in the period and countries considered, although the deleveraging process in Spain and the rebalancing towards diversified funding sources of NFCs in this country (towards more market-based finance) have led their ratio to fall below even 60% recently, while in the rest of the European countries analysed it has remained relatively stable and above 70% over most of the period. In the case of US corporations this ratio stands at somewhat below 30% in 2015, with a slightly decreasing trend since 1999.

During and after the years of the financial crisis, NFCs of all economies have reduced their leverage with banks most notably. In the case of Spanish corporations, bank debt increased

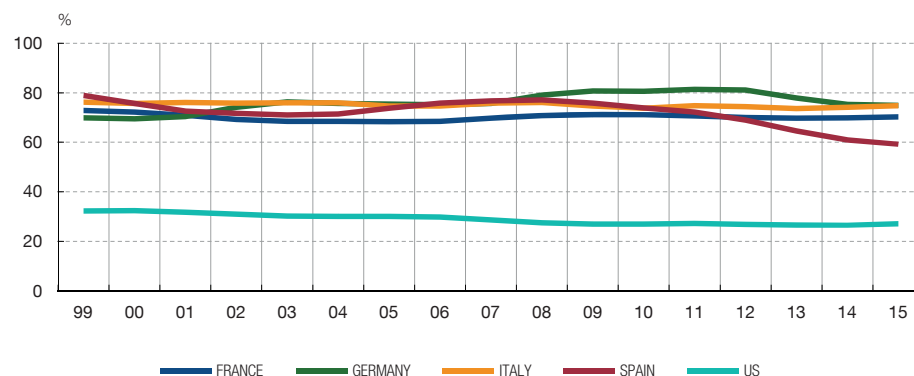
LOANS AND BANKS LOANS

FIGURE 12

A LOANS RELATIVE TO TOTAL DEBT



B BANK LOANS RELATIVE TO TOTAL LOANS



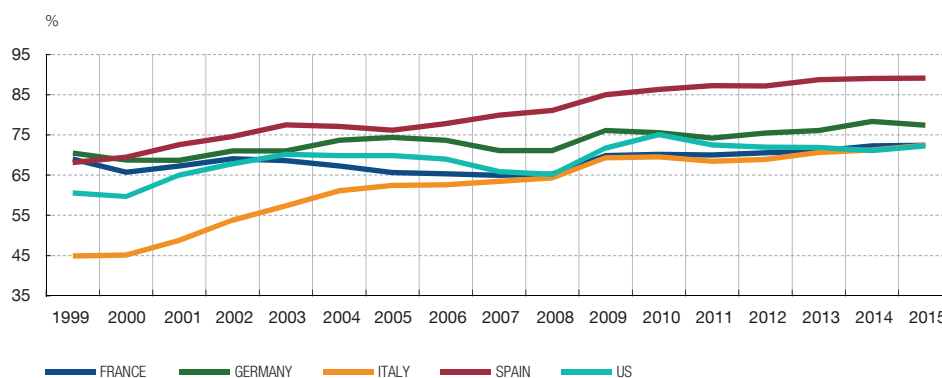
SOURCE: Own calculations.

as a proportion of total debt in the period 1999-2007 to the point where, in 2008, 74% of the debt of Spanish NFCs was bank loans. Banking debt was then the main source of debt that fuelled the growth of assets and liabilities of Spanish NFCs during the years of economic expansion prior to the crisis. Since 2008 the contraction in Spanish NFCs' bank debt has been higher than in the other economies as shown jointly in Figures 12A and 12B. This contraction approaches 20 p.p. in terms of total debt, set against more moderate reductions in the rest of the countries (around 5 p.p.).

A second relevant debt composition ratio makes the distinction between short-term and long-term debt. High levels of debt expose firms to financial risks that may be reduced by a proportion of debt with a longer maturity. Figure 13 shows long-term debt (both bank and nonbank) as a proportion of total debt. Except for France, there has been a significant rise in long-term leverage both in the euro area and in the US corporates over the sample period. In 1995 Italian NFCs had the lowest ratio (a difference of 30 p.p. relative to the other euro area economies); and by 2015 Spanish corporates, which present a similar total leverage ratio to the average euro area (Figure 11), present the highest proportion of long-term debt (89%), almost 15 p.p. more than the other euro area economies. Moreover, the significant differences between the US and the core euro area economies (France and Germany) in terms of the long-term leverage ratio in 1995 have disappeared by 2015.

LONG-TERM DEBT RELATIVE TO TOTAL DEBT

FIGURE 13



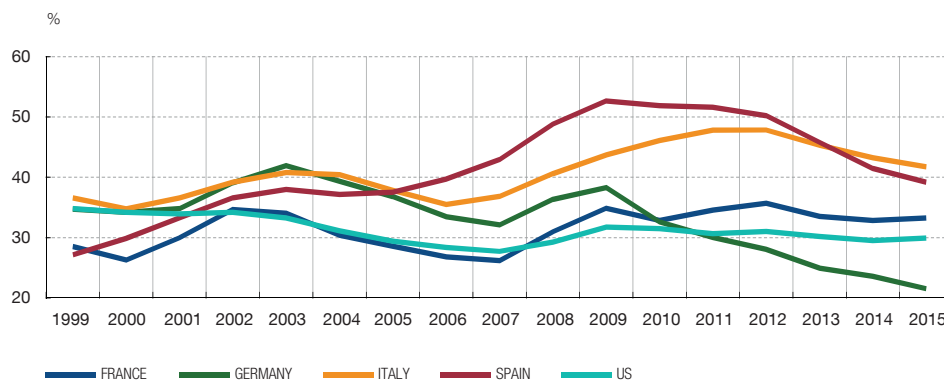
SOURCE: Own calculations.

Arguably, the liquid financial assets held by corporations are readily available to pay for their debt so the leverage ratios should account for differences in the liquidity ratio to assess the true differences in vulnerability due to higher or lower leverage ratios. With this in mind, Figure 14 presents the evolution of a modified leverage ratio calculated as follows: $(\text{total debt} - \text{longterm deposits} - \text{liquid assets}) / (\text{liabilities} - \text{longterm deposits} - \text{liquid assets})$. Longterm bank deposits are added now to the liquid assets considering that they could be collateral of the bank debt.

Compared with the standard leverage ratio in Figure 11, the modified leverage ratio presents a lower level, as expected. The higher proportion of liquidity assets and the higher

MODIFIED LEVERAGE RATIO

FIGURE 14



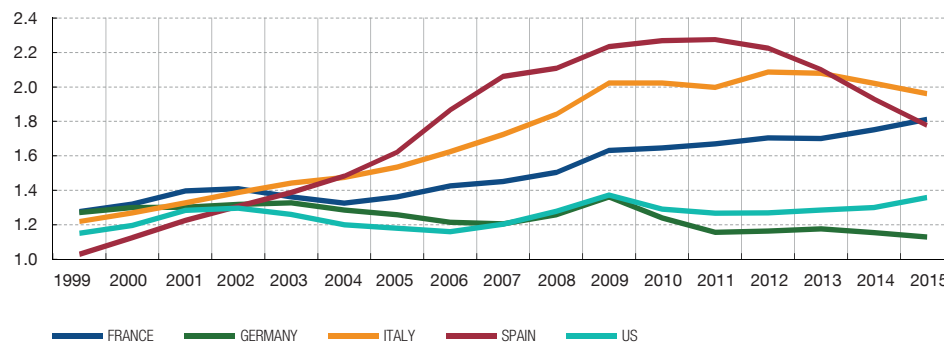
SOURCE: Own calculations.

proportion of long-term deposits in the EU countries compared with the US explain that, with the new leverage ratio, the differences between US and EU corporations are now less pronounced. In fact, with the new leverage ratio differences between French and US corporations practically disappear. Now German corporations have shown a clearly downward trend since 2003. The German modified leverage ratio in 2015 is 9 p.p. lower than that for corporations in the US.

The previous “stock ratios” of leverage may be complemented with two other leverage ratios that combine stocks and flows. The ratio of corporate debt to GVA is presented in Figure 15 and the ratio of debt to profit before interest and taxes plus amortisation (EBITA) is in Figure 16.

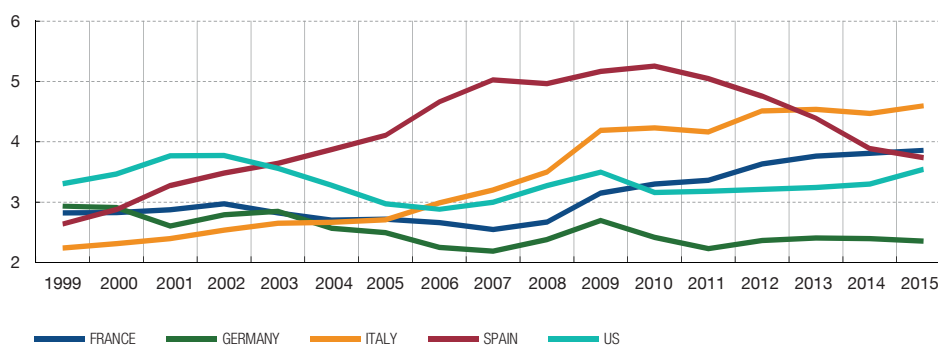
DEBT RELATIVE TO GVA

FIGURE 15



SOURCE: Own calculations.

Contrary to the standard leverage ratio (Figure 11), those two new ratios do not show convergence across countries on the deleveraging process after the financial crisis. For example in terms of the debt to EBITA ratio the Spanish corporates show a clear correction of their leverage after 2010 whereas Italian and French corporates increase their leverage and present debt ratios much higher than before the crisis. On the other side, German corporates have the lowest ratio by 2015: on average they only need two years of generated cash flow excluding taxes and interest payments to pay back their debts.



SOURCE: Own calculations.

The debt-flow ratios of the US corporates have been very stable, like the German ones, during the full sample period with small increases during the recession periods (2001 and 2009). But unlike the German corporates, US NFCs have shown a significant increase both in the debt to GVA and in the debt to EBITA ratios within the recent recovery period (2013-2015).

Overall, there is no evidence of convergence across European countries in the composition of the corporations' assets; in particular, we observe large differences in the ratio of operating assets to total assets, with Germany showing the lowest ratio. Nevertheless, the deleveraging process taking place after the financial crisis in some countries has approximated the liabilities structure of the corporations in the euro area, in parallel with a reduction in banking finance. Also, when taking into account differences in liquidity ratios (very high in Germany) and in the importance of long-term bank deposits in EU and US corporations, and considering that liquid assets and long-term deposits are highly realisable assets in the event of needing to repay debt, the differences in leverage between corporations in EU countries and in the US are substantially lower than when leverage is calculated with total outstanding debt. By contrast, the stock-flow ratios of debt show differences across economies that are larger in 2015 than in 1999, and with the German corporations currently showing the lowest levels.

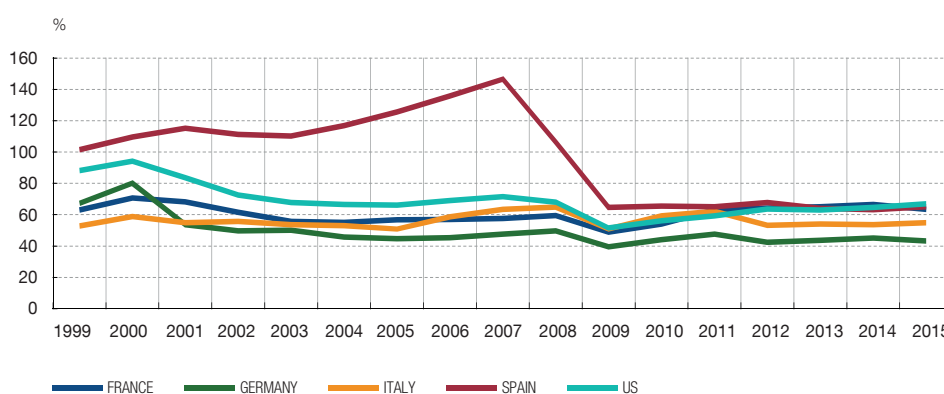
4 Sources and Uses of Funds

We now focus on the annual flow of funds generated by NFCs through their saving and investment decisions. The analysis will be based on the framework put forward in section 2.3 on the identity between sources and uses of funds. The sources of funds (internal) are equal to net profits plus depreciation allowances (depreciation is part of production costs but no outflow of cash is involved). The uses include payment of dividends and capital investment. If generated cash flows exceed capital investment plus dividends then firms can either reduce their debt levels or increase their financial assets, including cash. If internally generated funds fall short of dividends plus capital investment then firms will have to reduce financial assets or look for external funds (issuing new debt or equity). According to the National Sector Accounts, the difference between corporate savings (net profits plus depreciation and minus dividends paid) and gross investment gives the Excess (+) or the Need (-) of funds in the corporate sector.¹²

The annual flows of funds in the NFC sectors of the four European countries and of the US during the period 1999-2015, in absolute values, appear in Table A3 of the Appendix. We will concentrate first on possible differences in the uses of gross cash flows paying dividends or financing gross investment. Figures 17 and 18 show the two ratios. French and Italian corporations allocate a stable proportion of their gross cash flows to finance gross investment, between 50% and 60%. In the German corporate sector where investment in capital formation represented 60% of gross cash flow in 1999, by the end of the period it represents only 40%. The Spanish corporate sector is clearly atypical in relation to that ratio: in 1999 Spanish corporations' capital investment was equal to their aggregate cash flows; the proportion increases in the years of economic expansion and in 2007 Spanish corporations' investment was 40% higher than cash flows, resorting mainly to the credit of resident and non-resident banks to cover this internal deficit. With the onset of the crisis the ratio adjusts downwards to return to more normal values

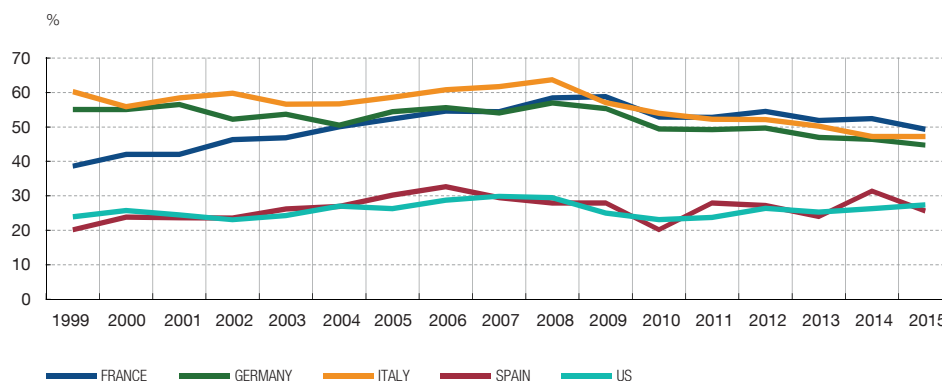
GROSS CAPITAL INVESTMENT RELATIVE TO GROSS CASH FLOW

FIGURE 17



SOURCE: Own calculations.

¹² A limitation of the use of national and financial accounts is that we do not have information about the investment abroad by the NFCs.



SOURCE: Own calculations.

over the following two years and, since then, it has held stable at values of investment relative to cash flows similar to those of French corporations.

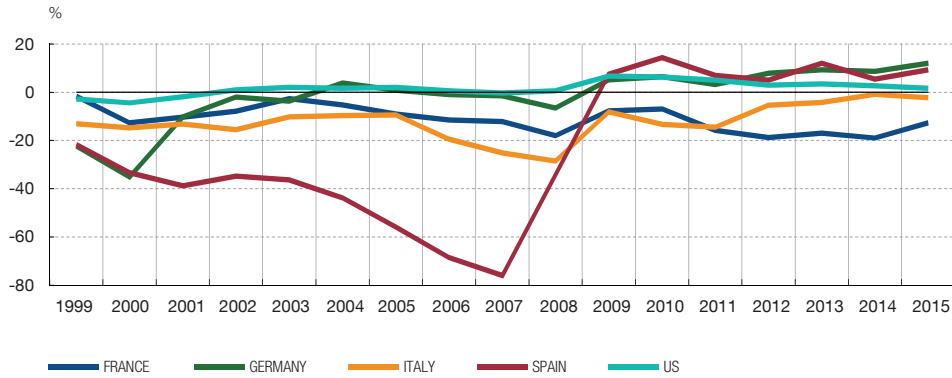
The time pattern of gross investment relative to gross cash flow in US corporations is similar to that of the ratio in German corporations, going from high to low, with this decreasing trend concentrating in the initial years of the sample. However, gross investment as a proportion of gross cash flow in US corporations has been 20 p.p. higher than the proportion in German corporations throughout the period.

Another possible use of internally generated funds is to pay dividends to the shareholders. Figure 18 compares the proportion of dividends to gross cash flows across countries and over time. Countries' corporate sectors cluster in two groups: France, Germany and Italy are in one group where dividends represent between 40% and 60% of gross cash flows; and in Spain and the US the ratio practically coincides and stays in the range of 20%-30% throughout the period. It seems that corporations allocate a relatively stable proportion of gross cash flow to pay dividends over time and let external finance, debt and equity issues cover the shortfalls in internal funds due to ups and downs in gross capital investment¹³.

Figure 19 shows the needs (-) and excess (+) of funds relative to gross cash flows, as described in section 2.3. The German corporate sector was closely balanced, meaning that its sources of funds were almost equal to its uses, from 2002 to 2008. The French and Italian corporate sectors' needs have been negative every year, with investment exceeding saving by an amount that represents 20% of gross cash flows (in the case of Italy the needs have tended towards zero in recent years). The more atypical behaviour over time again, while expected (given the changes in investment relative to gross cash flows in Figure 17), corresponds to the Spanish corporate sector. The need for funds (excess of investment over saving) was increasing during the economic expansion and in 2007 represented up to 80% of gross cash flows; in the

¹³ NFCs in Spain and Italy have traditionally resorted to bank credit when searching for funding. NFCs in Germany and France have a more balanced position between equity and debt in their funding. And the US NFCs rely on equity to a greater extent than European companies (see CNMV, 2011).

EXCESS (+) AND NEEDS (-) OF FUNDS BY NFCs RELATIVE TO GROSS CASH FLOWS FIGURE 19



SOURCE: Own calculations.

next two years the Spanish corporate sector moved rapidly to a position of excess, similarly to the German sector, by an amount that represents around 10% of gross cashflows. The US corporate sector has had an excess of funds since 2002, but in proportions lower than that of the German corporations.

Therefore, since 2009 the German and Spanish corporate sectors, together with the US sector, have joined the group of countries that contribute to the “savings glut”, a situation where the corporate sector’s sources of funds are higher than its uses and therefore it contributes to financing the rest of the economy (Gruber and Kamin, 2015). We also highlight the fact that the pattern of gross investment as a proportion of generated cash flow has been decreasing since 1999 for most countries, with Germany the country that proportionally uses fewest internally generated resources for new capital investment.

5 Rates of Return, Cost of Debt and Income Taxes

In this section we combine flow (income statement) and stock (balance sheet) data, to calculate the rates of return on invested assets and the cost of debt of the NFC sectors. The rates of return include the return on operating assets, the return on financial assets, the return on total assets and the return on equity (see Box 3).

RATES OF RETURN ON ASSETS AND EQUITY BOX 3

$$ROA \text{ Operational} = \frac{\text{Operating Profit}}{\text{Operating Assets}}$$
$$\text{Return on financial assets} = \frac{\text{Financial Income} + \text{Other net property income}}{\text{Financial Assets}}$$
$$ROA \text{ Total} = \frac{\text{Earnings Before Interest and Taxes}}{\text{Total Assets}}$$
$$ROE = \frac{\text{Net profit}}{\text{Equity}}$$

From the income statement, Earnings before Interest and Taxes are equal to Operating Profits plus Financial Income and plus Other Property Income. Net Profit is equal to Earnings before Interest and Taxes minus Interest Expenses and minus Corporate Profit Taxes. The values of these ratios are calculated with data from Tables A1 and A2 of the Appendix.

5.1 Returns on assets

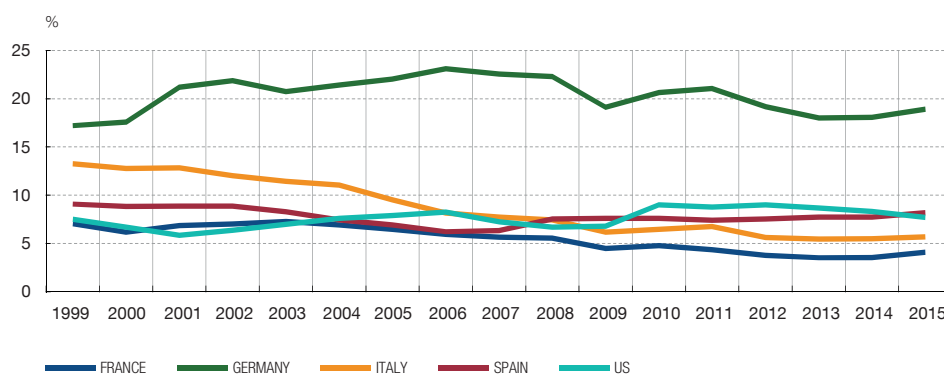
The returns on operating assets appear in Figure 20. The German corporate sector has by far the highest rate of return on operating assets, with values that fluctuate around 20%¹⁴. In the rest of the countries, including the US, the corporate sectors earn rates of return on operating assets in the range of 5%10%. The ROA Operational of German and US corporations is more procyclical than in other countries: it moderately increases in the years of expansion and moderately decreases in the years of the crisis, although in both cases the value in 2015 is higher than the value in 2000. A similar pattern was observed for both countries when describing operating profits (net profits) as a proportion of GVA (total income) in Figure 6 (Figure 7). The rate of return on the operational assets of the corporate sectors in France and Italy decrease over time and their values in 2015 are lower than they were in the year 2000. In Spain the rate

¹⁴ As mentioned before, with IMF data operating assets in Germany would be higher than those reported by Eurostat. Thus in 2010-2015 the ROA of operating assets of German NFCs with the IMF data would be on average 11%, Still German NFCs would show the highest rate of return on operating assets during that period.

of return slightly decreases until 2007 and recovers in the years of the crisis to 8.2% in 2015, still under the figure of 9% earned in the early years of the sample period. Finally, the ROA Operational of corporations in the US shows an increasing trend, as in Germany, moving from 6.7% in 2001 to 7.7% in 2015.

RETURN ON OPERATING ASSETS (ROA)

FIGURE 20

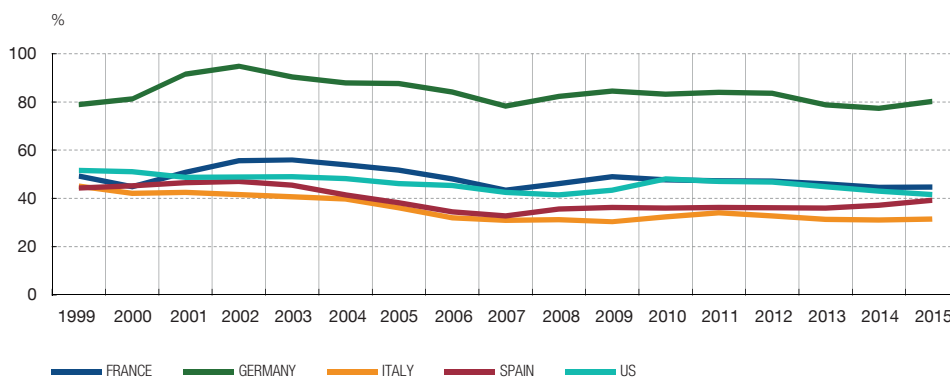


SOURCE: Own calculations.

The return on operational assets is equal to operating profit margin (operating profit relative to GVA) times the productivity of operating assets (GVA relative to operating assets). The operating profit margins were shown in Figure 6, and in Figure 21 we compare the productivity of the different countries' operating assets.

PRODUCTIVITY OF OPERATING ASSETS (GVA PER EURO OF OPERATING ASSET)

FIGURE 21



SOURCE: Own calculations.

The German corporate sector shows substantially higher productivity of operating assets than in the other corporate sectors, as also occurs when comparing the operating profit margins (Figure 6). Only the productivity of Italian corporations' operating assets shows a moderate negative trend that combined with the decrease in the operating profit margin (Figure 6) explains the negative evolution of ROA Operational in Figure 20. In the rest of the corporate sectors the evolution of ROA is mainly explained by the behaviour of the operating profit margin. By way of

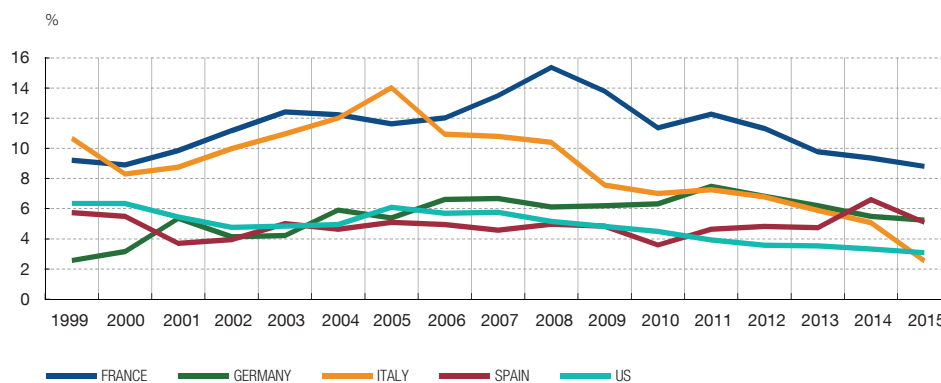
summary, in 2015 the German corporate sector earns 2 pp more of operating margin than the US corporate sector but German companies generate more than double the GVA per euro of operating assets than their US counterparts¹⁵.

The explanation of why the productivity of operating assets in German corporations is much higher would require close examination. We notice that the average depreciation allowances of German corporations represent around 16% of operating assets while in the US, Italy and Spain they represent less than half, between 6% and 7% (9% in the case of France). This means that, on average, the operating assets of German corporations remain on the balance sheet for 6 years while in the US and the other European countries this period is 15 years.

In addition to operating assets, corporations also hold financial assets which likewise generate income in return. Figure 22 shows the (nominal) return on financial assets for the five countries considered. In this respect, the Italian and French corporate sectors present the higher returns in comparison with the other economies (with the exception of 2011-2015 for Italy) but with a clear negative trend in the second part of the sample period. Spanish corporates have stable financial returns, of around 4%. By contrast German corporates present an increasing trend in financial returns from 1999 to 2010 with a return of 5% in 2015. The US companies show in 2015 a low return on financial assets (around 3%) and also with a clear declining trend since 2000.

RETURN ON FINANCIAL ASSETS

FIGURE 22



SOURCE: Own calculations.

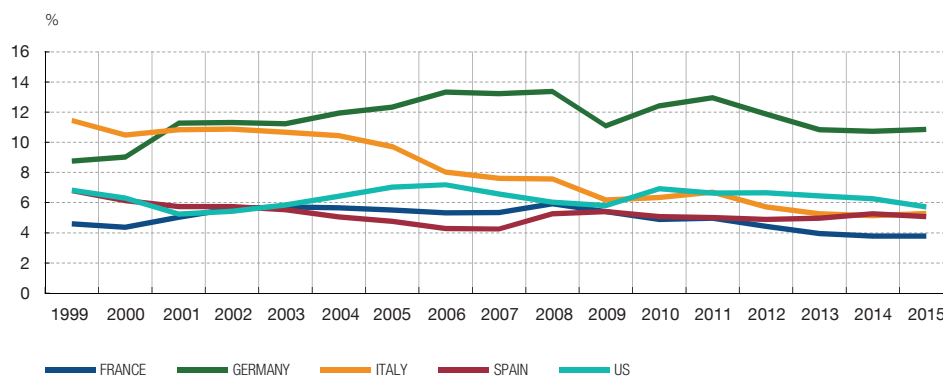
Combining the results of Figures 20 and 22, we obtain the rate of return on total assets as the ratio of profits before interest and taxes to total assets (Figure 23). The rates of return on total assets are in general lower than the rates of return on operating assets, and higher than the returns on financial assets, as expected. The exception is the Italian corporate sector where

¹⁵ ROA results depend very much on the definition of operating assets (i.e. capital). If capital stocks were generated, for example, by the perpetual inventory method instead of the (market) value of the operating assets from the Financial Accounts, these cross-country differences could change.

rates of returns are similar for operational and for financial assets. The Italian and the French corporate sectors have, since 2008, experienced a negative trend in the return on total assets. In 2015 the corporate sectors of Spain, Italy and the US earn a rate of return on total assets of 5% (before taxes), France a return of 4% and Germany a return of 11%.

RETURN ON TOTAL ASSETS

FIGURE 23



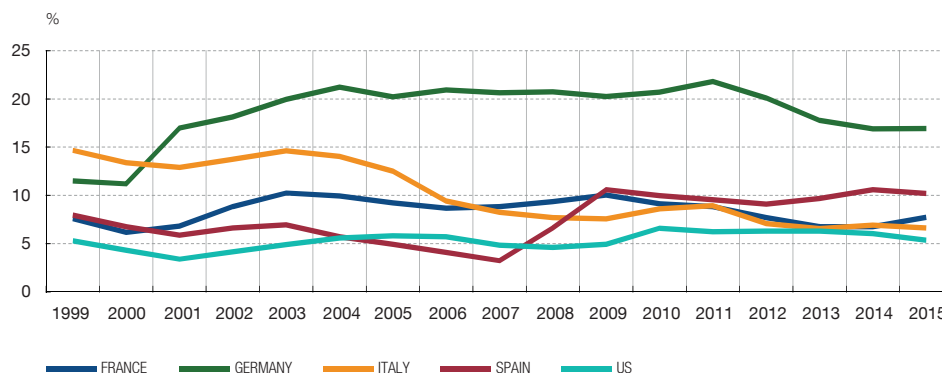
SOURCE: Own calculations.

Corporations finance their assets with debt and equity. Banks and others creditors charge an explicit interest rate specified at the time of the transaction, while equity holders receive a part of the residual profit (net profit or profit after interest and taxes) in the form of distributed dividends (apart from changes in the valuation of their stakes in the company that arise when they sell their shares). In addition to differences in the return on total assets, the return on equity (ROE), defined as net profit relative to equity, can differ across corporate sectors owing to differences in the cost of debt, leverage and tax rates.

Figure 24 shows the return on equity of the respective corporate sectors. Once again, the German corporate sector is the most profitable, with a significant difference with the others; during most of the sample period the German corporate sector earns a return on equity close to 20%, twice the return earned in the other countries¹⁶. In Italy and Spain the ROE of corporations decreases sharply in the years 2004-2007. In the Italian case the corporate ROE continues to decline moderately but intermittently in the following years, reaching 6.6% in 2015, while in Spain the ROE increases above pre-crisis values as early as 2009. Since then it has held quite stable at 10% (3 pp higher than the ROE of France and Italy and 7 pp lower than the ROE of German corporations). The ROE of the US corporate sector is fairly stable, around 5% throughout the sample period, but lower when compared with the European countries.

Overall these rates of return on assets and on equity show similar patterns. There is no evidence of convergence across euro area countries, with German corporate returns

¹⁶ The higher operating assets reported in the IMF data implies a parallel upgrade in net worth (equity). This higher value of equity would imply, ceteris paribus, a ROE of 11% in the average period 2010-2015, compared with an average ROE of 18% according to Eurostat statistics. However, NFCs in Germany would continue having the highest rates of return on equity across the countries considered during that period.



SOURCE: Own calculations.

significantly higher than in the other four countries, and no systematic change may be discerned after the 2007/2008 crisis, except for the substantial decline in the equity return for Italian NFCs.

5.2 Cost of debt and income taxes

The same return on assets will turn into different returns on equity if corporations differ in terms of leverage ratios, the cost of debt, and the taxes they pay on corporate profits. We now compare the costs of debt and the effective tax rates of corporate sectors in the different countries. Differences in leverage ratios were already examined in Figure 11.

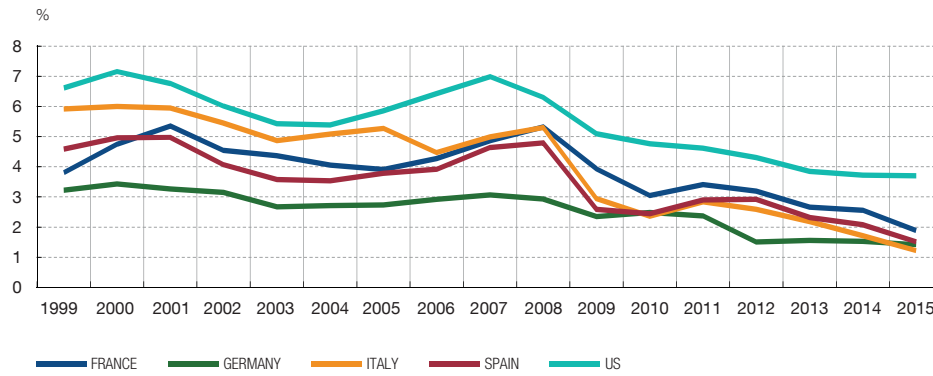
In the period 1999-2007, years in which the cost of debt remains relatively stable in all countries, the average cost of debt is around 3% for the German corporations and between 5% and 6% for the Italian ones (see Figure 25). For French and Spanish corporations the average cost of debt is somewhere in between the costs for the German and Italian corporations. In 2007, just before the crisis, French, Italian and Spanish corporations converge towards an average cost of debt of 5%. As a reaction to the crisis, the ECB implemented an ultra-accommodative monetary policy that still persists, resulting in decreases in the cost of debt in all countries. As a consequence, the corporate sectors of the euro zone pay interest on debt accounting for between 1% and 2% of all outstanding debt in 2015.

Corporations in the US pay higher average interest on debt than corporations in the euro area countries, although the time evolution of average costs of debt in the former is closely in parallel to those of the latter. During the sample period, the average cost of debt of German corporations is between 3 pp and 4 pp lower than the average cost of debt of corporations in the US.

The conclusions from the comparison of the cost of debt among corporate sectors change when the cost of debt is expressed in real terms: the nominal rates of Figure 25 minus current inflation (annual change in the CPI of the respective economy), as shown in Figure 26. The absolute differences in average cost of debt adjusted for differences in inflation across corporate sectors in the euro zone stay around 1 p.p. throughout the sample period. In the pre-crisis years (1999-2006) the Spanish corporate sector had the lowest inflation-adjusted cost

AVERAGE COST OF DEBT (% INTEREST PAYMENTS/DEBT)

FIGURE 25

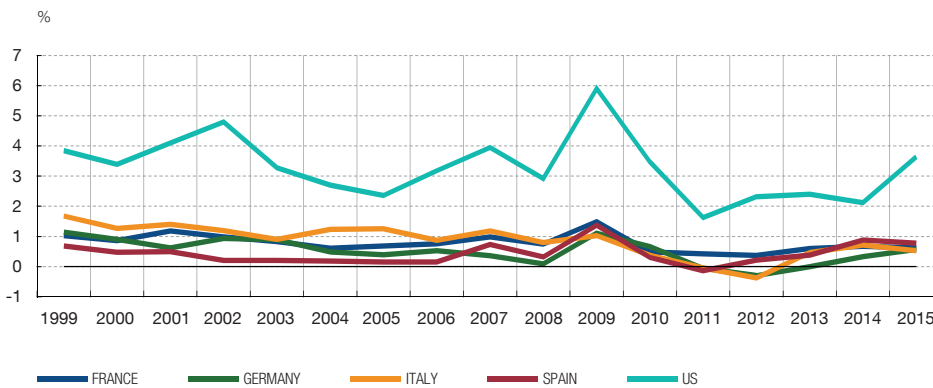


SOURCE: Own calculations.

of debt, close to zero in the years 2002-2006. That may explain in part the sudden rise in the Spanish corporate leverage ratio in that period (Figure 11). During the crisis years real interest rates converge in a similar fashion to nominal interest rates.

COST OF DEBT IN REAL TERMS (CPI DEFLATOR)

FIGURE 26



SOURCE: Own calculations.

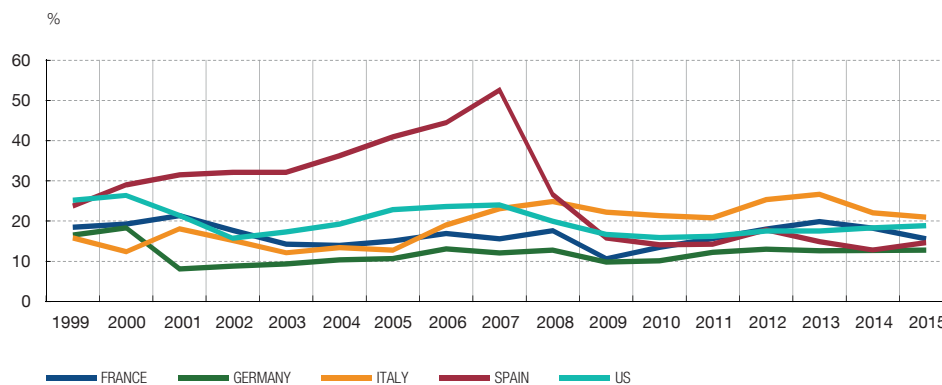
Inflation rate differentials are not enough to explain the differences in the nominal cost of debt between the German and the US corporate sectors. The real cost of debt of US corporations continues to be 2 pp to 3 pp higher than the real cost for the German corporations.

Also, differences in the taxation of corporate profits across countries can also explain differences in the ROE across corporate sectors that do not show up when comparing returns on total assets. Figure 27 shows the ratio of corporate and property taxes, reported in Table A1, over profit before taxes (net profit plus corporate and property taxes). If property taxes are not especially high the ratio will approximate the average effective tax rate on corporate profits of the respective country. The calculated tax rate shows values in the reasonable range of 10% and 25%. The exception is the Spanish corporate sector in the period 1999-2007, when corporate and property taxes show an increasing trend and reach a maximum above 50% of profits before

taxes in year 2007. The nominal corporate tax rate of Spanish corporations in the period 1999-2007 was 35% so the increase in the calculated tax rate especially in the period 2004-2007 will have to be attributed to the increase in property taxes in a period of accelerating increases in property prices. Since 2009 the effective tax rate of Spanish corporations has been in line with the rates of corporate sectors in the countries under comparison.

TAXES ON PROFITS AND PROPERTY OVER PROFITS BEFORE TAXES

FIGURE 27



SOURCE: Own calculations.

Although the differences have been modest, German corporations paid the lowest tax rate practically throughout the period, a situation that continued in 2015. The lower average cost of debt, and the lower tax rate on the corporate profits of German corporations contribute to widen the relative differences in the ROE of German corporations with respect to the ROE in the other countries, relative to the differences that are visible in Germany's favour in terms of ROA. This conclusion applies also to corporations in the US, with an estimated average tax rate over corporate profits that in 2015 is still 6 p.p. higher than that of the German corporations.

6 Conclusions

In this paper we were interested in three issues: i) how the creation of the euro affected the performance of the corporate sectors of the largest euro-economies, and particularly whether the single currency contributed to some convergence among them; ii) how the corporate sectors of these economies were affected by the financial and economic crisis and if all showed the same resilience in returning to pre-crisis conditions; and iii) how the corporate sectors in the euro zone compare with the corporate sector in the US in terms of performance and resilience. As an initial approach to these issues we have analysed a set of aggregated financial and real indicators from the Non-Financial Corporate sector derived from national accounts. We are planning to complement that analysis with more disaggregated data to take into account cross-country firm and sector heterogeneity.

In relation to the first issue we found significant structural differences between the European economies that remained in place well after the creation of the euro area:

- German NFCs “make” more than they “buy” in the sense that GVA represents a higher proportion of the value of production of the corporate sector in Germany.
- The German and the Spanish corporate labour share (i.e. labour compensation relative to GVA) shows something of a declining trend during the sample period, but that is not the case for France and Italy.
- There are large differences in the composition of corporations’ assets. German NFCs have much higher productivity of operating assets than corporations in the other euro-economies compared. This result coincides with higher depreciation rates of the operating assets (i.e. higher rotation of assets in the balance sheet) in the German corporate sector.
- Higher operating margins, but especially higher productivity of operating assets, explain why the return on German NFCs’ operating assets is more than twice the rate of return on the operating assets of corporates from the other euro countries compared.
- The dividend pay-out ratio (dividends relative to net profit plus depreciation) of Spanish corporations is lower than the pay-out by corporations in the other euro countries considered. The relatively high proportion of retained earnings was not an impediment for the Spanish corporate sector to be that where leverage rose to higher values. The reason is also the comparatively high proportion of gross investment in capital formation relative to gross generated cash flows among Spanish corporations, especially during the pre-crisis years.

- German corporations pay a lower average cost than corporations elsewhere for their debt with explicit cost, and also pay a lower average corporate and property tax rate. Both factors contribute to maintaining the substantial differences in return to equity in favour of German corporations.

As for the issue of how the corporate sectors compare in their behaviour and performance in the pre-crisis years and in the years of the crisis, some of the relevant results are the following:

- The corporate sectors of Spain and Italy are those with the biggest differences in behaviour and performance between the pre-crisis and the crisis period. The Spanish corporate sector shows the highest volatility in growth rates of GVA, with the highest average rate of growth and the lowest average, respectively. The Italian corporate sector experiences the highest decrease in profitability among the corporate sectors analysed.
- The high growth rate of GVA in the Spanish corporate sector until 2007 coincides in time with a loss of weight of GVA in the value of production, much higher than the loss in the corporate sectors of the other countries, and with higher rates of net investment in operating capital. In the crisis years the Spanish corporate sector converges towards the values of the other corporate sectors compared in terms of weight of gross value added in total value of production, and in investment rates.
- There is some evidence of a declining proportion of cash flows to finance gross capital investment, especially in the case of the German and Spanish corporations.
- Until 2009 the corporate sector in the four countries used funds in amounts larger than those that were generated internally, particularly in the case of Spain, whose high deficit was covered by incurring new debt. Since 2009, the corporate sectors of Germany and Spain have financed the other sectors of the economy since savings exceed investment by approximately 10% of gross cash flows. In the corporate sectors of France and Italy, investments are permanently higher than savings and the corporate sector draws funds from other sectors of the economy.
- During the crisis years there is some convergence in the leverage ratios of the four countries' corporations towards values around 40% of debt relative to total assets and a reduction in the proportion of debt with banks. This convergence process disappears with alternative leverage measures that consider liquid assets, the ratio of debt relative to GVA or the ratio of debt to EBITA. Currently, German corporates are those with the lowest leverage ratios.
- No systematic changes may be discerned in the differences in the rates of return on assets and on equities after the financial crisis.

- In the precrisis years the Spanish corporate sector experienced a unique increase in the corporate and property tax rates , which rose to over 50% in 2007 according to our calculations. In the next two years the tax rate converged towards figures in line with those paid by corporations in the other countries analysed, and has continued at these levels since.
- By the end of the period, 2015, there is convergence in the average cost of debt paid by corporations in the different countries, meaning the signs of financial fragmentation seem to have disappeared.

Finally, as for the issue of how the corporate sectors of euro area members compare with the corporate sector in the US, the general conclusion is that the performance of corporations in the US differs from that of German corporations, and resembles more the performance of corporations of the rest of the European countries, in particular in terms of the returns on assets and on equity. In general, the performance of US corporations shows lower output volatility and a higher proportion of value added than their European counterparts. Of particular note is the comparative high average cost of debt, as well as the low leverage ratio of US corporations in the sample period. Since 2002, the corporate sector in the US has almost every year saved more than it has invested, generating an excess of funds that finance other sectors of the economy. During the crisis years, the corporate sectors of Germany and Spain joined the US corporate sector in saving more than they invested, and by 2015 German corporations present the highest excess of savings over investment.

Why these differences in behaviour and performance? What are their implications, if any, for real convergence within the European and Monetary Union? These are relevant questions that the descriptive analysis presented here motivates but whose answer requires a more thorough and detailed analysis by future research.

References

- BARKAI, S. (2016). "Declining Labor and Capital Shares", mimeo, University of Chicago.
- BANCO DE ESPAÑA (2017). *Annual Report*, 2016.
- CETTE, G. and J.P. VILLETTELLE (2015). "The Financial Position and Funding of French Non-Financial Corporations", Quarterly Selection of Articles, Spring 2015. Banque de France.
- COMISIÓN NACIONAL DEL MERCADO DE VALORES (2011). *Annual Report*, 2010.
- DOTTLING, R., G. GUTIÉRREZ and T. PHILIPPON (2017). "Is there an Investment Gap in Advanced Economies? If So, Why?", Mimeo.
- EUROPEAN CENTRAL BANK (2016). "Business Investment Developments in the Euro Area since the Crisis", *Economic Bulletin*.
- GRUBER, J. and S. KAMIN (2016). "The Corporate Saving Glut and Falloff of Investment Spending in OECD Economies", *IMF Economic Review*, vol. 64, 777-799.
- KARABARBOUNIS, L. and B. NEIMAN (2014). "The Global Decline of the Labor Share", *Quarterly Journal of Economics*, 129 (1), 61-103.

DATA APPENDIX

INCOME STATEMENT OF NFCs

TABLE A1

Millions of euros for EA countries and billions of dollars for US

| FRANCE | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Value of production | 1,621,723 | 1,791,226 | 1,886,968 | 1,916,875 | 1,948,317 | 2,044,748 | 2,147,733 | 2,278,117 | 2,412,748 | 2,493,283 | 2,299,357 | 2,424,264 | 2,556,891 | 2,594,421 | 2,596,427 | 2,599,445 | 2,630,655 |
| Intermediate consumption | 917,954 | 1,043,907 | 1,104,475 | 1,109,085 | 1,115,781 | 1,176,374 | 1,245,618 | 1,335,617 | 1,415,570 | 1,467,591 | 1,313,507 | 1,412,215 | 1,508,802 | 1,533,215 | 1,521,136 | 1,515,816 | 1,520,853 |
| Gross value added | 703,769 | 747,319 | 782,493 | 807,790 | 832,536 | 868,374 | 902,115 | 942,499 | 997,177 | 1,025,692 | 985,850 | 1,012,049 | 1,048,089 | 1,061,206 | 1,075,292 | 1,083,629 | 1,109,802 |
| Production taxes less subsidies | 27,703 | 29,854 | 28,597 | 29,721 | 29,269 | 32,295 | 35,329 | 31,862 | 34,684 | 35,273 | 37,897 | 30,760 | 36,625 | 39,454 | 42,404 | 34,823 | 29,733 |
| Compensation of employees | 445,675 | 473,243 | 497,443 | 518,148 | 533,113 | 553,805 | 574,677 | 602,886 | 628,819 | 650,803 | 642,870 | 661,644 | 684,434 | 700,754 | 710,945 | 719,833 | 731,085 |
| Gross operating profit | 230,391 | 244,222 | 256,453 | 259,921 | 270,154 | 282,274 | 292,109 | 307,751 | 333,674 | 339,616 | 305,083 | 319,645 | 327,030 | 320,998 | 321,943 | 328,973 | 348,984 |
| Amortization and other net expenses | 129,730 | 141,358 | 151,116 | 157,881 | 162,064 | 170,864 | 179,248 | 191,560 | 203,534 | 215,760 | 214,715 | 218,396 | 230,556 | 236,313 | 239,521 | 243,035 | 247,420 |
| Operating profit | 100,661 | 102,864 | 105,337 | 102,040 | 108,090 | 111,410 | 112,861 | 116,191 | 130,140 | 123,856 | 90,368 | 101,249 | 96,474 | 84,685 | 82,422 | 85,938 | 101,564 |
| Financial income | 88,207 | 111,503 | 132,262 | 138,416 | 139,710 | 154,515 | 173,243 | 202,025 | 232,440 | 248,002 | 215,365 | 196,034 | 211,539 | 196,676 | 187,089 | 190,445 | 194,513 |
| Other net property income | 12,668 | 7,751 | 7,735 | 43 | 7,051 | 7,175 | 5,152 | 16,007 | 25,639 | 15,044 | 11,295 | 9,826 | 7,700 | 5,542 | 1,953 | 4,593 | 4,045 |
| Earnings before interest and taxes | 201,536 | 222,118 | 245,334 | 240,499 | 254,851 | 273,100 | 291,256 | 334,223 | 388,219 | 386,902 | 317,028 | 307,109 | 315,713 | 286,903 | 271,464 | 280,976 | 300,122 |
| Interest on debt | 49,863 | 67,913 | 83,402 | 73,812 | 71,159 | 67,512 | 68,841 | 81,344 | 99,405 | 114,694 | 86,814 | 67,987 | 79,595 | 77,412 | 65,010 | 64,646 | 50,567 |
| Corporate and property taxes | 28,059 | 29,659 | 34,568 | 29,464 | 26,262 | 28,600 | 33,415 | 42,685 | 44,991 | 48,020 | 24,484 | 32,220 | 36,952 | 37,645 | 41,035 | 39,418 | 38,940 |
| Net profit | 123,614 | 124,546 | 127,364 | 137,223 | 157,430 | 176,988 | 189,000 | 210,194 | 243,823 | 224,188 | 205,730 | 206,902 | 199,166 | 171,846 | 165,419 | 176,912 | 210,615 |
| GERMANY | | | | | | | | | | | | | | | | | |
| Value of production | 2,390,005 | 2,560,750 | 2,666,462 | 2,634,226 | 2,677,733 | 2,786,371 | 2,901,449 | 3,102,375 | 3,328,773 | 3,450,671 | 3,105,054 | 3,364,869 | 3,651,074 | 3,657,606 | 3,681,511 | 3,797,246 | 3,868,122 |
| Intermediate consumption | 1,282,573 | 1,403,173 | 1,457,725 | 1,411,164 | 1,451,810 | 1,523,221 | 1,617,907 | 1,751,974 | 1,894,498 | 1,995,782 | 1,738,461 | 1,909,244 | 2,116,266 | 2,098,006 | 2,084,715 | 2,130,392 | 2,131,118 |
| Gross value added | 1,107,432 | 1,157,577 | 1,208,737 | 1,223,062 | 1,225,923 | 1,263,150 | 1,283,542 | 1,350,401 | 1,434,275 | 1,454,889 | 1,366,593 | 1,455,625 | 1,534,808 | 1,559,600 | 1,596,796 | 1,666,854 | 1,737,004 |
| Production taxes less subsidies | -19,274 | -18,884 | -17,129 | -15,745 | -13,964 | -12,512 | -14,555 | -16,107 | -13,645 | -14,052 | -16,023 | -15,882 | -13,986 | -11,530 | -12,515 | -12,647 | -12,114 |
| Compensation of employees | 686,501 | 718,250 | 728,290 | 729,413 | 730,448 | 734,343 | 735,088 | 752,811 | 779,117 | 811,815 | 803,612 | 836,062 | 881,176 | 922,245 | 947,239 | 985,708 | 1,025,651 |
| Gross operating profit | 440,205 | 458,211 | 497,576 | 509,394 | 509,439 | 541,319 | 563,009 | 613,697 | 668,803 | 657,126 | 579,004 | 635,445 | 667,618 | 648,885 | 662,072 | 693,793 | 723,467 |
| Amortization and other net expenses | 198,806 | 207,606 | 217,722 | 227,071 | 228,254 | 233,748 | 240,095 | 242,856 | 255,186 | 263,435 | 269,584 | 274,509 | 282,942 | 290,677 | 297,350 | 304,291 | 313,847 |
| Operating profit | 241,399 | 250,605 | 279,854 | 282,323 | 281,185 | 307,571 | 322,914 | 370,841 | 413,617 | 393,691 | 309,420 | 360,936 | 384,676 | 358,208 | 364,722 | 389,502 | 409,620 |
| Financial income | 34,047 | 56,867 | 105,149 | 77,982 | 62,765 | 74,604 | 83,103 | 97,806 | 94,139 | 110,649 | 90,050 | 105,055 | 105,559 | 106,576 | 100,607 | 99,650 | 102,489 |
| Other net property income | 10,829 | 5,773 | 7,009 | -548 | 7,167 | 27,221 | 14,157 | 27,033 | 39,161 | 11,927 | 31,266 | 18,961 | 35,086 | 24,916 | 31,072 | 24,214 | 23,544 |
| Earnings before interest and taxes | 286,275 | 313,245 | 392,012 | 359,757 | 351,117 | 409,396 | 420,174 | 495,680 | 546,917 | 516,267 | 430,736 | 484,952 | 525,321 | 489,700 | 496,401 | 513,366 | 535,653 |
| Interest on debt | 44,779 | 51,136 | 51,384 | 51,570 | 44,628 | 45,160 | 44,586 | 48,438 | 53,050 | 53,612 | 44,202 | 45,959 | 43,703 | 28,947 | 31,284 | 31,543 | 29,883 |
| Corporate and property taxes | 39,829 | 48,053 | 27,620 | 27,037 | 28,634 | 37,800 | 40,152 | 58,574 | 59,508 | 59,284 | 37,994 | 44,508 | 58,833 | 59,992 | 58,874 | 61,264 | 64,527 |
| Net profit | 201,667 | 214,056 | 313,008 | 281,150 | 277,855 | 326,436 | 335,436 | 388,668 | 434,359 | 403,371 | 348,540 | 394,485 | 422,785 | 400,761 | 406,243 | 420,559 | 441,243 |

INCOME STATEMENT OF NFCs (cont'd)
TABLE A1

Millions of euros for EA countries and billions of dollars for US

| ITALY | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Value of production | 1,501,263 | 1,645,310 | 1,731,205 | 1,771,842 | 1,814,479 | 1,890,998 | 1,977,710 | 2,091,892 | 2,210,090 | 2,248,543 | 1,983,405 | 2,111,230 | 2,197,079 | 2,122,572 | 2,071,308 | 2,081,707 | 2,099,034 |
| Intermediate consumption | 964,822 | 1,076,757 | 1,129,203 | 1,150,400 | 1,179,850 | 1,231,849 | 1,299,698 | 1,392,523 | 1,479,040 | 1,506,257 | 1,281,958 | 1,395,785 | 1,463,445 | 1,410,736 | 1,365,114 | 1,368,004 | 1,368,220 |
| Gross value added | 536,441 | 568,553 | 602,001 | 621,442 | 634,629 | 659,150 | 678,011 | 699,368 | 731,050 | 742,286 | 701,447 | 715,445 | 733,633 | 711,835 | 706,195 | 713,703 | 730,814 |
| Production taxes less subsidies | 13,910 | 13,592 | 14,658 | 16,466 | 16,198 | 16,700 | 20,969 | 22,587 | 25,418 | 22,253 | 18,073 | 19,244 | 20,644 | 23,126 | 21,492 | 22,482 | 22,128 |
| Compensation of employees | 263,645 | 275,035 | 290,869 | 303,541 | 316,363 | 328,758 | 342,914 | 357,206 | 375,499 | 388,854 | 383,956 | 389,801 | 401,220 | 396,887 | 394,651 | 396,490 | 408,834 |
| Gross operating profit | 258,886 | 279,926 | 296,474 | 301,435 | 302,068 | 313,692 | 314,128 | 319,575 | 330,133 | 331,179 | 299,418 | 306,400 | 311,769 | 291,822 | 290,052 | 294,731 | 299,852 |
| Amortization and other net expenses | 101,029 | 107,500 | 114,752 | 121,450 | 123,747 | 130,997 | 135,513 | 141,269 | 147,508 | 154,420 | 156,343 | 162,985 | 166,261 | 170,022 | 167,348 | 168,440 | 167,605 |
| Operating profit | 157,857 | 172,426 | 181,722 | 179,985 | 178,321 | 182,695 | 178,615 | 178,306 | 182,625 | 176,759 | 143,075 | 143,415 | 145,508 | 121,800 | 122,704 | 126,291 | 132,247 |
| Financial income | 38,358 | 40,046 | 48,970 | 50,612 | 51,042 | 59,363 | 76,203 | 63,224 | 63,759 | 64,274 | 45,321 | 43,885 | 47,167 | 43,739 | 34,555 | 30,314 | 31,683 |
| Other net property income | 433 | -2,739 | -5,057 | -4,435 | -2,044 | -610 | 1,336 | 4,113 | 6,823 | 2,467 | 1,711 | 22 | -1,094 | 429 | 4,165 | 3,401 | -14,337 |
| Earnings before interest and taxes | 196,648 | 209,733 | 225,635 | 226,162 | 227,319 | 241,448 | 256,154 | 245,643 | 253,207 | 243,500 | 190,107 | 187,322 | 191,581 | 165,968 | 161,424 | 160,006 | 149,593 |
| Interest on debt | 39,792 | 45,039 | 49,103 | 48,457 | 46,011 | 51,209 | 56,690 | 52,152 | 64,682 | 74,113 | 42,516 | 34,761 | 42,306 | 38,875 | 32,335 | 25,166 | 17,896 |
| Corporate and property taxes | 24,753 | 20,336 | 31,894 | 27,069 | 21,983 | 25,465 | 25,491 | 36,728 | 43,465 | 42,196 | 32,814 | 32,604 | 31,057 | 32,248 | 34,394 | 29,707 | 27,650 |
| Net profit | 132,103 | 144,358 | 144,638 | 150,636 | 159,325 | 164,774 | 173,973 | 156,763 | 145,060 | 127,191 | 114,777 | 119,957 | 118,218 | 94,845 | 94,695 | 105,133 | 104,047 |
| SPAIN | | | | | | | | | | | | | | | | | |
| Value of production | 730,890 | 818,904 | 894,556 | 981,680 | 1,056,727 | 1,155,501 | 1,288,464 | 1,445,310 | 1,568,722 | 1,639,835 | 1,446,638 | 1,451,858 | 1,442,518 | 1,394,915 | 1,367,884 | 1,406,350 | 1,470,211 |
| Intermediate consumption | 432,506 | 494,429 | 542,497 | 605,119 | 656,665 | 729,001 | 829,562 | 946,086 | 1,016,215 | 1,034,752 | 855,919 | 870,072 | 869,510 | 839,359 | 824,906 | 852,769 | 895,868 |
| Gross value added | 298,384 | 324,475 | 352,059 | 376,561 | 400,062 | 426,500 | 458,902 | 499,224 | 552,507 | 605,083 | 590,719 | 581,786 | 573,008 | 555,556 | 542,978 | 553,581 | 574,343 |
| Production taxes less subsidies | -229 | 52 | 345 | 55 | -231 | 61 | 194 | -1,233 | -2,413 | -1,461 | -1,313 | -1,706 | -1,479 | -171 | 1,068 | 2,038 | 2,939 |
| Compensation of employees | 186,681 | 203,928 | 223,374 | 239,663 | 255,893 | 271,693 | 291,207 | 317,671 | 346,559 | 371,166 | 355,712 | 347,732 | 341,663 | 321,025 | 306,899 | 315,183 | 326,467 |
| Gross operating profit | 111,932 | 120,495 | 128,340 | 136,843 | 144,400 | 154,746 | 167,501 | 182,786 | 208,361 | 235,378 | 236,320 | 235,760 | 232,824 | 234,702 | 235,011 | 236,360 | 244,937 |
| Amortization and other net expenses | 50,802 | 56,952 | 61,309 | 65,893 | 71,432 | 78,225 | 84,444 | 92,783 | 101,246 | 107,642 | 112,643 | 112,871 | 115,619 | 118,769 | 118,335 | 121,072 | 125,257 |
| Operating profit | 61,130 | 63,543 | 67,031 | 70,950 | 72,968 | 76,521 | 83,057 | 90,003 | 107,115 | 127,736 | 123,677 | 122,889 | 117,205 | 115,933 | 116,676 | 115,288 | 119,680 |
| Financial income | 10,920 | 12,491 | 13,101 | 13,996 | 16,398 | 17,343 | 19,994 | 22,585 | 22,313 | 30,352 | 29,306 | 23,608 | 32,228 | 29,196 | 30,683 | 41,681 | 32,060 |
| Other net property income | -103 | 1,199 | -2,156 | -1,812 | 168 | -20 | 2,055 | 3,419 | 5,623 | 1,390 | 1,930 | 1,082 | 786 | 4,408 | 2,360 | 5,421 | 4,899 |
| Earnings before interest and taxes | 71,947 | 77,233 | 77,976 | 83,134 | 89,534 | 93,844 | 105,106 | 116,007 | 135,051 | 159,478 | 154,913 | 147,579 | 150,219 | 149,537 | 149,719 | 162,390 | 156,639 |
| Interest on debt | 14,209 | 19,986 | 24,745 | 23,143 | 22,453 | 24,868 | 30,985 | 39,359 | 55,975 | 63,598 | 34,982 | 33,134 | 39,770 | 38,840 | 28,809 | 24,660 | 17,391 |
| Corporate and property taxes | 13,671 | 16,613 | 16,756 | 19,256 | 21,576 | 25,014 | 30,335 | 34,108 | 41,567 | 25,474 | 19,015 | 16,168 | 15,782 | 19,772 | 17,994 | 17,653 | 20,395 |
| Net profit | 44,067 | 40,634 | 36,475 | 40,735 | 45,505 | 43,962 | 43,786 | 42,540 | 37,509 | 70,406 | 100,916 | 98,277 | 94,667 | 90,925 | 102,916 | 120,077 | 118,853 |

INCOME STATEMENT OF NFCs (cont'd)
TABLE A1

Millions of euros for EA countries and billions of dollars for US

| UNITED STATES | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Value of production | 10,061 | 10,821 | 10,623 | 10,502 | 10,796 | 11,548 | 12,596 | 13,438 | 13,962 | 14,229 | 12,475 | 13,571 | 14,661 | 15,553 | 15,999 | 16,823 | 16,875 |
| Intermediate consumption | 4,891 | 5,308 | 5,152 | 4,963 | 5,071 | 5,441 | 6,064 | 6,450 | 6,758 | 6,972 | 5,615 | 6,332 | 7,069 | 7,541 | 7,693 | 8,119 | 7,866 |
| Gross value added | 5,170 | 5,513 | 5,471 | 5,539 | 5,725 | 6,108 | 6,532 | 6,988 | 7,204 | 7,257 | 6,860 | 7,239 | 7,592 | 8,012 | 8,305 | 8,704 | 9,009 |
| Production taxes less subsidies | 425 | 450 | 445 | 473 | 496 | 531 | 573 | 610 | 633 | 633 | 606 | 633 | 671 | 690 | 722 | 738 | 754 |
| Compensation of employees | 3,310 | 3,597 | 3,585 | 3,542 | 3,596 | 3,763 | 3,930 | 4,129 | 4,305 | 4,358 | 4,088 | 4,159 | 4,363 | 4,593 | 4,750 | 5,000 | 5,260 |
| Gross operating profit | 1,435 | 1,466 | 1,442 | 1,524 | 1,633 | 1,814 | 2,029 | 2,249 | 2,266 | 2,266 | 2,166 | 2,447 | 2,558 | 2,728 | 2,834 | 2,966 | 2,995 |
| Amortization and other net expenses | 683 | 742 | 785 | 805 | 818 | 850 | 910 | 979 | 1,040 | 1,094 | 1,092 | 1,095 | 1,139 | 1,186 | 1,228 | 1,283 | 1,330 |
| Operating profit | 752 | 724 | 656 | 719 | 815 | 964 | 1,119 | 1,269 | 1,226 | 1,172 | 1,074 | 1,353 | 1,419 | 1,542 | 1,606 | 1,683 | 1,665 |
| Financial income | 302 | 349 | 324 | 296 | 292 | 318 | 597 | 437 | 472 | 411 | 354 | 312 | 271 | 269 | 252 | 254 | 264 |
| Other net property income | 62 | 91 | 98 | 84 | 101 | 105 | -36 | 130 | 154 | 158 | 174 | 197 | 193 | 169 | 206 | 206 | 197 |
| Earnings before interest and taxes | 1,116 | 1,163 | 1,079 | 1,100 | 1,209 | 1,387 | 1,680 | 1,837 | 1,852 | 1,741 | 1,601 | 1,862 | 1,884 | 1,980 | 2,063 | 2,143 | 2,126 |
| Interest on debt | 393 | 472 | 475 | 432 | 392 | 395 | 451 | 521 | 606 | 585 | 480 | 445 | 444 | 438 | 410 | 422 | 453 |
| Corporate and property taxes | 171 | 170 | 111 | 97 | 133 | 187 | 272 | 308 | 294 | 227 | 178 | 221 | 229 | 267 | 284 | 314 | 308 |
| Net profit | 551 | 521 | 493 | 571 | 684 | 805 | 957 | 1,008 | 952 | 929 | 943 | 1,197 | 1,210 | 1,275 | 1,369 | 1,408 | 1,365 |

SOURCE: Own calculations.

NOTE: Other net expenses are obtained from other net current transfers. Data for US NFCs are not available for this item. Financial income corresponds to interest and dividends received. Other net property income includes income from investment funds and insurance policies, net withdrawals from income of quasi-corporations and net rents.

BALANCE SHEET OF NFCs

TABLE A2

Millions of euros for EA countries and billions of dollars for US

| FRANCE | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Operating assets | 1,428,053 | 1,666,308 | 1,538,318 | 1,451,627 | 1,488,159 | 1,610,487 | 1,742,763 | 1,958,658 | 2,297,576 | 2,225,120 | 2,013,709 | 2,119,435 | 2,218,442 | 2,252,386 | 2,340,141 | 2,428,825 | 2,482,746 |
| Financial assets | 1,095,171 | 1,340,577 | 1,421,280 | 1,238,803 | 1,181,160 | 1,322,059 | 1,534,432 | 1,812,920 | 1,911,079 | 1,711,183 | 1,644,233 | 1,813,437 | 1,786,341 | 1,786,884 | 1,933,615 | 2,085,340 | 2,253,754 |
| Liquid assets | 219,210 | 236,331 | 258,543 | 276,992 | 298,518 | 322,875 | 352,215 | 395,638 | 405,933 | 392,152 | 423,369 | 453,592 | 436,053 | 425,212 | 429,013 | 440,457 | 474,958 |
| Deposits, long-term | 31,120 | 30,286 | 35,168 | 37,856 | 42,652 | 50,054 | 56,183 | 58,874 | 63,490 | 77,725 | 88,418 | 102,698 | 125,569 | 144,854 | 166,195 | 178,507 | 179,056 |
| Total assets | 2,523,224 | 3,006,884 | 2,959,597 | 2,690,429 | 2,669,318 | 2,932,546 | 3,277,195 | 3,771,578 | 4,208,655 | 3,936,303 | 3,657,941 | 3,932,872 | 4,004,782 | 4,039,270 | 4,273,755 | 4,514,164 | 4,736,500 |
| Debt | 898,366 | 987,100 | 1,092,336 | 1,137,913 | 1,133,695 | 1,151,138 | 1,228,656 | 1,344,223 | 1,447,709 | 1,543,087 | 1,608,395 | 1,664,892 | 1,750,509 | 1,807,878 | 1,828,230 | 1,898,508 | 2,010,558 |
| Loans | 633,572 | 693,498 | 753,476 | 788,759 | 791,986 | 804,685 | 861,844 | 935,188 | 1,029,673 | 1,137,598 | 1,175,837 | 1,171,337 | 1,216,217 | 1,253,018 | 1,249,659 | 1,257,113 | 1,289,615 |
| Equity | 1,624,858 | 2,019,784 | 1,867,261 | 1,552,516 | 1,535,623 | 1,781,408 | 2,048,539 | 2,427,355 | 2,760,946 | 2,393,216 | 2,049,547 | 2,267,980 | 2,254,273 | 2,231,392 | 2,445,525 | 2,615,657 | 2,725,942 |
| Total liabilities | 2,523,224 | 3,006,884 | 2,959,597 | 2,690,429 | 2,669,318 | 2,932,546 | 3,277,195 | 3,771,578 | 4,208,655 | 3,936,303 | 3,657,941 | 3,932,872 | 4,004,782 | 4,039,270 | 4,273,755 | 4,514,164 | 4,736,500 |
| GERMANY | | | | | | | | | | | | | | | | | |
| Operating assets | 1,403,300 | 1,424,944 | 1,321,122 | 1,289,949 | 1,356,419 | 1,436,261 | 1,464,576 | 1,604,591 | 1,834,003 | 1,766,761 | 1,618,077 | 1,748,369 | 1,827,275 | 1,866,812 | 2,025,621 | 2,153,915 | 2,164,420 |
| Financial assets | 1,749,354 | 1,986,890 | 2,088,119 | 1,868,859 | 1,658,808 | 1,722,246 | 1,806,389 | 1,890,332 | 1,995,843 | 2,007,755 | 1,961,211 | 1,959,422 | 1,880,144 | 1,929,183 | 2,127,069 | 2,258,128 | 2,405,040 |
| Liquid assets | 359,476 | 401,346 | 466,141 | 486,583 | 480,591 | 479,942 | 489,858 | 534,296 | 554,578 | 536,022 | 571,591 | 636,887 | 680,222 | 730,681 | 783,458 | 818,802 | 887,613 |
| Deposits, long-term | 104,654 | 106,356 | 119,111 | 130,571 | 137,966 | 142,791 | 155,138 | 171,163 | 177,973 | 184,705 | 219,251 | 245,157 | 254,893 | 293,419 | 325,146 | 335,786 | 358,544 |
| Total assets | 3,152,654 | 3,411,834 | 3,409,241 | 3,158,807 | 3,015,226 | 3,158,506 | 3,270,965 | 3,494,923 | 3,829,846 | 3,774,516 | 3,579,288 | 3,707,790 | 3,707,419 | 3,795,995 | 4,152,690 | 4,412,043 | 4,569,460 |
| Debt | 1,397,365 | 1,499,933 | 1,569,091 | 1,609,796 | 1,623,541 | 1,620,497 | 1,610,997 | 1,638,139 | 1,726,520 | 1,829,610 | 1,858,987 | 1,803,266 | 1,768,004 | 1,801,055 | 1,867,881 | 1,922,900 | 1,960,753 |
| Loans | 957,456 | 1,011,849 | 1,073,977 | 1,093,357 | 1,082,107 | 1,057,124 | 1,034,007 | 1,046,482 | 1,097,165 | 1,143,898 | 1,145,331 | 1,114,283 | 1,106,992 | 1,119,637 | 1,160,612 | 1,188,431 | 1,199,726 |
| Equity | 1,755,289 | 1,911,901 | 1,840,151 | 1,549,011 | 1,391,686 | 1,538,009 | 1,659,968 | 1,856,784 | 2,103,327 | 1,944,907 | 1,720,301 | 1,904,524 | 1,939,415 | 1,994,940 | 2,284,810 | 2,489,143 | 2,608,707 |
| Total liabilities | 3,152,654 | 3,411,834 | 3,409,241 | 3,158,807 | 3,015,226 | 3,158,506 | 3,270,965 | 3,494,923 | 3,829,846 | 3,774,516 | 3,579,288 | 3,707,790 | 3,707,419 | 3,795,995 | 4,152,690 | 4,412,043 | 4,569,460 |
| ITALY | | | | | | | | | | | | | | | | | |
| Operating assets | 1,190,325 | 1,350,595 | 1,417,109 | 1,495,446 | 1,557,846 | 1,655,944 | 1,877,559 | 2,185,446 | 2,364,238 | 2,376,091 | 2,314,131 | 2,215,600 | 2,154,601 | 2,172,729 | 2,254,876 | 2,301,219 | 2,323,577 |
| Financial assets | 363,274 | 449,513 | 502,032 | 462,219 | 447,376 | 489,205 | 552,793 | 615,078 | 653,439 | 641,211 | 621,169 | 626,933 | 635,053 | 650,699 | 657,569 | 664,281 | 684,041 |
| Liquid assets | 125,338 | 137,462 | 144,378 | 148,851 | 155,043 | 166,654 | 185,594 | 209,070 | 225,671 | 224,136 | 225,465 | 236,035 | 233,034 | 232,844 | 242,992 | 257,409 | 283,221 |
| Deposits, long-term | 8,909 | 8,717 | 9,149 | 8,011 | 7,978 | 9,361 | 10,657 | 10,459 | 11,005 | 14,374 | 16,239 | 17,050 | 19,498 | 24,943 | 28,457 | 24,671 | 23,568 |
| Total assets | 1,553,599 | 1,800,108 | 1,919,141 | 1,957,665 | 2,005,222 | 2,145,149 | 2,430,352 | 2,800,524 | 3,017,677 | 3,017,301 | 2,935,299 | 2,842,533 | 2,789,654 | 2,823,428 | 2,912,445 | 2,965,500 | 3,007,618 |
| Debt | 653,617 | 721,056 | 799,030 | 862,614 | 914,572 | 971,770 | 1,040,908 | 1,135,563 | 1,260,809 | 1,366,463 | 1,419,496 | 1,447,075 | 1,465,796 | 1,485,310 | 1,468,214 | 1,442,084 | 1,433,737 |
| Loans | 547,668 | 607,932 | 666,131 | 708,280 | 749,407 | 792,280 | 845,946 | 922,244 | 1,023,161 | 1,119,985 | 1,166,700 | 1,179,630 | 1,192,935 | 1,195,209 | 1,151,751 | 1,102,361 | 1,079,726 |
| Equity | 899,983 | 1,079,052 | 1,120,112 | 1,095,051 | 1,090,650 | 1,173,379 | 1,389,444 | 1,664,961 | 1,756,868 | 1,650,838 | 1,515,803 | 1,395,458 | 1,323,858 | 1,338,119 | 1,444,231 | 1,523,417 | 1,573,881 |
| Total liabilities | 1,553,599 | 1,800,108 | 1,919,141 | 1,957,665 | 2,005,222 | 2,145,149 | 2,430,352 | 2,800,524 | 3,017,677 | 3,017,301 | 2,935,299 | 2,842,533 | 2,789,654 | 2,823,428 | 2,912,445 | 2,965,500 | 3,007,618 |

BALANCE SHEET OF NFCs (cont'd)

TABLE A2

Millions of euros for EA countries and billions of dollars for US

| SPAIN | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Operating assets | 673,298 | 718,260 | 756,033 | 800,073 | 880,557 | 1,028,016 | 1,200,091 | 1,447,648 | 1,689,093 | 1,698,983 | 1,627,923 | 1,615,347 | 1,582,436 | 1,537,357 | 1,508,363 | 1,490,402 | 1,461,328 |
| Financial assets | 188,344 | 249,325 | 296,687 | 308,032 | 330,968 | 373,389 | 432,207 | 526,543 | 612,055 | 638,867 | 645,476 | 688,518 | 713,659 | 697,917 | 696,497 | 713,422 | 724,748 |
| <i>Liquid assets</i> | <i>64,061</i> | <i>68,440</i> | <i>75,357</i> | <i>85,279</i> | <i>96,278</i> | <i>115,314</i> | <i>144,300</i> | <i>171,389</i> | <i>178,824</i> | <i>161,003</i> | <i>145,155</i> | <i>142,502</i> | <i>135,165</i> | <i>128,009</i> | <i>142,443</i> | <i>170,361</i> | <i>195,183</i> |
| <i>Deposits, long-term</i> | <i>36,288</i> | <i>39,686</i> | <i>45,983</i> | <i>51,260</i> | <i>56,828</i> | <i>62,707</i> | <i>67,674</i> | <i>73,672</i> | <i>85,380</i> | <i>102,088</i> | <i>112,375</i> | <i>115,086</i> | <i>109,815</i> | <i>100,337</i> | <i>99,742</i> | <i>93,102</i> | <i>73,899</i> |
| Total assets | 861,641 | 967,585 | 1,052,720 | 1,108,105 | 1,211,525 | 1,401,405 | 1,632,298 | 1,974,191 | 2,301,147 | 2,337,849 | 2,273,399 | 2,303,865 | 2,296,094 | 2,235,273 | 2,204,860 | 2,203,824 | 2,186,076 |
| Debt | 306,843 | 364,803 | 431,135 | 491,958 | 555,331 | 632,390 | 744,563 | 931,411 | 1,138,795 | 1,275,451 | 1,319,295 | 1,319,641 | 1,303,666 | 1,235,886 | 1,141,042 | 1,068,390 | 1,020,394 |
| <i>Loans</i> | <i>267,338</i> | <i>323,679</i> | <i>390,171</i> | <i>450,655</i> | <i>514,259</i> | <i>590,115</i> | <i>701,048</i> | <i>883,702</i> | <i>1,086,431</i> | <i>1,217,587</i> | <i>1,254,872</i> | <i>1,251,358</i> | <i>1,230,597</i> | <i>1,154,483</i> | <i>1,049,807</i> | <i>970,911</i> | <i>922,445</i> |
| Equity | 554,798 | 602,782 | 621,585 | 616,147 | 656,194 | 769,015 | 887,735 | 1,042,780 | 1,162,353 | 1,062,399 | 954,104 | 984,224 | 992,429 | 999,388 | 1,063,818 | 1,135,434 | 1,165,682 |
| Total liabilities | 861,641 | 967,585 | 1,052,720 | 1,108,105 | 1,211,525 | 1,401,405 | 1,632,298 | 1,974,191 | 2,301,147 | 2,337,849 | 2,273,399 | 2,303,865 | 2,296,094 | 2,235,273 | 2,204,860 | 2,203,824 | 2,186,076 |
| UNITED STATES | | | | | | | | | | | | | | | | | |
| Operating assets | 10,019 | 10,798 | 11,240 | 11,322 | 11,669 | 12,670 | 14,151 | 15,405 | 16,946 | 17,506 | 15,790 | 15,035 | 16,154 | 17,136 | 18,518 | 20,238 | 21,640 |
| Financial assets | 5,730 | 6,920 | 7,746 | 7,979 | 8,136 | 8,555 | 9,212 | 9,967 | 10,879 | 11,046 | 10,922 | 11,361 | 11,814 | 12,281 | 12,980 | 13,833 | 14,954 |
| <i>Liquid assets</i> | <i>468</i> | <i>537</i> | <i>577</i> | <i>583</i> | <i>590</i> | <i>620</i> | <i>694</i> | <i>750</i> | <i>807</i> | <i>894</i> | <i>945</i> | <i>946</i> | <i>906</i> | <i>906</i> | <i>986</i> | <i>1,097</i> | <i>1,183</i> |
| <i>Deposits, long-term</i> | <i>246</i> | <i>282</i> | <i>296</i> | <i>304</i> | <i>356</i> | <i>428</i> | <i>484</i> | <i>530</i> | <i>519</i> | <i>414</i> | <i>428</i> | <i>555</i> | <i>593</i> | <i>614</i> | <i>670</i> | <i>696</i> | <i>666</i> |
| Total assets | 15,749 | 17,718 | 18,986 | 19,301 | 19,805 | 21,225 | 23,363 | 25,372 | 27,825 | 28,552 | 26,712 | 26,397 | 27,968 | 29,417 | 31,498 | 34,071 | 36,593 |
| Debt | 5,946 | 6,598 | 7,019 | 7,184 | 7,214 | 7,329 | 7,701 | 8,109 | 8,671 | 9,278 | 9,414 | 9,339 | 9,614 | 10,167 | 10,669 | 11,311 | 12,240 |
| <i>Loans</i> | <i>1,719</i> | <i>1,876</i> | <i>1,924</i> | <i>1,884</i> | <i>1,861</i> | <i>1,919</i> | <i>2,125</i> | <i>2,383</i> | <i>2,738</i> | <i>3,001</i> | <i>2,739</i> | <i>2,266</i> | <i>2,151</i> | <i>2,204</i> | <i>2,238</i> | <i>2,329</i> | <i>2,432</i> |
| Equity | 9,802 | 11,120 | 11,966 | 12,118 | 12,591 | 13,896 | 15,662 | 17,264 | 19,154 | 19,274 | 17,297 | 17,057 | 18,354 | 19,250 | 20,829 | 22,760 | 24,353 |
| Total liabilities | 15,749 | 17,718 | 18,986 | 19,301 | 19,805 | 21,225 | 23,363 | 25,372 | 27,824 | 28,552 | 26,712 | 26,397 | 27,968 | 29,417 | 31,498 | 34,071 | 36,593 |

SOURCE: Own calculations.

NOTE: Financial assets, as well as equity, are valued at current prices, while debt is recorded at face value. All balance-sheet items are calculated as the average of end-year data for two consecutive years (the current year and the previous one). Accounts receivable (trade credits and advances), cash and short-term deposits are deducted from financial assets, and included in operating assets. Accounts payable (trade credits and advances) are deducted from debt and from operating assets. Liquid assets include cash, short-term deposits and mutual fund shares.

FLOW OF FUNDS OF NFCs

TABLE A3

Millions of euros for EA countries and billions of dollars for US

| FRANCE | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Net profits | 123,614 | 124,546 | 127,364 | 137,223 | 157,430 | 176,988 | 189,000 | 210,194 | 243,823 | 224,188 | 205,730 | 206,902 | 199,166 | 171,846 | 165,419 | 176,912 | 210,615 |
| Amortization | 116,720 | 127,232 | 135,174 | 142,253 | 146,820 | 153,248 | 161,067 | 171,084 | 180,783 | 191,015 | 193,970 | 197,884 | 204,985 | 210,522 | 214,332 | 217,209 | 220,883 |
| Gross cash-flow | 240,334 | 251,778 | 262,538 | 279,476 | 304,250 | 330,236 | 350,067 | 381,278 | 424,606 | 415,203 | 399,700 | 404,786 | 404,151 | 382,368 | 379,751 | 394,121 | 431,498 |
| Gross investment | 151,563 | 177,925 | 179,277 | 171,861 | 169,653 | 182,244 | 198,319 | 216,873 | 244,779 | 247,161 | 195,436 | 218,965 | 254,566 | 245,979 | 246,829 | 262,325 | 273,504 |
| Dividends paid | 92,841 | 105,853 | 110,466 | 129,385 | 142,635 | 165,294 | 183,106 | 208,354 | 231,124 | 242,634 | 234,859 | 213,998 | 213,179 | 208,364 | 197,090 | 206,541 | 212,777 |
| Change in financial assets | -4,070 | -32,000 | -27,205 | -21,770 | -8,038 | -17,302 | -31,358 | -43,949 | -51,297 | -74,592 | -30,595 | -28,177 | -63,594 | -71,975 | -64,168 | -74,745 | -54,783 |
| GERMANY | | | | | | | | | | | | | | | | | |
| Net profits | 201,667 | 214,056 | 313,008 | 281,150 | 277,855 | 326,436 | 335,436 | 388,668 | 434,359 | 403,371 | 348,540 | 394,485 | 422,785 | 400,761 | 406,243 | 420,559 | 441,243 |
| Amortization | 193,719 | 203,858 | 212,352 | 217,987 | 220,325 | 224,111 | 228,006 | 233,431 | 243,501 | 253,258 | 258,766 | 262,857 | 270,530 | 278,558 | 283,879 | 290,485 | 298,160 |
| Gross cash-flow | 395,386 | 417,914 | 525,360 | 499,137 | 498,180 | 550,547 | 563,442 | 622,099 | 677,860 | 656,629 | 607,306 | 657,342 | 693,315 | 679,319 | 690,122 | 711,044 | 739,403 |
| Gross investment | 265,641 | 334,653 | 281,876 | 248,100 | 249,495 | 251,296 | 252,135 | 281,899 | 322,077 | 325,840 | 240,146 | 290,285 | 329,540 | 287,584 | 301,491 | 319,948 | 319,828 |
| Dividends paid | 217,741 | 230,163 | 296,924 | 260,862 | 267,311 | 277,950 | 306,556 | 346,158 | 366,178 | 374,153 | 335,762 | 324,651 | 341,612 | 337,771 | 324,324 | 329,730 | 330,745 |
| Change in financial assets | -87,996 | -146,902 | -53,440 | -9,825 | -18,626 | 21,301 | 4,751 | -5,958 | -10,395 | -43,364 | 31,398 | 42,406 | 22,163 | 53,964 | 64,307 | 61,366 | 88,830 |
| ITALY | | | | | | | | | | | | | | | | | |
| Net profits | 132,103 | 144,358 | 144,638 | 150,636 | 159,325 | 164,774 | 173,973 | 156,763 | 145,060 | 127,191 | 114,777 | 119,957 | 118,218 | 94,845 | 94,695 | 105,133 | 104,047 |
| Amortization | 95,455 | 102,138 | 107,960 | 114,487 | 117,950 | 123,276 | 128,470 | 134,256 | 140,823 | 147,106 | 148,670 | 154,566 | 160,593 | 163,252 | 162,216 | 162,587 | 162,343 |
| Gross cash-flow | 227,558 | 246,496 | 252,598 | 265,123 | 277,275 | 288,050 | 302,443 | 291,019 | 285,883 | 274,297 | 263,447 | 274,523 | 278,811 | 258,097 | 256,911 | 267,720 | 266,390 |
| Gross investment | 119,966 | 145,092 | 138,422 | 147,981 | 148,544 | 152,687 | 153,619 | 170,555 | 181,283 | 177,853 | 134,353 | 162,678 | 173,341 | 137,341 | 138,830 | 143,678 | 146,376 |
| Dividends paid | 137,151 | 137,814 | 147,595 | 158,447 | 156,862 | 163,339 | 177,148 | 176,828 | 176,504 | 174,712 | 150,437 | 148,230 | 145,733 | 134,482 | 128,988 | 126,408 | 125,893 |
| Change in financial assets | -29,559 | -36,410 | -33,419 | -41,305 | -28,131 | -27,976 | -28,324 | -56,364 | -71,904 | -78,268 | -21,343 | -36,385 | -40,263 | -13,726 | -10,907 | -2,366 | -5,879 |
| SPAIN | | | | | | | | | | | | | | | | | |
| Net profits | 44,067 | 40,634 | 36,475 | 40,735 | 45,505 | 43,962 | 43,786 | 42,540 | 37,509 | 70,406 | 100,916 | 98,277 | 94,667 | 90,925 | 102,916 | 120,077 | 118,853 |
| Amortization | 44,464 | 49,509 | 53,775 | 58,088 | 63,015 | 69,434 | 76,196 | 83,750 | 91,439 | 97,564 | 100,335 | 103,480 | 107,984 | 110,293 | 110,048 | 112,364 | 116,630 |
| Gross cash-flow | 88,531 | 90,143 | 90,250 | 98,823 | 108,520 | 113,396 | 119,982 | 126,290 | 128,948 | 167,970 | 201,251 | 201,757 | 202,651 | 201,218 | 212,964 | 232,441 | 235,483 |
| Gross investment | 89,839 | 98,762 | 103,952 | 109,955 | 119,551 | 132,511 | 150,656 | 171,645 | 189,016 | 178,667 | 130,104 | 132,042 | 131,746 | 136,472 | 136,292 | 147,051 | 153,284 |
| Dividends paid | 17,829 | 21,454 | 21,329 | 23,269 | 28,420 | 30,487 | 36,255 | 41,211 | 37,949 | 46,898 | 56,152 | 40,723 | 56,665 | 54,671 | 51,091 | 72,926 | 60,218 |
| Change in financial assets | -19,137 | -30,073 | -35,031 | -34,401 | -39,451 | -49,602 | -66,929 | -86,566 | -98,017 | -57,595 | 14,995 | 28,992 | 14,240 | 10,075 | 25,581 | 12,464 | 21,981 |
| UNITED STATES | | | | | | | | | | | | | | | | | |
| Net profits | 551 | 521 | 493 | 571 | 684 | 805 | 957 | 1,008 | 952 | 929 | 943 | 1,197 | 1,210 | 1,275 | 1,369 | 1,408 | 1,365 |
| Amortization | 683 | 742 | 785 | 805 | 818 | 850 | 910 | 979 | 1,040 | 1,094 | 1,092 | 1,095 | 1,139 | 1,186 | 1,228 | 1,283 | 1,330 |
| Gross cash-flow | 1,235 | 1,263 | 1,278 | 1,376 | 1,502 | 1,656 | 1,867 | 1,987 | 1,993 | 2,023 | 2,035 | 2,291 | 2,350 | 2,462 | 2,597 | 2,691 | 2,695 |
| Gross investment | 1,048 | 1,145 | 1,022 | 957 | 975 | 1,059 | 1,187 | 1,335 | 1,380 | 1,361 | 1,017 | 1,238 | 1,338 | 1,507 | 1,580 | 1,685 | 1,766 |
| Dividends paid | 284 | 313 | 299 | 305 | 349 | 431 | 471 | 551 | 577 | 582 | 490 | 510 | 536 | 625 | 633 | 683 | 709 |
| Change in financial assets | -97 | -196 | -44 | 114 | 178 | 166 | 209 | 101 | 36 | 80 | 527 | 544 | 476 | 330 | 385 | 323 | 220 |

SOURCE: Own calculations.

NOTE: Gross investment is calculated as the sum of gross fixed capital formation (acquisitions of produced non-financial assets), acquisitions less disposals of non-produced non-financial assets and changes in inventories.

BANCO DE ESPAÑA PUBLICATIONS

OCCASIONAL PAPERS

- 0901 ÁNGEL ESTRADA, JUAN F. JIMENO and JOSÉ LUIS MALO DE MOLINA: The Spanish economy in EMU: the first ten years. (There is a Spanish version of this edition with the same number).
- 0902 ÁNGEL ESTRADA and PABLO HERNÁNDEZ DE COS: Oil prices and their effect on potential output. (There is a Spanish version of this edition with the same number).
- 0903 PALOMA LÓPEZ-GARCÍA, SERGIO PUENTE and ÁNGEL LUIS GÓMEZ: Employment generation by small firms in Spain.
- 0904 LUIS J. ÁLVAREZ, SAMUEL HURTADO, ISABEL SÁNCHEZ and CARLOS THOMAS: The impact of oil price changes on Spanish and euro area consumer price inflation.
- 0905 CORAL GARCÍA, ESTHER GORDO, JAIME MARTÍNEZ-MARTÍN and PATRY TELLO: Una actualización de las funciones de exportación e importación de la economía española.
- 1001 L. J. ÁLVAREZ, G. BULLIGAN, A. CABRERO, L. FERRARA and H. STAHL: Housing cycles in the major euro area countries.
- 1002 SONSOLES GALLEGO, SÁNDOR GARDÓ, REINER MARTIN, LUIS MOLINA and JOSÉ MARÍA SERENA: The impact of the global economic and financial crisis on Central Eastern and SouthEastern Europe (CESEE) and Latin America.
- 1101 LUIS ORGAZ, LUIS MOLINA and CARMEN CARRASCO: El creciente peso de las economías emergentes en la economía y gobernanza mundiales. Los países BRIC.
- 1102 KLAUS SCHMIDT-HEBBEL: Central banking in Latin America: changes, achievements, challenges. (There is a Spanish version of this edition with the same number).
- 1103 OLYMPIA BOVER: The Spanish Survey of Household Finances (EFF): description and methods of the 2008 wave.
- 1104 PABLO HERNÁNDEZ DE COS, MARIO IZQUIERDO and ALBERTO URTASUN: An estimate of the potential growth of the Spanish economy. (There is a Spanish version of this edition with the same number).
- 1105 ENRIQUE ALBEROLA, CARLOS TRUCHARTE and JUAN LUIS VEGA: Central banks and macroprudential policy. Some reflections from the Spanish experience.
- 1106 SAMUEL HURTADO, ELENA FERNÁNDEZ, EVA ORTEGA and ALBERTO URTASUN: Nueva actualización del modelo trimestral del Banco de España.
- 1107 PABLO HERNÁNDEZ DE COS and ENRIQUE MORAL-BENITO: Health care expenditure in the OECD countries: efficiency and regulation. (There is a Spanish version of this edition with the same number).
- 1201 ELOÍSA ORTEGA and JUAN PEÑALOSA: The Spanish economic crisis: key factors and growth challenges in the euro area. (There is a Spanish version of this edition with the same number).
- 1202 MARÍA J. NIETO: What role, if any, can market discipline play in supporting macroprudential policy?
- 1203 CONCHA ARTOLA and ENRIQUE GALÁN: Tracking the future on the web: construction of leading indicators using internet searches. (There is a Spanish version of this edition with the same number).
- 1204 JOSÉ LUIS MALO DE MOLINA: Luis Ángel Rojo en el Banco de España.
- 1205 PABLO HERNÁNDEZ DE COS and CARLOS THOMAS: El impacto de la consolidación fiscal sobre el crecimiento económico. Una ilustración para la economía española a partir de un modelo de equilibrio general.
- 1206 GALO NUÑO, CRISTINA PULIDO and RUBÉN SEGURA-CAYUELA: Long-run growth and demographic prospects in advanced economies.
- 1207 IGNACIO HERNANDO, JIMENA LLOPIS and JAVIER VALLÉS: Los retos para la política económica en un entorno de tipos de interés próximos a cero.
- 1208 JUAN CARLOS BERGANZA: Fiscal rules in Latin America: a survey.
- 1209 ÁNGEL ESTRADA and EVA VALDEOLIVAS: The fall of the labour income share in advanced economies.
- 1301 ETTORE DORRUCCI, GABOR PULA and DANIEL SANTABÁRBARA: China's economic growth and rebalancing.
- 1302 DANIEL GARROTE, JIMENA LLOPIS and JAVIER VALLÉS: Los canales del desapalancamiento del sector privado: una comparación internacional.
- 1303 PABLO HERNÁNDEZ DE COS and JUAN F. JIMENO: Fiscal policy and external imbalances in a debt crisis: the Spanish case.
- 1304 ELOÍSA ORTEGA and JUAN PEÑALOSA: Algunas reflexiones sobre la economía española tras cinco años de crisis.
- 1401 JOSÉ MARÍA SERENA and EVA VALDEOLIVAS: Integración financiera y modelos de financiación de los bancos globales.
- 1402 ANTONIO MONTESINOS, JAVIER J. PÉREZ and ROBERTO RAMOS: El empleo de las Administraciones Públicas en España: caracterización y evolución durante la crisis.

- 1403 SAMUEL HURTADO, PABLO MANZANO, EVA ORTEGA and ALBERTO URTASUN: Update and re-estimation of the Quarterly Model of Banco de España (MTBE).
- 1404 JUAN CARLOS BERGANZA, IGNACIO HERNANDO and JAVIER VALLÉS: Los desafíos para la política monetaria en las economías avanzadas tras la Gran Recesión.
- 1405 FERNANDO LÓPEZ VICENTE and JOSÉ MARÍA SERENA GARRALDA: Macroeconomic policy in Brazil: inflation targeting, public debt structure and credit policies.
- 1406 PABLO HERNÁNDEZ DE COS and DAVID LÓPEZ RODRÍGUEZ: Tax structure and revenue-raising capacity in Spain: A comparative analysis with the UE. (There is a Spanish version of this edition with the same number).
- 1407 OLYMPIA BOVER, ENRIQUE CORONADO and PILAR VELILLA: The Spanish survey of household finances (EFF): description and methods of the 2011 wave.
- 1501 MAR DELGADO TÉLLEZ, PABLO HERNÁNDEZ DE COS, SAMUEL HURTADO and JAVIER J. PÉREZ: Extraordinary mechanisms for payment of General Government suppliers in Spain. (There is a Spanish version of this edition with the same number).
- 1502 JOSÉ MANUEL MONTERO y ANA REGIL: La tasa de actividad en España: resistencia cíclica, determinantes y perspectivas futuras.
- 1503 MARIO IZQUIERDO and JUAN FRANCISCO JIMENO: Employment, wage and price reactions to the crisis in Spain: Firm-level evidence from the WDN survey.
- 1504 MARÍA DE LOS LLANOS MATEA: La demanda potencial de vivienda principal.
- 1601 JESÚS SAURINA and FRANCISCO JAVIER MENCÍA: Macroprudential policy: objectives, instruments and indicators. (There is a Spanish version of this edition with the same number).
- 1602 LUIS MOLINA, ESTHER LÓPEZ y ENRIQUE ALBEROLA: El posicionamiento exterior de la economía española.
- 1603 PILAR CUADRADO and ENRIQUE MORAL-BENITO: Potential growth of the Spanish economy. (There is a Spanish version of this edition with the same number).
- 1604 HENRIQUE S. BASSO and JAMES COSTAIN: Macroprudential theory: advances and challenges.
- 1605 PABLO HERNÁNDEZ DE COS, AITOR LACUESTA and ENRIQUE MORAL-BENITO: An exploration of real-time revisions of output gap estimates across European countries.
- 1606 PABLO HERNÁNDEZ DE COS, SAMUEL HURTADO, FRANCISCO MARTÍ and JAVIER J. PÉREZ: Public finances and inflation: the case of Spain.
- 1607 JAVIER J. PÉREZ, MARIE AOURIRI, MARÍA M. CAMPOS, DMITRIJ CELOV, DOMENICO DEPALO, EVANGELIA PAPANETROU, JURGA PESLIAKAITÉ, ROBERTO RAMOS and MARTA RODRÍGUEZ-VIVES: The fiscal and macroeconomic effects of government wages and employment reform.
- 1608 JUAN CARLOS BERGANZA, PEDRO DEL RÍO and FRUCTUOSO BORRALLO: Determinants and implications of low global inflation rates.
- 1701 PABLO HERNÁNDEZ DE COS, JUAN FRANCISCO JIMENO and ROBERTO RAMOS: The Spanish public pension system: current situation, challenges and reform alternatives. (There is a Spanish version of this edition with the same number).
- 1702 EDUARDO BANDRÉS, MARÍA DOLORES GADEA-RIVAS and ANA GÓMEZ-LOSCOS: Regional business cycles across Europe.
- 1703 LUIS J. ÁLVAREZ and ISABEL SÁNCHEZ: A suite of inflation forecasting models.
- 1704 MARIO IZQUIERDO, JUAN FRANCISCO JIMENO, THEODORA KOSMA, ANA LAMO, STEPHEN MILLARD, TAIRI RÕM and ELIANA VIVIANO: Labour market adjustment in Europe during the crisis: microeconomic evidence from the Wage Dynamics Network survey.
- 1705 ÁNGEL LUIS GÓMEZ and M.^a DEL CARMEN SÁNCHEZ: Indicadores para el seguimiento y previsión de la inversión en construcción.
- 1706 DANILO LEIVA-LEON: Monitoring the Spanish Economy through the Lenses of Structural Bayesian VARs.
- 1707 OLYMPIA BOVER, JOSÉ MARÍA CASADO, ESTEBAN GARCÍA-MIRALLES, JOSÉ MARÍA LABEAGA and ROBERTO RAMOS: Microsimulation tools for the evaluation of fiscal policy reforms at the Banco de España.
- 1708 VICENTE SALAS, LUCIO SAN JUAN and JAVIER VALLÉS: The financial and real performance of non-financial corporations in the euro area: 1999-2015.