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International adjustment and rebalancing of global demand: where do we stand?

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Despite the appearance of a moderate adjustment, the partial narrowing of global imbalances since the global financial crisis masks considerable changes in the way in which these imbalances are financed and in underlying imbalances in domestic demand.

Capital flows from and to the private sector, which in large part financed current account imbalances before the crisis, have plummeted. This reversal is similar in scope to that experienced by emerging economies during the crises of the past decade. However, the collapse in private flows did not lead to a sharp adjustment in current accounts, as private flows were replaced by flows from and to the public sector.

The partial decrease in current account imbalances was accompanied by a significant drop in the domestic demand of countries with a current account deficit. So far, the adjustment has been asymmetric, with a smaller increase in demand in surplus economies, which has contributed to subdued global growth. The increase in domestic demand in the surplus economies is itself mostly due to the growth differential between these economies (notably China) and deficit economies, and little to the internal rebalancing of their growth models.

Key words: global imbalances, capital flows, asymmetric adjustment

JEL codes: E21, F32, G15

Current account imbalances have been a prominent feature of the international monetary system as well as a recurring theme in economic policy debate since the 2000s. Despite fears of a sharp correction, the imbalances decreased only slightly during the global financial crisis that started in 2007, without leading to strong turmoil on the foreign exchange markets. A case in point: the narrowing of the US current account deficit was accompanied by a rise in the dollar, instead of the sharp depreciation anticipated by many analysts. Since then, global imbalances have remained large. This relative stability nonetheless masks major changes in how imbalances are financed and the geographical distribution of global demand. This paper details these changes.

Firstly, while current account imbalances have narrowed only moderately since the crisis, the private flows that largely financed these pre-crisis imbalances have plummeted. Within the G20 taken as a whole, the sum of current account deficits dropped by 1.5 percent of GDP between 2006 and 2009. Over this period, flows towards the private sector in G20 deficit countries shrank by 4.2 percent of GDP. Flows towards public sectors took over the financing of current account deficits with a 2.7 percent increase in GDP. A similar but stronger development may be observed in changes in the financing of imbalances among euro area countries. These results are consistent with the research on global liquidity, which carefully distinguishes between private and public liquidity, noting that in times of crisis, the latter replaces the former (Committee on the Global Financial System – CGFS, 2011). “Sudden stops” in private flows also contradict the “Lawson doctrine” articulated by the UK’s former Chancellor of the Exchequer, which states that current account deficits that reflect private savings and investment decisions are generally sustainable.

Secondly, the narrowing of current account imbalances was accompanied by a reduction in underlying imbalances in domestic demand. Domestic demand in deficit economies, which had surged with the widening of global imbalances, shrank significantly. So far, this adjustment has been asymmetric, as demand from surplus countries has only partially filled the gap. This has dampened global demand and is a factor in the current context of sluggish growth. Between 2006 and 2012, the domestic demand of G20 countries running a current account deficit decreased by 11 percentage points in share of G20 potential output,¹ while that of countries with a current account surplus increased by only 7 percentage points. The difference – 4 percent of potential output – reflects weak demand across G20 economies and corresponds largely to a deterioration in the G20 output gap. The increase in the share of the demand of surplus economies is itself partly an automatic result of these economies’ greater share in G20 GDP – mainly as a result of China’s strong growth.

1 Using potential GDP estimated in the IMF’s World Economic Outlook.

If this composition effect is disregarded, the increase in surplus economies' domestic demand represents less than one G20 GDP point.

Global imbalances have been widely studied in the literature; we do not detail all the discussions here. Chinn, Eichengreen and Ito (2011), Bussière *et al.* (2010), Obstfeld and Rogoff (2009), Obstfeld (2012) have all presented reviews of the literature. Recently, there has been substantial research on the distinction between public and private flows. A first group of research shows that the distinction between public and private flows is essential to understanding the widening of global imbalances and the associated apparent paradoxes. Pre-crisis, capital flowed from economies with high growth but scarce capital towards economies with low growth and abundant capital, contrary to the prediction of conventional theory (Lucas *Paradox*, 1992, Gourinchas and Jeanne's *Allocation puzzle*, 2013). Alfaro *et al.* (2011) showed that this movement was driven by public capital flows and that private capital, on the other hand, flowed towards developing economies with high productivity growth. A second group of research shows that the distinction is also important when analysing the adjustment of capital flows since the onset of the crisis (Bluedorn *et al.*, 2013), with most of this research being focused on the euro area (Auer, 2013; Merler and Pisani-Ferry, 2012). This paper takes a more general look at trends in the G20 economies. Asymmetric adjustment is a persistent topic in international economics, and was one of the issues at stake in the Bretton-Woods negotiations when the international monetary system was rebuilt after World War II (Bordo, 1993). The onset of the global financial crisis has seen the issue once again attract attention as part of the debate on the reform of the international monetary system (Joshi and Skidelsky, 2010).

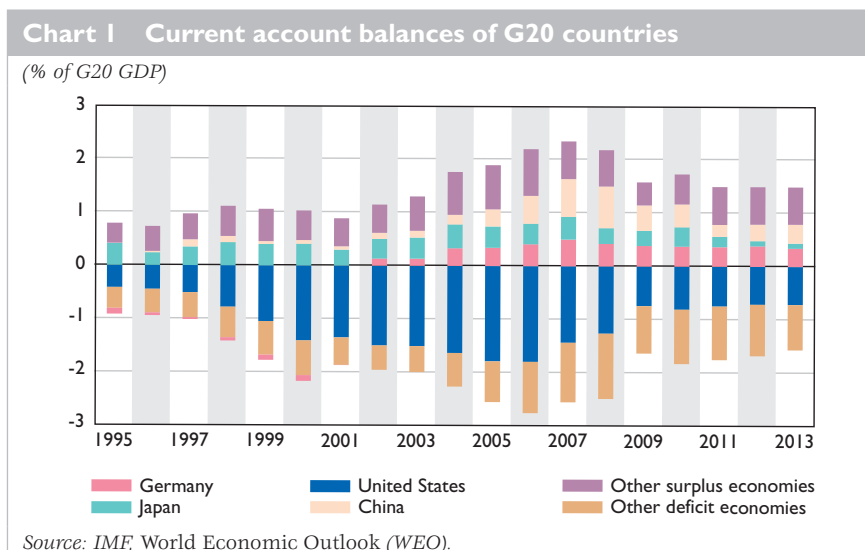
I | International adjustment: plummeting private flows

I | I | A marked widening in current account imbalances before the crisis

The marked widening in current account imbalances was a key feature of the global economy pre-crisis. The United States accounted for between two-thirds and three-quarters of the total deficit of G20 countries. China, Japan and Germany accounted for between half and three-quarters of the total surplus. Oil-exporting countries also accounted for a substantial share of this surplus. These imbalances decreased during the 2009 recession, as did global output and trade, and have since stabilised. The absolute sum of current account imbalances in the G20 countries peaked in 2006 and 2007 at 5 percent of G20 GDP, and has remained near 3 percent of G20 GDP since 2009.

I | 2 Fears of a sharp adjustment...

The unprecedented size of current account imbalances prior to crisis led analysts to fear a sharp adjustment (see for example Roubini and Setser, 2004, 2005). In this scenario, capital flows from surplus economies would have abruptly stopped financing countries in deficit. This sudden drying up of capital would precipitate significant exchange rate swings (Obstfeld and Rogoff, 2007; Blanchard, Giavazzi and Sa, 2005)² and a risk of market instability. The risk however depended on the type of financing considered. The flows, which partly financed the increase in private sector leverage in deficit economies, were particularly risky when they fuelled growth in asset prices and increased the financial fragility of the countries to which they flowed. The emerging market crises at the end of the 1990s showed how such episodes could result in the precipitous drying up of inflows, a large depreciation in the exchange rate, an asset price bust, banking crises and deep recession.³ A significant share of the surpluses however came from the accumulation of foreign currency reserves by the major emerging economy central banks, especially in Asia, which was perhaps driven by a different logic. For Dooley, Folkerts-Landau and Garber (2004) for example, the accumulation of reserves was a consequence of an export-driven development strategy and could continue for a long time. Bacchetta, Benhima and Kalantzis (2013) discuss for example when reserve accumulation is optimal.



² Empirically, external imbalances have high predictive power (see e.g. Della Corte, Sarno and Sestieri, 2012).

³ See for example research on currency crises by Kaminsky and Reinhart (1999), Bussière and Mulder (1999), Berg and Pattillo (1999), etc.

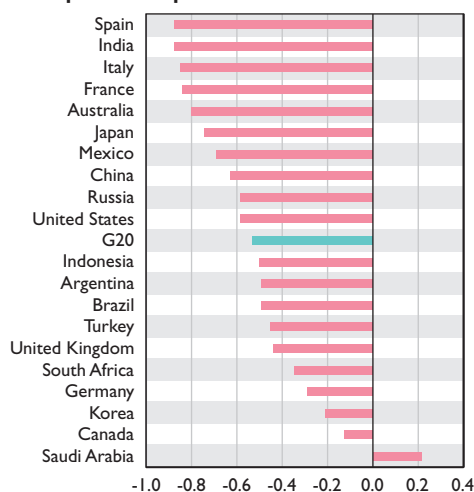
I | 3 ... which did not occur, due to the financing circuit

At first glance, the sharp adjustment that some analysts feared does not appear to have occurred. The US dollar did not depreciate massively, but instead rose at the peak of the crisis. However, looking at the composition of capital flows leads to a different picture: while the reversal in capital flows did indeed occur, it affected only flows from or to the private sector, but not aggregate flows.

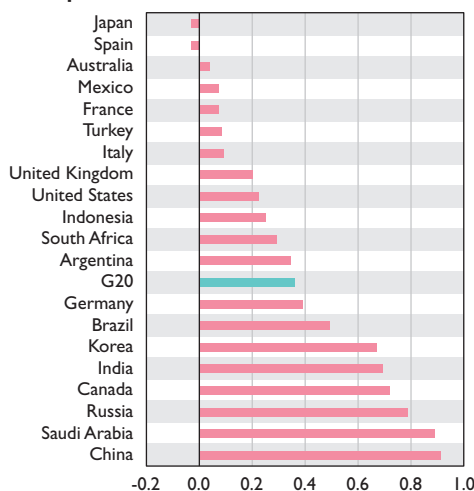
Charts 2 Net private and public flows

(% of G20 GDP)

a) Correlation between public and private flows



b) Correlation between public and total flows



Sources: IMF, balance of payments, own calculations.

In this section, we break down the financial account, counterpart of the current account, into net “public” and “private” capital flows.⁴ To do so, we use IMF balance of payments data. “Public” flows are defined as all cross-border financial transactions that involve assets and liabilities of the monetary authorities and government of the economy under consideration. For example, on the liabilities side, the purchase of government debt securities by non-residents is classified as a public flow, irrespective of whether the non-residents are from the private or public sectors. On the assets side, the accumulation of reserves by the central bank, or the granting by the government of an assistance loan to another country are also defined as public flows. Net private flows are defined as the difference between the financial account and net public flows.⁵

Public and private flows behave differently. They are usually negatively correlated, with an average correlation of negative 0.5 for the G20 as a whole (see Chart 2a).⁶ In most emerging economies, net public flows are strongly positively correlated with total flows, while the correlation is weak for most advanced economies (see Chart 2b).

Since the onset of the global financial crisis, there has been a reversal in net private capital flows, partly offset by opposing net public capital flows.

|3| The reversal of private capital flows...

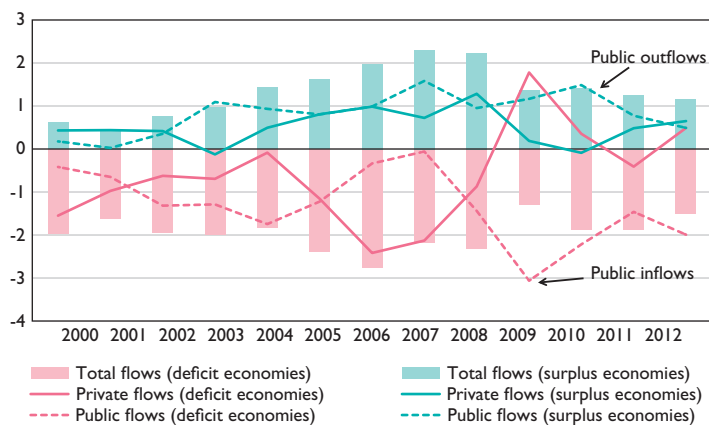
Chart 3 depicts trends in total and private net capital flows for the G20 countries, distinguishing between countries running a current account surplus and those running a deficit. To facilitate the comparison with Chart 1, which shows current account balances, net capital outflows, which correspond to current account surpluses, are depicted by a positive balance on Chart 3 (see Box).

Pre-crisis flows towards private-sector instruments financed a significant share of current account deficits. In 2006, net private flows to deficit economies accounted for 2.4 percent of G20 GDP, compared with 0.3 percent for net public flows. In 2009, at the height of the reversal, deficit economies experienced net outflows of private capital (1.8 percent of GDP), offset by net inflows towards public instruments (3.1 percent of GDP). In surplus economies, net public flows always played a more important role due to the accumulation of foreign currency reserves in emerging Asia and in oil-exporting countries. Public flows nonetheless increased even further during the crisis. In 2010 for example, surplus economies' private net capital flows were zero and the net financial account consisted entirely of public flows.

⁴ There may be differences between the financial account and current account balances. Firstly, there is also a capital account, which we do not discuss here. Secondly, the data come from different sources, which are not necessarily mutually compatible. The balance of payments statistics include an “errors and omissions” item, which absorbs the difference between measured current and financial account transactions.

⁵ In this definition, a transaction between two private sector agents may be classified as a “public” flow if it involves a government security. This is the case for example of the sale of a US Treasury bill by a private American bank to a non-resident.

⁶ We include Spain in the G20.

Chart 3 Total net and private capital flows in G20 countries*(share as a % of GDP)*

NB: A net positive flow corresponds to a net capital outflow or a current account surplus. We include Spain in the G20.

Sources: IMF balance of payments, own calculations.

1|3|2 ... was partially offset by public capital flows

The findings above suggest that the adjustment of current account deficits could have been much sharper without public sector outflows and inflows. Strictly speaking, this is not necessarily the case: it is indeed possible for increased financing to the public sector to crowd out flows to the private sector. However, a few examples of individual countries, two with a current account deficit and two with a surplus, suggest that the resilience of public flows made it possible to avoid a sudden reversal of the current account balance (see Charts 4).

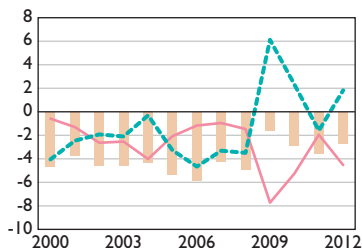
In the United States, inflows to public instruments and outflows from private instruments were probably a result of increased risk aversion and the “flight to safety”. In 2009 and 2010, non-residents exchanged their risky private assets for safe government assets. Public inflows over this period consisted mainly in purchases of US government debt securities, considered by the market to be the premier non-risk asset. Conversely, private financial instruments posted heavy outflows. The reversal of private financing flows between 2006 and 2009 amounted to 11 percent of GDP.

In Spain, net public flows, which accounted for most of the inflows in the first phase of the crisis in 2009 and 2010, were due mostly to the Government’s ability to continue to borrow on the international markets, even as credit to the private sector plunged. In the second phase, in 2011 and 2012, i.e. during the euro area crisis, the government also stopped borrowing on the international markets and the financial account quickly returned to a balanced position. This balance nonetheless masked massive private capital

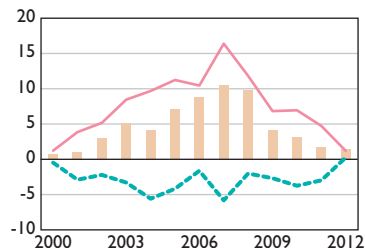
Charts 4 Total net capital flows in selected G20 countries

(share as a % of GDP)

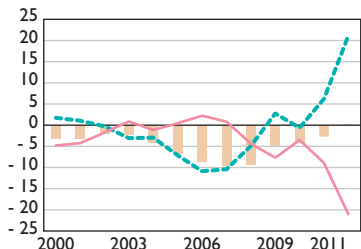
United States



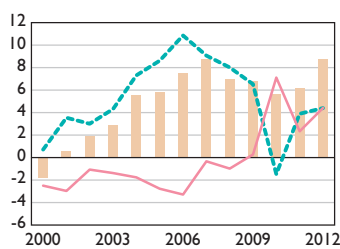
China



Spain



Germany



NB: A net positive flow corresponds to a net capital outflow or a current account surplus.

Sources: IMF balance of payments, own calculations.

outflows amounting to 21 percent of GDP in 2012. This was due to a reduction in Spanish banks' cross-border liabilities, financed by liquidity injected by the Eurosystem via Target2.⁷ Overall, the reversal of private flows between 2006 and 2012 peaked at a substantial 32 percent of GDP.

The German private sector has sharply cut back its cross-border lending post-crisis. Waning private flows have been offset by increased public capital flows to the rest of the world, which has enabled the financial account to remain stable. The public flows are made up mainly of Bundesbank claims on the Eurosystem via Target2, and to a lesser extent, an increase in government external assets as a result of loans within the framework of European Union aid programmes.

Unlike in the three previous examples, the structure of capital flows did not change in China, with outflows of public capital (accumulation of foreign currency reserves by the Central bank) and inflows of private capital (direct investment). Both of these flows decreased from 2007 until they achieved a position close to balance in 2012.

⁷ Target2 settles payment transactions between euro area central banks. Since the financial crisis, these transactions have partly replaced the interbank market: several periphery commercial banks in fact no longer have access to private financing and turn to their national central bank for financing. Symmetrically, core banks' excess liquidity is deposited with their national central banks, which hold Target2 claims. See for example, Higgins and Klitgaard (2011) or Bonhorst and Mody (2012).

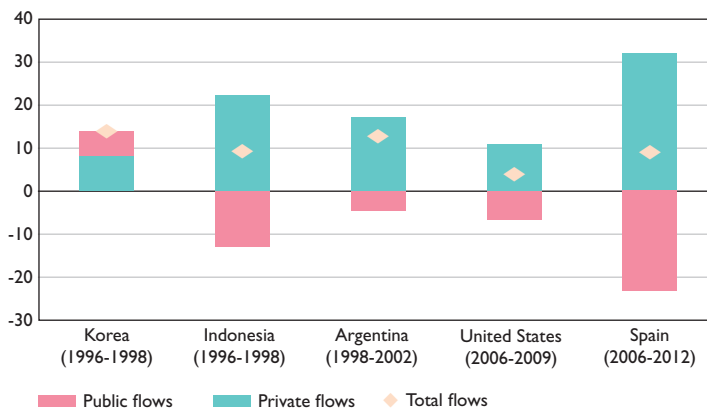
I|3|3 The buffer role of public flows

The resilience of public flows was instrumental in protecting the global economy from the consequences of a sudden and rapid adjustment of global imbalances. Capital outflows from public sectors of surplus economies (e.g. the accumulation of reserves in emerging markets) and capital inflows towards government securities of deficit economies (e.g. US Treasury bills) cushioned the shock provoked by the collapse of private flows. In the euro area, the provision of liquidity by the Eurosystem and the functioning of the payments system via Target2 offset dwindling cross-border inter-bank flows. Without the resilience of public capital flows, the adjustment would have been akin to the one that occurred during the emerging economy crises. Chart 5 compares the reversal in capital flows during the current crisis to the turnaround that occurred during the emerging market crises of the previous decade. While the overall adjustment of the financial account in the United States and Spain was less than that of the emerging economy crises, the adjustment of private flows was on the same scale.

For the United States, the continued accumulation of reserves in emerging Asia produced rather mixed “stabilising” effects. While the resilience of these flows towards public financial instruments helped to prevent the disorderly depreciation of the dollar, it also slowed down the real structural depreciation of the dollar, which should have accompanied the return to balance of the US economy and could have enabled external demand to take over from domestic demand. In the United States, which is an economy with a floating exchange rate that holds debts in its own currency,

Chart 5 Reversal in capital flows during crises

(in percent of GDP)



NB: A positive figure indicates a net capital outflow and an increase in the current account balance.
Sources: IMF balance of payments, own calculations.

nominal depreciation does not have the temporary negative impact that it is likely to have in emerging economies, where the depreciation of the national currency automatically increases the share of foreign-currency denominated debt.

Irrespective of the short-term trends, medium-term adjustment of global imbalances should come from the underlying rebalancing between the income and the spending decisions of economic agents, notably in the private sector (see Box). The section that follows takes a closer look at the demand rebalancing process.

Box

Current account, capital flows and demand imbalances

The current account is the sum of the balance of trade, which includes all cross-border transactions in goods and services, and the income balance, i.e. net income from the rest of the world (for example, returns on foreign direct investment, interest paid on bonds held abroad, etc.). An economy that has a trade surplus and a positive net income has a current account surplus.

As current transactions must be financed, the current account has its counterpart in the financial account, which is the balance of cross-border financial transactions. By definition, the sum of the two balances is zero:

$$\text{current account} + \text{financial account} = 0 \quad (1)$$

An economy with a current account deficit will necessarily have a financial account surplus: net positive capital inflows finance the current account deficit. Conversely, an economy with a current account surplus is accumulating assets abroad: it will have net capital outflows and a financial account deficit (see Charts 3 and 4).

$$\text{current account} = - \text{financial account} = \text{net capital outflows} \quad (2)$$

The current account may also be seen as the aggregate spending decisions of all economic agents in the country. It is equal to the difference between income and domestic demand:

$$\text{current account} = \text{national income} - \text{domestic demand} \quad (3)$$

Domestic demand is therefore weak in surplus economies and strong in deficit economies. At the global level, income is equal to both the gross domestic product and the sum of domestic demand:

$$\begin{aligned} \text{global GDP} &= \text{domestic demand of deficit economies} \\ &+ \text{domestic demand of surplus economies} \end{aligned} \quad (4)$$

.../...

Lastly, we define potential GDP, which corresponds to the production possibility of the economy, i.e. The amount that the economy can produce when all resources are fully employed. The output gap measures the relative difference between actual GDP and potential GDP. We therefore have:

$$\begin{aligned} & \text{domestic demand of deficit economies/global potential GDP} \\ & + \text{domestic demand of surplus economies/global potential GDP} \\ & = I + \text{output gap} \end{aligned} \quad (5)$$

Assuming constant national incomes, a reduction in current account imbalances implies a drop in the domestic demand of deficit economies and a surge in the demand of surplus economies [equation (3)]. Equation (5) illustrates the risk of an “asymmetric” adjustment: if the increase in domestic demand in surplus economies is lower than the decline in the domestic demand of deficit economies, the global output gap will widen (see Charts 6 below, which depicts this situation for the G20).

2| Rebalancing global demand: asymmetry constrains economic growth

2|1 The risk of an asymmetric adjustment...

One of the risks associated with global imbalances is that of “asymmetric adjustment”. While domestic demand decreases in deficit economies due to reduced leverage and the borrowing constraints imposed on debtors, no pressure is put on surplus economies to force them to increase their demand. If the decrease in demand in deficit economies is not offset by an equivalent increase in demand in surplus economies, the global economy experiences a demand deficit that leads to a recession and a global negative output gap (see Box). This asymmetric adjustment risk has been widely discussed in international forums. Addressing this risk is for instance one of the objectives of the “Framework for strong, sustainable and balanced growth” adopted by the G20 countries at the Pittsburgh summit in 2009. Deficit economies pledged to “support private savings and undertake fiscal consolidation” and surplus economies to “strengthen domestic sources of growth”.

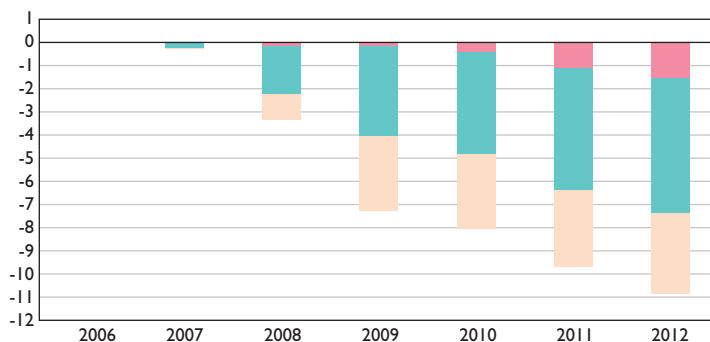
To show the state of progress of rebalancing and its symmetrical or asymmetric nature, Charts 6 depict the change in the three main components of domestic demand – private consumption, public consumption and total investment – since 2006. The components are represented in terms of potential GDP of G20 countries (including Spain), for deficit and surplus countries.⁸

⁸ It is not possible to distinguish between public and private investment for all G20 countries due to the absence of data.

Charts 6 Change in the components of domestic demand in the G20 since 2006

(share as a % of potential GDP)

a) Deficit economies



b) Surplus economies



NB: A positive figure indicates a net capital outflow and an increase in the current account balance.
Sources: IMF balance of payments, own calculations.

Expressing components of demand in shares of potential GDP rather than actual GDP presents two advantages. First, it enables us to disregard the sharp swings in nominal GDP that occurred during the crisis.⁹ Second, as explained in the box above, the sum of changes in the domestic demand of deficit and surplus economies, expressed as a share of potential GDP, is equal to the change in the global output gap. To rebalance current accounts without widening the output gap, these changes must be equal in absolute values and opposite in signs. Charts 6 therefore clearly show the asymmetry of the adjustment.¹⁰ The disadvantage of using a measure of potential GDP is that this measure is highly uncertain. We use the IMF estimates reported in the *World Economic Outlook*.¹¹

⁹ An unchanging level of consumption would therefore automatically appear to be an increase during a recession if it is presented as a share of actual GDP.

¹⁰ In practice, the G20 does not represent the world as a whole and asymmetric adjustment may be offset by an improvement in the current account of the G20 as a whole. In this situation, the G20 would benefit from an increase in demand from the rest of the world.

¹¹ For Saudi Arabia, we use our own calculations based on a Hodrick-Prescott filter. If IMF estimates were to overestimate potential GDP of deficit economies, the chart would overestimate the drop in the share of domestic demand of deficit economies and underestimate the rise in the share of domestic demand of surplus economies.

2|2 ... has materialised

Deficit economies largely rebalanced their domestic demand, while in surplus economies domestic demand increased modestly.

Three lessons may be learned from this exercise.

First, there was indeed a narrowing of the demand imbalances driving global imbalances. Measured as a share of the potential GDP of G20 countries, domestic demand shrank in deficit economies and expanded in surplus economies.

Second, the adjustment was asymmetric. Demand contracted by 11 percent of G20 potential GDP in deficit economies but grew by only 7 percentage points in surplus economies. All else being equal, the output gap thus increased by 4 percentage points. According to IMF data, the output gap of G20 countries as a whole worsened by 3.4 percentage points between 2006 and 2012, and 3.7 percentage points between 2006 and 2013. The difference is due to the fact that G20 countries benefitted from an increase in demand from the rest of the world, by about half a point between 2006 and 2012. The asymmetric adjustment was therefore partly responsible for weak global growth. This asymmetric adjustment was also observed in the euro area.¹² We must however consider the fact that G20 economies were possibly overheating in 2006. Part of the increase in the output gap would therefore be consistent with a return to normal economic conditions. According to IMF estimates, G20 countries had a positive output gap of slightly less than one point in 2006.

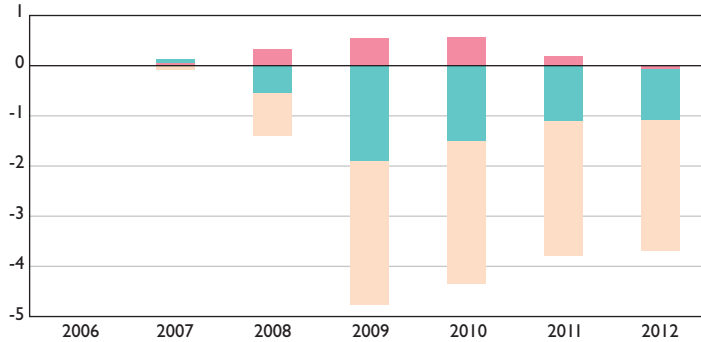
Third, it is interesting to observe that the adjustment is more reflective of a change in the geographical composition of the G20 GDP than an internal rebalancing within each member country. Surplus economies posted a higher growth rate than economies running a deficit, mainly due to China's strong growth. From 2006 to 2013, surplus economies' potential GDP rose from 34% to 42% of potential GDP of G20 countries. Therefore even if surplus economies' domestic demand remained stable as a proportion of their own GDP, this demand would account for a larger share of G20 GDP. Charts 7 show the change in domestic demand components without this effect, i.e. maintaining the geographical composition of potential GDP of G20 countries unchanged at its 2006 level: only the deficit economies significantly rebalanced their domestic demand by close to 4 percentage points, while the increase in domestic demand in surplus economies remained below one point. The sharp drop in investment in deficit economies undoubtedly contributed to the lacklustre international trade over this period, due to the high import intensity of investment (Bussière *et al.*, 2013).

¹² See Berthou and Gaulier (2013).

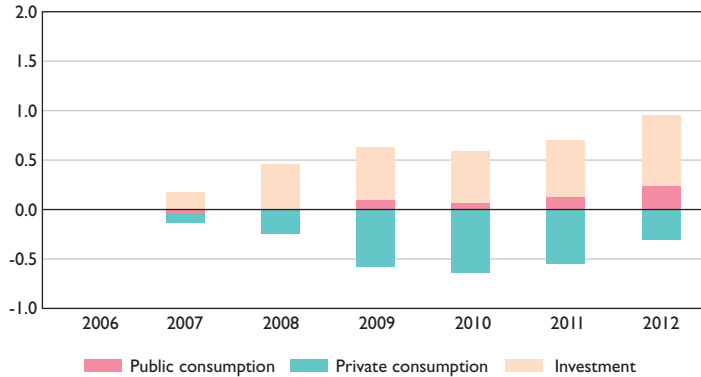
Charts 7 Change in the components of domestic demand in the G20 since 2006, assuming a constant composition of G20 GDP

(share as a % of potential GDP)

a) Deficit countries



b) Surplus countries



Note: We include Spain in the G20.

Sources: IMF WEO, national sources, own calculations.

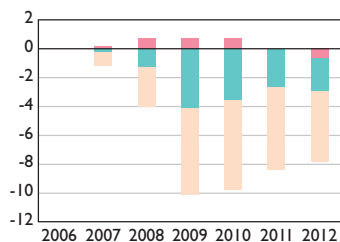
The change in the domestic demand of countries taken individually illustrates the asymmetric adjustment even further. If we consider the United States and Spain, which are two examples of deficit economies (see Charts 8), we note substantial rebalancing in both countries. In 2012, the share of private consumption and investment in US potential GDP was 7 percentage points smaller than in 2006, due mainly to private sector deleveraging. In Spain, this share was 13 percentage points lower than in 2006, due to slackened investment. The share of public consumption as a percentage of potential GDP remained relatively stable in both countries, dampening the negative impact of receding private demand on output.

In surplus economies, the situation was more varied. In China, rebalancing is taking place, driven by rising investment. In Germany, the share of domestic demand in potential GDP was smaller in 2012 than in 2006: the imbalance therefore increased slightly. It is worth noting that in both countries, rebalancing

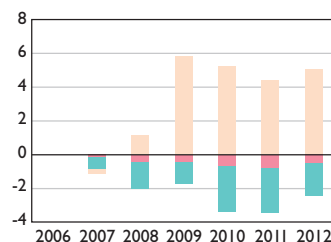
Charts 8 Change in the components of domestic demand since 2006

(share as a % potential GDP)

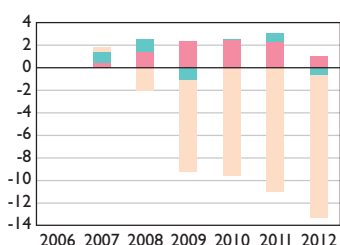
United States



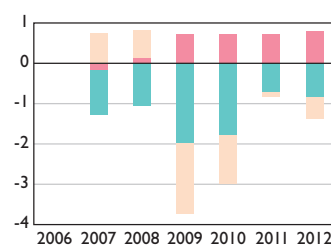
China



Spain



Germany



NB: A net positive flow corresponds to a net capital outflow or a current account surplus.

Sources: IMF balance of payments, own calculations.

is mainly a result of government policy. The upsurge in investment in China is largely driven by a stimulus policy and investment in infrastructure. In Germany, public consumption is the sole component of domestic demand that has increased since 2006, by almost one point of potential GDP. However, the share of private consumption has dropped in both countries since 2006: by one percentage point in Germany and two percentage points in China. Savings behaviour and private spending were therefore not rebalanced.

The adjustment of domestic demand, especially private demand, in surplus economies, is not a given. The motives prompting households in surplus economies to save are real: demographic changes, lack of social safety nets and depletion of natural resources. But regardless of how well-founded it is, the *ex ante* intention to save still requires investment or borrowing decisions to result in *ex post* savings behaviour. Pre-crisis investment and borrowing of deficit economies turned out to be risky and these countries are also increasing their savings. Theoretically, the adjustment should come from a drop in global real interest rates – a drop that is substantial enough to stimulate investment and discourage savings. But with policy rates close to zero in the major advanced economies, such an adjustment appears to be impossible.

The alternative is therefore to tackle the problem directly at its source by reducing the motives for saving in surplus countries. This is the rationale behind current international debate on the structural reforms that could

facilitate rebalancing in forums such as the G20. For example, the introduction of social safety nets in China could help to curtail households' precautionary savings and thus contribute to rebalancing the global economy.

3| Conclusion

The ability of open economies to lend or borrow externally, i.e. run current account surpluses or deficits, offers precious flexibility in the management of macroeconomic growth. For example, it enables an economy to cope with population aging by accumulating assets abroad, to take full advantage of a high potential output growth by borrowing externally, or, for exporters of commodities, to smooth national consumption in the event of temporary price fluctuations. However, the current account imbalances that widened in the 2000s were surprising in their magnitude and the unusual direction of capital flows, with high-growth emerging economies lending massively to advanced economies.

These significant imbalances present three types of risks. Firstly, the accumulation of current account deficits is often the counterpart of a sharp rise in private sector leverage, associated with asset price bubbles and increased financial fragility. This risk materialised: the global financial crisis, which started with the downturn in the US housing market in 2007, mostly affected economies with substantial current account deficits.

The second is that of an abrupt and disorderly reversal of capital flows that could lead to wide fluctuations in asset prices and exchange rates. This second risk materialised only partially. While capital flows from and to the private sector indeed plummeted and even reversed in a movement similar to that observed in crises in emerging economies in the previous decade, public inflows and outflows partially took over. The fall in asset prices was limited to risky private securities and the dollar crisis feared in the 2000s did not occur.

The third risk is that of an asymmetric adjustment of demand between deficit and surplus economies. This risk also materialised and it is likely that the asymmetric adjustment is partly responsible for the slowdown in global growth. Nonetheless, public consumption remained stable in deficit countries, while government policies in surplus countries drove an upsurge in public consumption and investment, which limited the slide in global economic growth.

Until now, public capital flows and government policies have made it possible to avoid the disorderly narrowing of global imbalances in the short term. In the medium term, the challenge facing economic policy is to facilitate the structural rebalancing of private sectors so as to enable growth in domestic demand in surplus economies while consolidating the increase in savings in deficit economies.

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The labour market: institutions and reforms

Summary of the 2nd labour market conference organised by the Aix-Marseille School of Economics and the Banque de France on 16 and 17 December 2013

*Microeconomic and Structural Studies Directorate
Microeconomic Analysis Division*

The 2nd labour market conference, organised by the Aix-Marseille School of Economics (AMSE) and the Banque de France, brought together academics and representatives of international organisations and central banks. The debates focused on the relationship between the housing and labour markets, labour relations and reforms, labour policies and unemployment and wage dynamics. The characteristics of the housing market have an impact on the mobility of workers, the geographical radius of their job search and the place where firms choose to locate their business. Although the impact of labour relations on economic performance is still imperfectly understood, the experience of Germany demonstrates the essential role that collective bargaining plays in creating a flexible labour market: Germany's unemployment rate has remained practically stable, despite the crisis, thanks to the wage and working-hour adjustment mechanisms (such as short-time working schemes) put in place by trade unions. Labour policies such as the "zero charge" plan implemented in France in 2009 and 2010 can be extremely efficient, particularly during periods of recession. Moreover, a number of interesting conclusions were put forward on the issue of wage dynamics, notably regarding male-female discrimination, the impact of globalisation, the setting of minimum wages and the age structure of the population.

Key words: labour market, housing market, labour policy, labour relations, wages

JEL codes: J2, J3, J5, J6

NB: Programme and papers are downloadable at <https://www.banque-france.fr/en/economics-statistics/research/seminars-and-symposiums/amse-banque-de-france-conference-labour-markets-institutions-and-reforms.html>

The 2nd labour market conference, organised by the Aix-Marseille School of Economics (AMSE) and the Banque de France, brought together academics (including five members of the French Economic Analysis Council) and representatives of international organisations and central banks. The keynote speakers were David Blanchflower, professor at Dartmouth College and former member of the Bank of England Monetary Policy Committee, and Pierre Cahuc, professor at the École Polytechnique and member of the *Centre de recherche en économie et statistique* (CREST).

In his introductory speech, Alain Duchâteau, Deputy Director General Economics and International Relations at the Banque de France, pointed out that the relationship between the housing and labour markets has come under scrutiny recently, both in countries experiencing a housing market adjustment, such as the United States, and in those with persistently high house prices, such as France. Attention has focused in particular on the impact of transaction costs and housing tenure on worker mobility, the role of mobility in rebalancing labour markets in a monetary union, the impact of the housing market on job creation via investment and the location of firms and, lastly, social demand for job protection, which is stronger when geographical mobility is restricted. With regard to this last phenomenon, Alain Trannoy, director of AMSE, stressed in his introductory speech that the French case is unique: whereas the government's labour policy is enhancing labour market flexibility, its housing policy is making the housing market stickier, notably by increasing transaction costs. The economic outcome of the mix of these two policies is thus uncertain.

Faced with rising unemployment, governments have adopted active labour policies and accelerated the pace of structural reform. However, there is still intense debate over the efficiency and direction of these measures: What are the associated opportunity costs? What system of unemployment benefits should be adopted? What are the factors influencing wage dynamics?

Labour relations play a major role in the implementation of labour market reforms, as shown by the heterogeneity of social dialogue in Europe and the way it slows down or accelerates structural reforms.

This is particularly relevant in France where successive governments have tried to improve the quality of labour relations by strengthening union representation and introducing a bargaining process that leads to effective decision-making.

The conference helped to improve economic policy diagnosis on these different issues.

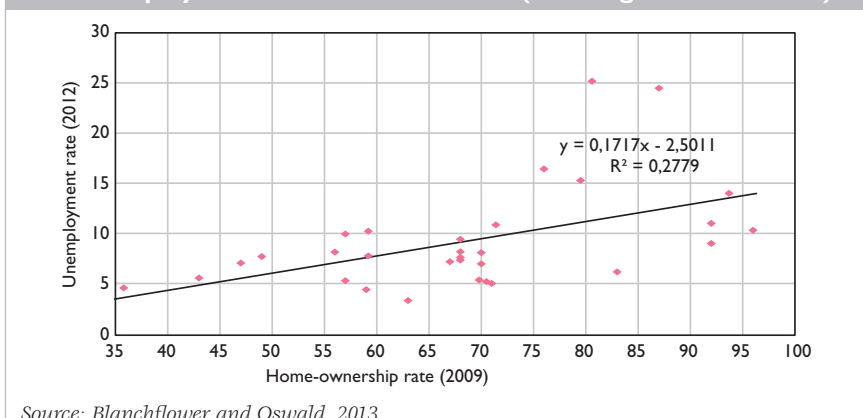
I | The relationship between the labour and housing markets

In the first session of the conference, David Blanchflower gave a presentation on the impact of home ownership (or owner-occupancy) on the natural rate of unemployment. He highlighted the strong complementarity between the labour market and other markets such as the housing market, and claimed that these links have largely been ignored in the existing literature. The intuitive relationship between the home-ownership rate and unemployment – the fluidity of the labour market is reduced when there is a high proportion of (less mobile) homeowners – is supported by the positive correlation observed between these two variables across different economies (see figure 1).

The main finding in Blanchflower's empirical studies of US data is that there exists a strong statistical link between a high level of home ownership in a geographical area and a subsequent high level of joblessness in that area (a lag of five years is often retained in the regressions). The elasticity of this relationship appears significant: a 1-point increase in home ownership leads, five years later, to an increase of more than 1 point in the unemployment rate.

David Blanchflower also finds that high home ownership is associated with lower labour mobility, longer commuting times and lower rates of business formation. Although he offers no conclusions on the mechanisms behind the statistical results he obtains, he does exclude two simple interpretations: first, there is no evidence in the literature that homeowners are more unemployed than renters; second, the mechanism is unlikely to be due to the impact of home acquisition on aggregate demand because

Figure 1 Correlation between home-ownership rate and unemployment rate in 30 countries (annual growth rate in %)



Source: Blanchflower and Oswald, 2013.

of the lag periods between the observations of home ownership and of unemployment. Indeed, there is no obvious reason why the negative aggregate demand distortion should only appear five years after the home acquisition. According to David Blanchflower, the observed correlation is the consequence of negative externalities induced by a high home-ownership rate; the effect on mobility and commuting times suggests that home ownership could lead to rigidities in the labour market and to congestion effects, whereas the impact on business creations could be the consequence of “Not In My Back Yard” (NIMBY) pressures from homeowners. As homeowners face higher costs when they move, they are potentially more reluctant to relocate closer to their workplace or to accept a job offer which requires them to move. This results in an increased commuting time for the homeowner and a more rigid labour market, which generates negative externalities for everyone.

During the subsequent discussion, Alain Trannoy suggested that differentiating by type of asset, notably house vs. flat, could be a way of testing the hypothesis of NIMBY pressures. Indeed, the above-mentioned NIMBY pressures are likely to be less intense in urban areas where owners mainly own flats. Roland Rathelot (CREST) pointed out that housing tenure in Europe differs markedly from that in the United States, in that many countries in the region have a high proportion of social housing, and this characteristic should be taken into account when studying these mechanisms in relation to European data.

The impact of the home-ownership rate on mobility thus appears to be an important mechanism for understanding the correlation established by David Blanchflower. The effect of barriers to mobility on the labour market was extensively discussed in this first session of the conference.

One barrier to mobility that can have a potentially negative impact on the labour market is housing transfer taxes. Christian Hilber (London School of Economics – LSE) has studied their effect by exploiting a discontinuity in the UK tax schedule as a quasi-experimental setting: due to the existence of a GBP 250,000 threshold under UK legislation, above which the stamp duty increases from 1 to 3 percent, it is possible to compare the behaviour of homeowners estimating their house values to be on either side of the threshold in order to isolate the effects of this fiscal policy. He finds that a higher stamp duty has a strong negative impact on the propensity of homeowners to move: a 2 percentage-point increase in the stamp duty reduces the annual rate of mobility by between 2 and 3 percentage points. However, according to Christian Hilber, the effects of stamp duties are only observable for short-distance moves (less than 10 km). He deduces from this finding that stamp duties are more likely to impact the housing market than the labour market.

Philippe Askenazy (CNRS and *École d'économie de Paris* – PSE), who opened discussions on the documents presented in the session, questioned the

interpretation of the results, arguing that short-distance moves could also be motivated by specific needs, such as “being very close to a day nursery”, which are prerequisites for entering the labour market. Philippe Askenazy also pointed out that, given the upward trend in house prices during the experiment, the effect of the threshold on those whose house value is under but close to GBP 250,000 could be questionable because of anticipation effects: knowing that their home is likely to be worth more than the threshold in the near future gives them incentives to bring forward their move. The overall effect of the distortion induced by higher stamp duty could thus be ambiguous.

In his study on the geography of job search in the United States, Roland Rathelot shows that the probability of applying for a job strongly decreases with the distance between job location and home location. Introducing his findings on job search patterns into a matching model, he shows that eliminating the mismatch caused by the geography of job search would reduce the unemployment level in the US by 2%. The magnitude of this effect seems rather low given the elasticity of the matching function on the number of vacancies; but Roland Rathelot points out that we would need a 12% increase in the number of vacancies to obtain a 2% decrease in the unemployment level. He also explains that introducing differentiation in the labour market, by taking into account occupational dimensions, is likely to increase the impact of the geography of job search on mismatch in the labour market. Roland Rathelot argues that his findings call for policies to correct the mismatch, although Philippe Askenazy highlighted that such policies would be difficult to design and to implement.

Etienne Wasmer (Sciences Po and *Laboratoire interdisciplinaire d'évaluation des politiques publiques* – LIEEP) has also studied the distance dimension of job search. He proposes a theoretical framework where there exists a trade-off between wages and commuting distances. The empirical validation of his theoretical framework is based on an administrative social security dataset covering all newly unemployed workers in Austria. The main findings of his studies are that workers do substitute wages and commuting distance: newly unemployed workers seem to prospect locally and then gradually enlarge the radius of search if they are not successful. Surprisingly enough, it appears that the reference point of the initial local search seems more tied to the previous workplace rather than to the place of residence.

Philippe Askenazy proposed an explanation for this observation, noting that information asymmetries are reduced in the area near to the previous job, hence increasing the probability of the job seeker finding a job there. He also argued that it is not easy to infer policy recommendations from these findings given that, even if an increase in commuting distance raises the probability of finding a job, such an increase is economically and environmentally costly.

2| Round table: labour relations and labour market reforms

The round-table discussion on labour relations and reforms, chaired by Gilbert Cette (Banque de France), began with three questions:

- What is the impact of the quality of labour relations on labour market equilibrium and on the ability to reform the labour market?
- Are countries with deteriorated labour relations condemned to high unemployment rates?
- How can we improve the quality of labour relations when necessary?

According to Gerhard Bosch (Duisburg-Essen University), this theme raises both efficiency and equity issues. Good labour relations require four ingredients: high levels of trust or confidence between social partners, institutional stability, bargaining at different levels, and powerful social partners and unions. According to him, more importantly than the Hartz reforms, a silent revolution took place in Germany at the beginning of the 2000s through social dialogue and bargaining. After observing that German industry was suffering from a loss of competitiveness, social partners significantly increased working time flexibility and reformed the vocational training system. This laid the groundwork for a genuine employment miracle in Germany during the crisis: the unemployment rate has remained almost stable despite a significant output adjustment; dismissals have been limited thanks to working time flexibility and short-time working schemes set up by social partners; and the recruitment of new apprentices has been maintained, facilitating the ongoing integration of young people into the labour market. One of the reasons labour relations work so well in Germany is the existence of works councils, whose members are generally professionals who are properly trained to assess the way firms are managed.

Pierre Cahuc stressed that, apart from a positive correlation, there are few certainties about the relationship between the performance of the labour market and labour relations. The linkage between the unionisation rate and productivity is also difficult to establish. From a theoretical point of view, the seminal works of Freeman and Medoff have underlined a causality chain which could be at work here, but empirical works have been at pains to identify the direction of causality at play. The only certainty is that of a negative impact of unions on profitability; the impact on productivity, however, remains uncertain.

Several recommendations could nonetheless be put in place to improve the transparency of labour relations, for example: avoiding the extension

of collective agreements to non-union workers; and checking the absence of negative externalities from collective agreements on other activities which are not directly involved.

Bruno Decreuse (AMSE) reminded us that, although labour relations and reforms are at the heart of a complex set of interactions, the quality of labour relations is not, in theory, decisive if markets are perfectly competitive. Indeed, interdependencies between market institutions and labour relations are crucial: confidence and institutions interact closely, with confidence allowing markets to work better. Etienne Wasmer underlined that employment protection can lead to human resources practices which increase work pressures. To delay retirement without money incentives, we need to improve the non-money benefits derived from work; employees who are satisfied with labour relations will stay on longer at work.

Stefano Scarpetta (Organisation for Economic Co-operation and Development – OECD) in turn highlighted that few conclusive pieces of evidence exist on the role played by the quality of labour relations. Moreover, although labour relations are important because of their impact on agents' mutual trust, it is difficult to identify with certainty specific policies that could improve them. We have few indicators for the quality of labour relations: union density and coverage, some information on coordination. However, the recent crisis has shown just how important labour relations are in enabling the labour market to adjust. In Germany, for example, high quality labour relations meant wages and working hours could be adjusted, helping to cushion the shock to production. Whereas in the past, adjustment was primarily made through early retirement, in the recent crisis, the collective bargaining process focused primarily on working hours. But can the German model be duplicated? For the next wave of labour market reforms, it would appear vital to promote labour negotiations in order to foster trust between labour market stakeholders. In that way, reforms could reduce uncertainty.

During the debate, David Blanchflower stated that, in his view, the quality of labour relations has no predictive power whatsoever, and that the most important issue is in fact the competitive functioning of markets. The existence of rents due to insufficient competition is the main source of conflict undermining labour relations. However, according to Gerhard Bosch, the quality of labour relations is not just an issue of efficiency, but also one of equity, as union density is correlated with fairer income distribution. Besides, as the example of Germany shows, unions can help to encourage the integration of young people into the labour market, contrary to what the insider/outsider theory predicts.¹

1 According to the insider/outsider theory, developed by Assar Lindbeck and Dennis Snower, insiders, i.e. employees well integrated into the firm, along with their union representatives, defend their own interests at the expense of outsiders (new entrants in the labour markets, unemployed or short-term contract workers) because of recruitment and firm-specific training costs which reinforce insiders' bargaining power.

3| Employment and unemployment policy

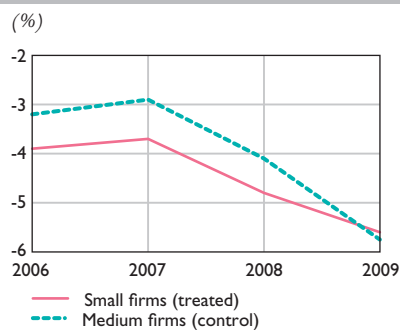
Pierre Cahuc gave the second keynote speech of the conference. The objective of his study, written in conjunction with Stéphane Carcillo (OECD and Sciences Po) and Thomas Le Barbanchon (CREST), is to examine the effects of the “zero charge” programme on the job flows of participating firms. This programme, which was implemented between December 2008 and December 2009 and targeted at firms with fewer than 10 employees, consisted in providing subsidies for the recruitment of workers paid less than 1.6 times the minimum wage, with the amount of the subsidy decreasing gradually up to this threshold. The subsidies were to be stopped one year after hiring. The authors use this “natural” experiment to identify the effect of a temporary decrease in the cost of labour on the level of employment, the number of hours worked, hiring, contract terminations and the employee turnover rate.

The study is based on administrative files compiled by the social security system (DADS), as well as the forms filled in by firms requesting this subsidy, which were collected by the national jobcentre service (*Pôle Emploi*).

The authors use the administrative threshold of ten full-time-equivalent employees, below which firms could benefit from the subsidy, to properly identify the effects of the programme. By looking at firms just above this threshold and those just below, they were able to compare the evolution of relevant variables in firms of a similar size. This method, known as “difference-in-difference” (between firms with more than and fewer than ten employees, and before and after the implementation of the programme), brings into evidence the effects of the programme.

According to the authors, receiving the subsidy had a significant and rapid effect on employment, with the elasticity of labour demand to cost estimated at -2 (a decrease in the cost of labour of 1% led to an increase in employment of 2%; see Chart 2). This high level of elasticity can be explained by the fact that the programme principally concerned low-skilled jobs in small firms where wages are mostly downward rigid due to the legal minimum wage, as well as branch-level minimum wages negotiated between unions and firm representatives. Although

Chart 2 Employment increase in small firms (treated group) and in medium-sized firms (control group)



Source: Cahuc, Carcillo, Le Barbanchon, 2013.

there was no conditionality attached to the subsidy in terms of net job creations, the authors did not observe any evidence of a substitution of older workers with newer ones, who might have been hired specifically to obtain the subsidy. Nonetheless, this lack of conditionality did result in substantial windfall effects, estimated at 94% of the total cost of the programme. To understand these effects, the authors use a theoretical model to assess how attaching conditions to the hiring subsidies could affect net job creations. They find that imposing a -4% threshold on the change in employment (i.e. limiting job losses to 4%) would have created 40% more jobs at constant budget.

This presentation attracted a great deal of interest from the audience. In response to David Blanchflower's question about whether the effects of the programme differed according to the firm's activity, Pierre Cahuc explained that the effect was strong in the manufacturing sector, but negligible in the building sector. Sébastien Roux (Banque de France) asked if the authors had observed any compression of the wage distribution; as the programme was targeted in particular at low-paid workers, it should have increased the proportion of low-skilled workers in firms with fewer than ten employees. Pierre Cahuc indicated that the evolution of wages did not appear to have been affected in the firms concerned, but that a closer examination of wage distributions could challenge this conclusion.

Asked whether independent firms had been distinguished from large companies, Pierre Cahuc replied that the vast majority of firms with fewer than ten employees are independent.

Alain Trannoy and Gilbert Cette expressed surprise at the huge elasticity of labour demand to wages, estimated at -2, and questioned whether this value could be applied to more ambitious programmes. In response, Pierre Cahuc reiterated that the jobs targeted by the programme were characterised by strong downward wage rigidity, which contributed to the high elasticity. If subsidy programmes were less targeted, this elasticity would probably be lower. Finally, Gilbert Cette speculated about the effects of the discontinuation of the zero charges programme, and in particular about the inverse, negative effects it could have on employment.

Following this presentation, three theoretical articles with empirical applications were presented, examining different questions related to the labour market.

In a joint paper with Yanos Zylberberg (*Centre de Recerca en Economia Internacional – CREI, Universitat Pompeu Fabra*), Régis Barnichon (CREI, *Universitat Pompeu Fabra*) examines the theoretical consequences for the labour market of the under-employment of individuals, i.e. their employment in jobs for which they are overqualified. The authors develop a formal model where the economy is separated into sub-markets in which all jobs require

the same level of skills, but for which over-skilled workers can apply. In each of these sub-markets, congestion effects lead some workers to apply for less-skilled jobs as they have a competitive advantage over the less-skilled workers normally applying for these positions. However, although this behaviour is rational from the point of view of the individual workers choosing to occupy the less-skilled jobs, it does not take into account the supplementary congestion it creates in the sub-markets they apply to, which in turn pushes the usual workers in this sub-market to apply for even less-skilled jobs. The trickle-down of these effects to several sub-markets causes potentially large losses in efficiency. The authors present empirical evidence suggesting that decreasing the under-employment rate by 10% could raise GDP by 5%.

Sébastien Roux, who led discussions on this article, acknowledged its clarity and its theoretical innovations. However, he also pointed out a number of limitations, including the lack of a precise definition of the concept of under-employment used by the authors. In their article, the authors only consider voluntary under-employment, whereas some of these jobs could be regarded as transitional positions. Sébastien Roux also questioned whether some of the features of the model were in fact realistic, in particular the way the wages are set, as these depend directly on the number and skills of the workers applying for each vacancy. Finally, he suggested that the authors could propose some measures, consistent with the mechanisms in their model, which could effectively reduce under-employment and thus enhance the efficiency of the labour market. During the discussion, David Blanchflower stressed that surveys have shown that young workers tend to want to work more, while old workers want to work less, which is also a form of under-employment.

Cecilia Garcia-Penalosa (AMSE) presented a theoretical article, written jointly with Juan Dolado (*Universidad Carlos III*, Centre for Economic Policy Research – CEPR, and the Institute for the Study of Labour – IZA), and Sara de la Rica (*Universidad del País Vasco, Fundación de Estudios de Economía Aplicada* – FEDEA, IZA). This paper aims to explain the gaps in wages and employment between men and women, even when they have identical characteristics in the model. The authors' approach relies on self-fulfilling expectations on the part of employers, who believe women will leave their jobs more often than men. These expectations lead employers to offer less training to women than to men, which reduces their productivity and, in turn, their wages and employability. Within households, the lower productive advantage of women means they are more likely to take charge of domestic production, and hence less likely to stay in their jobs, which serves to confirm employers' expectations. These mechanisms generate multiple equilibria, one corresponding to a full-parity situation, and another where women are discriminated against because of these self-fulfilling expectations. On the basis of this representation, the authors conclude that the parity equilibrium is more likely in economies with higher productivity, that in certain cases it improves overall well-being,

and that gender-neutral subsidies are more effective for getting out of the discriminating equilibrium than subsidies targeted at women or men.

Sébastien Roux, who led the discussions on this article, stressed the interest and wide-reaching relevance of the theoretical mechanisms presented by the authors to explain the sources of the differences observed between men and women in the labour market. He also pointed out some of the limitations of this article, in particular the fact that the mechanisms which lead to gender inequalities are primarily based on the training opportunities offered by the employers. In reality, differences between women and men can also be linked to events which occurred before entry into the labour market, i.e. the creation of cultural stereotypes, or career specialisations linked to initial training, neither of which is taken into account by the authors.

In the third article presented in the session, Nicholas Lawson (AMSE) looked at how a proper account of fiscal externalities can affect the measurement of the optimal unemployment insurance rate, which is the ratio between unemployment benefits and the wage of the job which preceded the period of unemployment. In particular, he shows that the results obtained in the current literature should be substantially revised to take better account of fiscal externalities. This existing literature aims to measure the unemployment insurance rate which maximises overall well-being in the economy. It is derived from the trade-off between unemployed individuals' well-being, which depends on their unemployment benefits, and the well-being of employed workers, whose income is taxed to finance these benefits. However, Nicholas Lawson stresses that income taxes can be used to fund other expenses, and not just unemployment benefits, and that the choice of unemployment insurance rate, which is related to the tax rate, can thus affect these expenses.

While the article is successful in showing the importance of considering these fiscal externalities, Sébastien Roux noted that it is less conclusive about the operational choice of unemployment insurance rate. Overall, it underlines the importance of having a proper measure of certain parameters, in particular the elasticity of future revenues to unemployment, in order to develop an efficient economic policy. Sébastien Roux concluded that these results also need to be examined in a French institutional context, where the unemployment insurance rate is determined through bargaining between unions, company representatives and the French government.

4| Wage dynamics

The last section of the conference was devoted to wage dynamics within the context of global competition, institutional constraints or an ageing working population.

Juan Carluccio (Banque de France), Denis Fougère (CNRS, Banque de France) and Erwan Gautier (*Laboratoire d'économie et de management de Nantes-Atlantique* – LEMNA, Banque de France) looked at how international trade affects domestic wages and wage bargaining at the firm level. Their article finds that both exports and imports have a significant positive effect on the average hourly wage. When distinguishing between job categories, they find that the export premium is similar for blue-collar and white-collar workers, technicians and executives. By contrast, offshoring has heterogeneous effects depending on the type of workers; it has a positive effect on the wages of technicians and executives, but a negative impact on those of blue-collar workers. Firms' exposure to international competition also plays a role in negotiations: an increase in the intensive margin of trade leads to a significantly higher probability that a firm-level wage agreement will be signed. The export wage premium is larger in firms where wage agreements are frequently signed, particularly for low-skilled workers (i.e. blue-collar and white-collar). Similarly, the negative offshoring effects observed for blue- and white-collar workers are not present in firms that often agree on wages. According to the authors, the results are compatible with a theoretical model where the extra surpluses created by foreign demand prompt workers to bargain collectively to extract some of these rents.

Marco Leonardi (University of Milan and IZA) and Michele Pelizzari (University of Geneva) examined the effect of institutions on wages. Their paper looks at the impact of the *scala mobile*, an institutional mechanism in Italy granting all employees wage increases indexed to prices. Under the system, the same nominal lump-sum wage increase was paid to all workers each quarter. The authors assume production complementarities between skilled, median and unskilled workers in the production function and wage setting mechanisms depending on worker categories. Unskilled worker wages are exogenous, fixed at the minimum wage level, while the labour market for median workers is perfectly competitive and the wages of skilled workers are negotiated. Based on these assumptions, the introduction of the *scala mobile* mechanism leads to compression from the bottom to the top of the wage distribution, with potentially significant effects for worker motivation.

In the last article of the session, Patrick Aubert (*Conseil d'orientation des retraites*, CREST), Muriel Roger (Banque de France, PSE – *Institut national de la recherche agronomique*) and Malgorzata Wasmer (CNRS, *Groupe d'analyse et de théorie économique* – GATE, *Office fédéral de la santé publique suisse*) studied the profile of marginal productivity across age groups within the workforce. Since age-productivity profiles can differ according to occupation, the authors break the workforce down by age (young, middle-aged, old) and by skills (low-skilled, high-skilled). Estimating a production function with a nested constant-elasticity-of-

substitution (CES) specification in labour allows imperfect substitution between different categories of workers. Estimations are performed using French datasets for manufacturing, services and trade sectors. Throughout the sectors, wage rates vary considerably less than productivity and wage profiles are steeper for high skilled workers. The relative productivity/wage ratio is found to be sector-specific.

Bruno Decreuse (AMSE) led the discussions on the three articles. He underlined that some of the variables (capital intensity, share of skilled workers) in the article presented by Erwan Gautier could be considered as endogenous, as with trade. Moreover, he stressed that, in the current version, the theoretical model does not take into account the diversity of workers or of imports and exports. This last point was reinforced by a question from the floor noting that it would be interesting to distinguish between imports and exports according to the type and quality of goods. Regarding Michele Pellizzari's presentation, Bruno Decreuse questioned the identification of the workers' substitution/complementarity in the empirical section and suggested some ideas for improving this point. With regard to the final article, he questioned the theoretical framework chosen by the authors to interpret the results. The results obtained on wage increases could also be linked to the workers' job search behaviour: in a competitive labour market, workers in employment can increase their wages by actively looking for other jobs, and thus move up the pay scale by changing companies. This explanation differs from the one chosen by the authors who assume that wage differences between age brackets are determined by specific rules that are internal to the company. Moreover, their estimations are also made on cross sectional data, which raises the question of whether the results could be explained by cohort phenomena, where the baby-boomers have captured a significant share of the collective pie. This point was reinforced by a comment from the floor which highlighted the high weight of seniors in firms and their significant bargaining power when it comes to wages.

International workshop on algorithmic and high-frequency trading: a brief summary

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This short article provides an overview of the main points of the International workshop on algorithmic and high-frequency trading organised by Banque de France on 8 November 2013 at its headquarters in Paris. Seven invited speakers presented their latest research on this topic. Bruno Biais (Toulouse School of Economics) gave the keynote speech. The workshop concluded with a policy panel session chaired by Thierry Foucault (HEC) where the challenges for regulators resulting from this new technology were discussed. Besides their academic interest, many of the issues examined proved to be relevant for all those responsible for providing insights (including academics, regulators and practitioners) into this new way of trading.

Key words: high-frequency trading, algorithmic trading,
market quality, market efficiency, regulation of financial markets

JEL Codes: G12, G14, G15, G18

On 8 November 2013, the Banque de France hosted the International workshop on algorithmic and high-frequency trading. The aim of this workshop was to bring together researchers, regulators and practitioners who are expert in this innovative field. This one-day workshop provided a forum to: i) discuss new empirical and theoretical research that deals with the recent technological advances in financial markets, with a particular focus on high-frequency and algorithmic trading; ii) highlight some of the associated challenges for regulators; and iii) assess how regulatory changes may lead in turn to some financial innovations in the market structure.

The workshop programme included a wide variety of presentations covering theoretical and applied research in algorithmic and high-frequency trading. The workshop brought together seven speakers: Rama Cont (Imperial College), Adam D. Clark-Joseph (Illinois State University), Sophie Moinas (Toulouse School of Economics), Alvaro Cartea (Université catholique de Louvain – UCL), Jérôme Dugast (Banque de France), Jean-Édouard Colliard (ECB), and Lars Norden (Stockholm University). Bruno Biais (Toulouse School of Economics) gave the opening speech and the workshop was brought to a close with a roundtable discussion on the challenges that these new technologies pose to regulators. The roundtable was chaired by Thierry Foucault (HEC Paris), with the participation of Laurent Clerc (Banque de France), Charles Albert Lehalle (Capital Fund Management) and Olivier Vigna (Autorité des marchés financiers – AMF). This short article briefly reiterates the main points of the talks of the various speakers.

Summary of invited lectures

Bruno Biais outlined the recent changes in the microstructure of financial markets stemming from algorithmic and high-frequency trading. Algorithmic and high-frequency traders have two main advantages over other market participants: an informational advantage (fast access and quick analysis of market information); and a trading submission speed advantage (the low-latency transmission of orders and the ability to promptly change previous trading decisions). Therefore, investors using this financial innovation are in a relatively favourable position compared with other market participants. Algorithmic and high-frequency trading can also have some indirect benefits that improve market quality since it facilitates arbitrage across markets and helps to link fragmented markets. Lastly, Bruno Biais discussed the pros and cons of some regulations concerning these new trading tools, such as high message traffic fees, trading platforms only open to slow traders, capital requirements for fast traders, and stress tests in all firms specialising in this type of activity.

The workshop was then divided into three sessions.

Information processing with high-frequency trading

The first session was chaired by Laurence Lescourret (ESSEC Business School), in which three researchers presented their latest research on information processing with high-frequency trading: Rama Cont (Imperial College), Adam D. Clark-Joseph (University of Illinois) and Sophie Moinas (Toulouse School of Economics). Rama Cont presented an empirical study of the behaviour of fast traders, and how they can affect market quality. Adam D. Clark-Joseph examined empirically the mechanisms that enable high-frequency traders to profitably anticipate price movements. He gave empirical evidence showing that fast agents consistently lose money on numerous small orders, and then earn high profits on larger orders. He also modelled the way in which traders can use their own small, “exploratory” orders to gather valuable, private information. At the end of this first session, Sophie Moinas presented an empirical paper using French data. She showed that slow traders are more exposed to adverse selection than fast traders; thus the former prefer to trade more through market orders than the latter.

Trading speed and market quality

During the second session chaired by Alejandro Bernales (Banque de France), two researchers, Alvaro Cartea (UCL) and Jérôme Dugast (Banque de France), analysed issues regarding trading speed and market quality. Alvaro Cartea presented an empirical paper in which he showed that algorithmic and high-frequency trading technologies may negatively affect market liquidity. Following this, Jérôme Dugast presented a theoretical paper to explain the “existence” of mini flash crashes when there are fast traders in the market. He showed that when information processing is gradual and new information is imprecise, a lower cost for fast trading technologies improves efficiency but also generates mini flash crashes.

High-frequency trading and challenges for regulators

In the third session chaired by Serge Darolles (Université Paris Dauphine), two researchers, Jean-Édouard Colliard (ECB) and Lars Norden (Stockholm University), presented studies on high-frequency trading and challenges for regulators. Jean-Édouard Colliard presented evidence on the causal impact of financial transaction taxes on market quality

in a modern market structure by focusing on the introduction of this levy in France in August 2012. He observed a relatively low impact of this reform on exchange-based trading due to exemptions for liquidity provision, while off-exchange trading declined by 40%, and the largest OTC trades virtually disappeared after the reform. He suggested that market segmentation poses a considerable challenge for the implementation of this type of regulation. Lastly, Lars Norden explained his analysis on how different network connectivity speeds influence market participant dynamics. He showed evidence that colocated traders have an informational advantage over non-colocated participants. Thus, non-colocated traders incur higher adverse selection costs. Overall, however, the introduction of speed differentiation improves both bid-ask spreads and market depth. Lars Norden's results suggested that the liquidity improvements stem from the fastest traders' increased market share and their enhanced inventory management abilities.

Lastly, the workshop concluded with a policy panel entitled: "The rise of algorithmic trading: what challenges for regulators". This policy panel session was chaired by Thierry Foucault (HEC Paris) with the participation of Laurent Clerc (Banque de France), Charles Albert Lehalle (Capital Fund Management) and Olivier Vigna (AMF). The dialogue in this panel was based on the analysis provided by the different speakers. Charles Albert Lehalle highlighted the risks that high-frequency trading could generate in terms of market volatility. From his point of view, these risks could be contained if automated trading systems were required to comply with a number of established standards, as is the case for other more traditional industries. Laurent Clerc, for his part, discussed the challenges that high-frequency trading poses for regulators. In particular, he focused on the systemic risks that these activities could give rise to and on how they must be addressed through macroprudential regulation. Lastly Olivier Vigna underscored the difficulties that automated trading posed to market regulators, notably in terms of combating market manipulation. Thus, this last panel session helped to reach one of the most important objectives of this workshop: to promote discussions among panellists, speakers and the audience, and hence to help to improve the understanding of the recent challenges in the financial markets.

Quarterly Selection of Articles

Winter 2010-2011

- The position of firms in 2009: a decline in business and a reluctance to invest during the crisis
- Payment periods in 2009 – One year on from the Economic Modernisation Act
- French outward and inward foreign direct investment in 2009
- The future of monetary policy – Summary of the conference held in Rome on 30 September and 1 October 2010
- New challenges for public debt in advanced economies – Summary of the conference held in Strasbourg on 16-17 September 2010

Spring 2011

- The impact of the earthquake of March 11th on the Japanese economy and the rest of the world
- Monetary and credit developments in France: 2010, the year of the recovery
- Inventories in the crisis
- Structural reforms, crisis exit strategies and growth – OCDE-Banque de France Workshop, 9 and 10 December 2010
- Structural analysis in times of crisis – Banque de France symposium, 29 and 30 November 2010
- The Banque de France in European and international organisations

Summer 2011

- Summary of the international symposium organised by the Banque de France “What is the appropriate regulatory response to global imbalances?”
- The relationship between capital flows and financial development: a review of the literature
- Households’ savings and portfolio choices: micro and macroeconomic approaches
- National financial accounts in 2010: recovery in lending and ongoing rise in debt ratio
- Household savings behaviour in 2010

Autumn 2011

- SMEs see a pick-up in business in 2010, but delay investment
- Companies after the crisis – Banque de France seminar, 28 June 2011
- Fiscal and monetary policy challenges in the short and long run – Summary of the Banque de France-Bundesbank conference held on 19 and 20 May 2011 in Hamburg
- After the collapse, the reshaping of international trade – Summary of the Banque de France/PSE/CEPII conference of 25 and 26 May 2011
- Insurance companies’ investments at the end of 2010

Winter 2011-2012

- The cost of business credit by firm category
- Companies in France in 2010: a mixed picture
- Payment periods in 2010: the efforts made since the implementation of the LME have lost momentum
- France's national economic wealth showed a marked rebound in 2010 due to higher land prices
- French overseas territories and the euro
- Summary of the international workshop on microfinance organised by the Banque de France on 8 July 2011
- Forecasting the business cycle - Summary of the 8th International Institute of Forecasters workshop hosted by the Banque de France on 1-2 December 2011 in Paris
- Fiscal and monetary policy in the aftermath of the financial crisis - Summary of the BDF/EABCN/EJ/PSE conference on 8-9 December 2011

Spring 2012

- High-growth SMEs
- The financial situation of the major French groups remained sound in the first half of 2011
- Leveraged buy-outs in France: substantial differences between small and medium-sized targets
- Monetary and credit developments in 2011
- Has the 2008-2009 recession increased the structural share of unemployment in the euro area?
- The measurement of systemic risk - Summary of a lecture given by Robert F. Engle, winner of the Nobel Prize in Economics, Banque de France, 25 January 2012
- United States then, Europe now - Summary of a lecture given by Thomas J. Sargent, winner of the Nobel Prize in Economics, Banque de France, 1 March 2012

Summer 2012

- Holdings of French investment funds
- SMEs in Europe: disparities between countries and sectors were greater in 2010 than before the crisis
- Analysis of banking activity by business line
- Firms' financing and default risk during and after the crisis - Summary of a conference hosted by the Banque de France and OSEO on 9 and 10 February 2012
- 18th international panel data conference: a brief synthesis

Autumn 2012

- Current account imbalances in the euro area: competitiveness or demand shock?
- Non-residents' equity holdings in French CAC 40 companies at end-2011
- New housing loans to households: recent trends
- Insurance institutions' investments at end-2011

Winter 2012-2013

- French companies in 2011: expanding activity but shrinking profits
- The financial situation of the major listed groups remained sound in the first half of 2012 despite a difficult environment
- Securitisation in France
- Equilibrium exchange rate and competitiveness within the euro area
- Macroeconomic and financial vulnerability indicators in advanced economies
- The labour market: institutions and reforms

Spring 2013

- Monetary and credit developments in 2012 – Credit distribution grew more quickly in France than in the euro area
- France's inward foreign direct investment from 2005 to 2011
- Assisted microcredit – Summary of the symposium organised by the Banque de France on 12 December 2012
- Oil and the macroeconomy – Summary of the Banque de France workshop on 14 November 2012

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- Profits of CAC 40 companies: what contribution does foreign direct investment income make? An assessment of the period 2005-2011
- Access to credit of SMEs and MTEs: decline in supply or lower demand? Lessons learned from a new quarterly business survey
- Firm competitiveness: summary report on the CompNet conference Banque de France – 20 and 21 September 2012
- French investment funds during the crisis (2008-2012)
- Wage dynamics and current account rebalancing in the euro area

Autumn 2013

- The economic slowdown took a toll on SMEs' profits and investments in 2012
- Globalisation and labour market outcomes: an overview of the conference organised by the Banque de France on 16 and 17 May 2013
- Insurance institutions' investments at end-2012
- Non-residents holdings of French CAC 40 shares at end-2012
- The IMF and management of capital flows: the long road towards a pragmatic approach

Winter 2013-2014

- How do VAT changes affect inflation in France?
- Securitisation in France: recent developments
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Nota bene

In January 2014 Latvia joined the euro area, bringing the number of euro area countries to 18. Unless otherwise indicated, all data series included observations for 2014 relate to the “Euro 18” (i.e. the euro area including Latvia) for the whole time series. For interest rates, monetary statistics and the HICP, euro area statistical series take into account the changing composition of the euro area.

Statistical data are updated monthly on the Banque de France’s website.

Table I
Industrial activity indicators – Monthly Business Survey – France

(NAF revision 2; seasonally-adjusted data)

	2013			2014			
	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
Changes in production from the previous month ^{a)}							
Total manufacturing	5	12	-9	7	10	5	3
Food products and beverages	-1	17	-3	3	4	10	4
Electrical, electronic and computer equipment and other machinery	6	7	-6	9	7	4	4
Automotive industry	1	19	2	-2	5	-2	-1
Other transport equipment	9	5	-2	12	4	7	3
Other manufacturing	6	10	-10	6	13	3	3
Production forecasts ^{a)}							
Total manufacturing	4	-1	12	5	3	4	1
Food products and beverages	5	8	10	8	8	9	7
Electrical, electronic and computer equipment and other machinery	-2	3	10	2	4	6	1
Automotive industry	13	-7	6	4	-1	4	2
Other transport equipment	7	2	8	4	5	1	0
Other manufacturing	6	3	13	7	3	4	1
Changes in orders from the previous month ^{a)}							
Total manufacturing	5	14	2	5	6	3	2
Foreign	6	11	0	6	5	4	1
Order books ^{a)}							
Total manufacturing	-1	2	1	1	3	3	3
Food products and beverages	-9	-4	-2	-5	-4	-3	-5
Electrical, electronic and computer equipment and other machinery	1	2	-3	3	4	5	1
Automotive industry	-27	-27	-30	-30	-22	-14	-22
Other transport equipment	50	57	48	49	47	47	48
Other manufacturing	-2	1	2	3	5	2	5
Inventories of finished goods ^{a)}							
Total manufacturing	2	3	3	3	2	3	3
Food products and beverages	1	3	2	2	2	0	3
Electrical, electronic and computer equipment and other machinery	7	9	7	7	5	5	8
Automotive industry	1	1	5	-1	-2	-1	0
Other transport equipment	2	-2	-1	5	5	5	5
Other manufacturing	1	2	3	2	2	2	2
Capacity utilisation rate ^{b)}							
Total manufacturing	76.3	76.8	74.9	76.1	76.5	76.2	76.4
Staff levels (total manufacturing) ^{a)}							
Changes from the previous month	-1	0	0	0	0	1	-1
Forecast for the coming months	-3	-2	-2	-2	-1	1	-2
Business sentiment indicator ^{c)}							
	100	101	99	99	98	99	98

a) Data given as a balance of opinions. Forecast series are adjusted for bias when it is statistically significant.

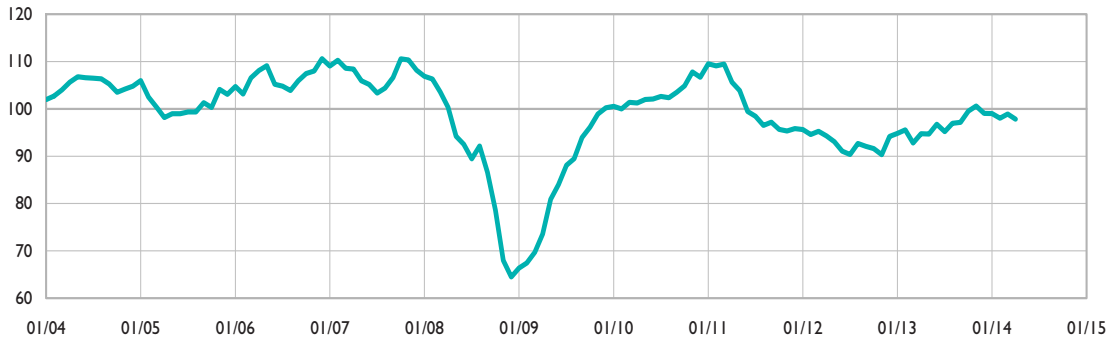
b) Data given as a percentage.

c) The indicator summarises industrial managers' sentiment regarding business conditions. The higher the indicator is, the more positive the assessment. The indicator is calculated using a principal component analysis of survey data smoothed over three months. By construction, the average is 100.

Table 2
Industrial activity indicators – Monthly Business Survey – France (NAF revision 2; seasonally-adjusted data)

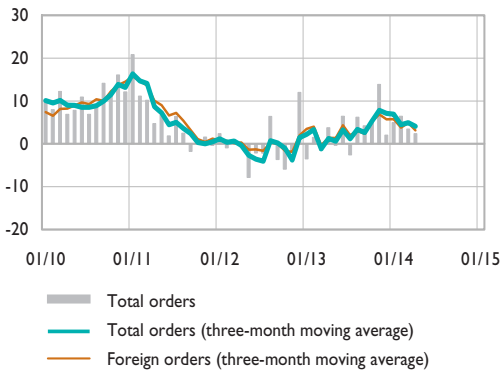
Business sentiment indicator

(100 = 1981 – last value)



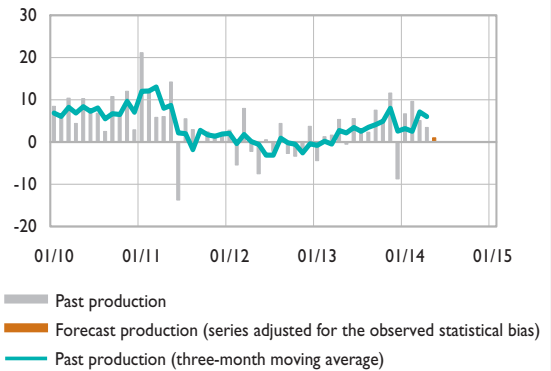
Orders ^{a)}

(balance of opinions; monthly change)



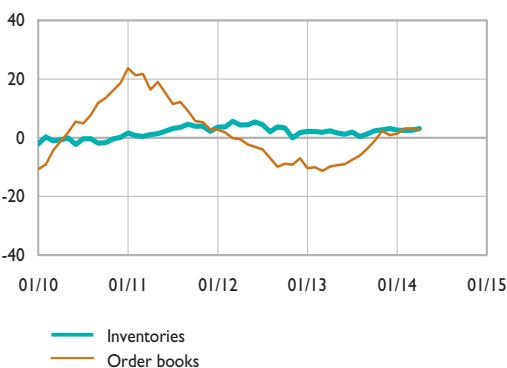
Production ^{a)}

(balance of opinions; monthly change)



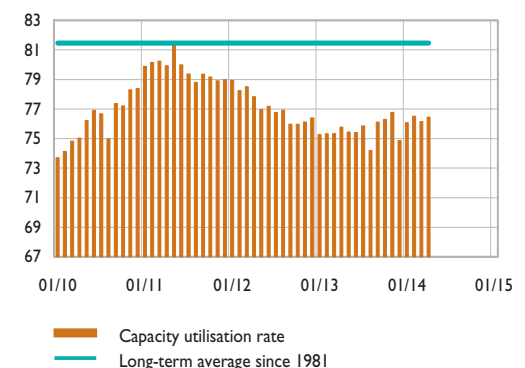
Inventories and order books ^{a)}

(balance of opinions; compared to levels deemed normal)



Capacity utilisation rate ^{a)}

(%)



^{a)} Manufacturing.

Source: Banque de France.

Produced 20 May 2014

Table 3
Consumer price index ^{a)}

(annual % change)

	2013					2014			
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
France	1.0	1.0	0.7	0.8	0.8	0.8	1.1	0.7	0.8
Germany	1.6	1.6	1.2	1.6	1.2	1.2	1.0	0.9	1.1
Italy	1.2	0.9	0.8	0.7	0.7	0.6	0.4	0.3	0.5
Euro area	1.3	1.1	0.7	0.9	0.8	0.8	0.7	0.5	0.7
United Kingdom	2.7	2.7	2.2	2.1	2.0	1.9	1.7	1.6	1.8
European Union	1.5	1.3	0.9	1.0	1.0	0.9	0.8	0.6	0.8
United States	1.5	1.2	1.0	1.2	1.5	1.6	1.1	1.5	2.0
Japan	0.9	1.0	1.1	1.6	1.6	1.4	1.5	1.6	na

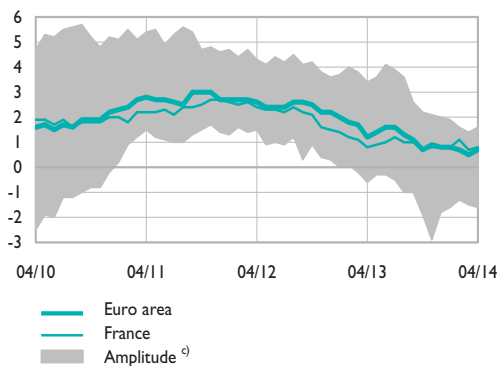
(annual average)

(seasonally-adjusted monthly % change)

	2011	2012	2013	2013		2014			
				Nov.	Dec.	Jan.	Feb.	March	April
France	2.3	2.2	1.0	0.1	0.1	0.0	0.3	-0.1	0.0
Germany	2.5	2.1	1.6	0.3	-0.1	0.0	0.0	0.0	0.0
Italy	2.9	3.3	1.3	0.0	0.1	0.0	0.0	0.0	0.2
Euro area	2.7	2.5	1.4	0.0	0.1	0.1	0.1	0.0	0.0
United Kingdom	4.5	2.8	2.6	0.1	0.1	0.1	0.2	0.2	0.1
European Union ^{b)}	3.1	2.6	1.5	-	-	-	-	-	-
United States	3.2	2.1	1.5	0.1	0.2	0.1	0.1	0.2	0.3
Japan	-0.3	0.0	0.4	0.4	0.1	-0.1	0.0	0.0	na

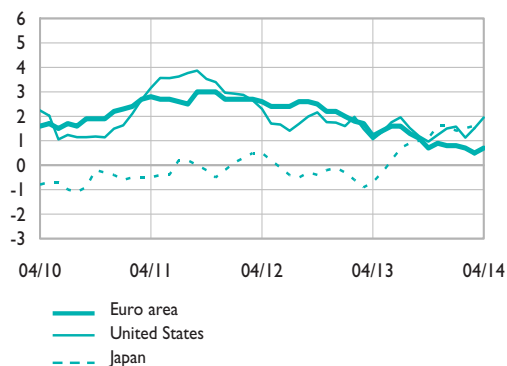
France and the euro area

(annual % change)



International comparisons

(annual % change)



a) Harmonised indices except for the United States and Japan (national indices).

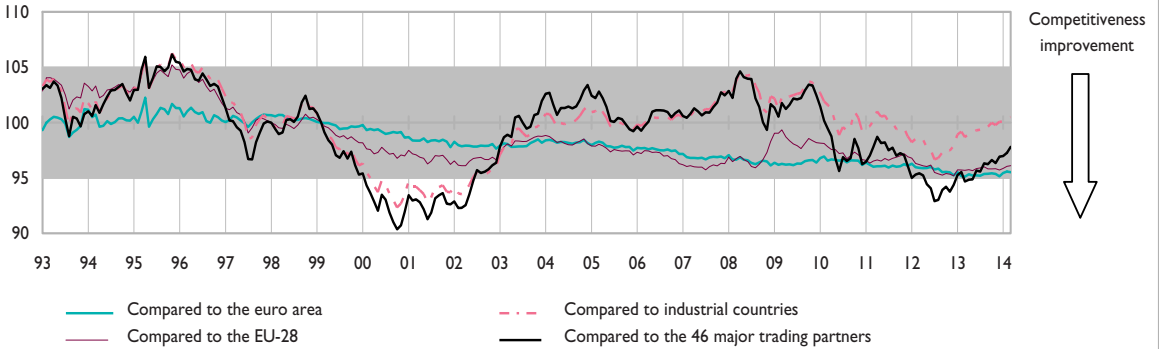
b) The series of seasonally adjusted monthly changes in the HIPC is not available for the European Union.

c) Gap between the extreme values of harmonised price indices observed in the euro area (changing composition).

Table 4
The competitiveness of France's economy

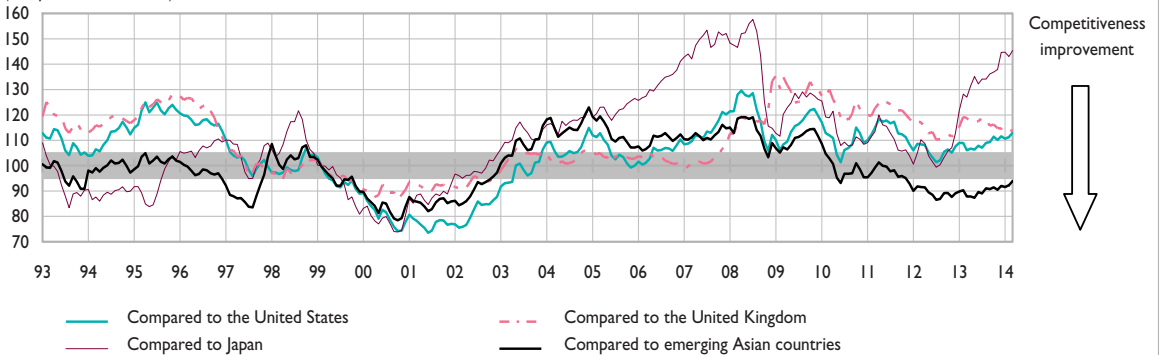
Indicators deflated by consumer prices

(1st quarter 1999 = 100)



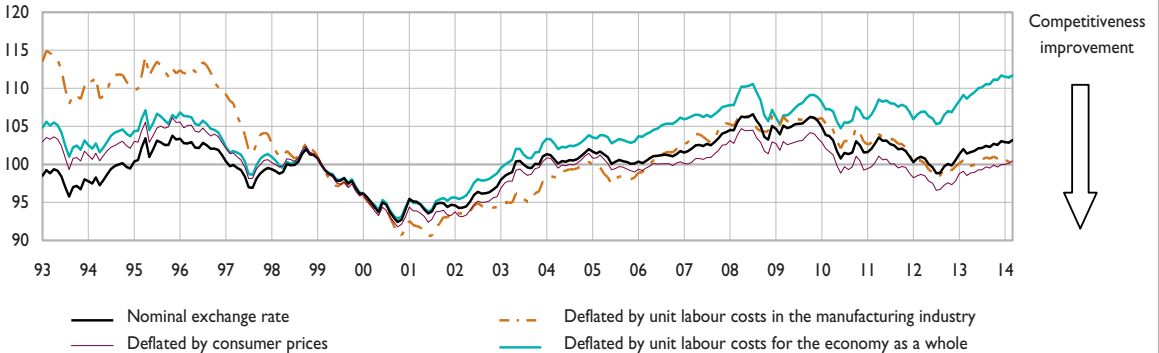
Indicators deflated by consumer prices

(1st quarter 1999 = 100)



Indicators of competitiveness compared to 24 OECD countries

(1st quarter 1999 = 100)



Grey area: change in competitiveness compared to long-term average less than 5%.

Sources: National data, Banque de France, ECB, IMF, OECD, Thomson Financial Datastream.

Table 5
Balance of payments – Main components (quarterly data) – France

(unadjusted data, EUR billions)

	2012	2013	2012	2013			
			Q4	Q1	Q2	Q3	Q4
Current account	-44.4	-27.7	-9.2	-12.4	-3.9	-9.0	-2.4
Goods	-70.6	-62.3	-16.4	-17.2	-14.0	-16.4	-14.6
Services	32.6	36.2	8.2	4.0	10.3	11.8	10.2
Income	29.7	37.2	8.3	10.3	10.4	6.9	9.7
Current transfers	-36.2	-39.0	-9.2	-9.4	-10.6	-11.3	-7.7
Capital account	-0.4	1.9	0.2	0.2	1.0	0.2	0.6
Financial account	74.2	16.0	19.5	-24.6	1.6	17.0	22.0
Direct investment	-9.4	5.6	0.3	-2.7	1.8	3.4	3.1
<i>French direct investment abroad</i>	-28.9	1.9	-4.0	-0.8	-0.1	-2.5	5.3
<i>Foreign direct investment in France</i>	19.5	3.7	4.3	-1.9	1.9	5.9	-2.2
Portfolio investment	39.2	99.5	0.9	6.5	24.9	16.2	52.0
Assets	6.3	-51.3	-13.0	-37.4	-13.8	-13.7	13.6
Liabilities	32.9	150.8	13.9	43.8	38.8	29.9	38.3
Financial derivatives	14.3	16.1	9.1	4.3	5.9	-0.7	6.7
Other investment	34.1	-106.7	11.9	-33.1	-31.2	0.0	-42.3
Reserve assets	-4.0	1.5	-2.8	0.5	0.3	-1.9	2.6
Net errors and omissions	-29.4	9.8	-10.5	36.8	1.3	-8.1	-20.2

Current account balance

(unadjusted data, EUR billions)



Financial account balance

(unadjusted data, EUR billions)

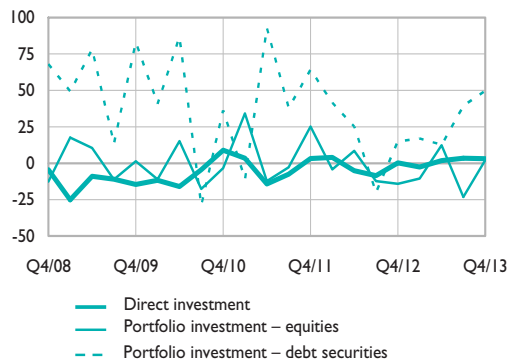


Table 6
Balance of payments – Current and capital accounts (quarterly data) – France

(unadjusted data, EUR billions)

	2012	2013	2012	2013			
			Q4	Q1	Q2	Q3	Q4
Current account	-44.4	-27.7	-9.2	-12.4	-3.9	-9.0	-2.4
Goods	-70.6	-62.3	-16.4	-17.2	-14.0	-16.4	-14.6
Exports	437.8	433.5	110.7	108.4	111.1	103.4	110.7
Imports	508.4	495.8	127.1	125.6	125.1	119.8	125.4
General merchandise	-71.2	-64.0	-16.5	-17.5	-14.7	-16.6	-15.2
Goods procured in ports by carriers	-3.0	-2.4	-0.8	-0.7	-0.5	-0.7	-0.6
Goods for processing and repairs on goods	3.6	4.2	0.8	0.9	1.2	0.9	1.1
Services	32.6	36.2	8.2	4.0	10.3	11.8	10.2
Exports	168.3	178.5	42.1	36.4	46.3	50.1	45.8
Imports	135.7	142.3	33.9	32.4	36.0	38.4	35.6
Transportation	-0.4	-1.7	0.0	-0.7	-0.3	-0.4	-0.3
Travel	11.3	10.3	1.4	0.4	3.5	5.7	0.7
Communications services	1.9	1.7	0.4	0.5	0.4	0.4	0.4
Construction services	1.8	2.7	0.9	0.3	0.4	0.6	1.3
Insurance services	1.3	2.1	0.7	-0.1	0.8	0.5	1.0
Financial services	1.6	1.9	0.2	0.5	0.4	0.5	0.5
Computer and information services	-1.6	-1.1	-0.4	-0.4	-0.2	-0.2	-0.3
Royalties and license fees	2.2	1.0	0.6	0.1	0.2	0.2	0.5
Other business services	13.8	18.3	4.3	3.2	4.8	4.4	6.0
Personal, cultural and recreational services	0.4	0.6	0.1	0.1	0.1	0.2	0.3
Government services	0.3	0.3	0.0	0.1	0.1	0.1	0.0
Income	29.7	37.2	8.3	10.3	10.4	6.9	9.7
Compensation of employees	15.5	15.8	3.9	3.9	4.0	4.0	3.9
Investment income	14.2	21.4	4.4	6.3	6.4	2.9	5.8
Direct investment	32.1	37.0	7.2	7.6	16.1	5.1	8.3
Portfolio investment	-18.3	-18.7	-2.9	-1.7	-10.6	-2.9	-3.5
Other investment	0.4	3.1	0.1	0.4	0.9	0.7	1.0
Current transfers	-36.2	-39.0	-9.2	-9.4	-10.6	-11.3	-7.7
General government	-17.6	-20.2	-4.6	-4.3	-6.7	-6.7	-2.5
Other sectors	-18.6	-18.8	-4.6	-5.1	-3.9	-4.6	-5.2
of which workers' remittances	-8.2	-8.2	-2.1	-2.1	-2.1	-2.1	-2.1
Capital account	-0.4	1.9	0.2	0.2	1.0	0.2	0.6

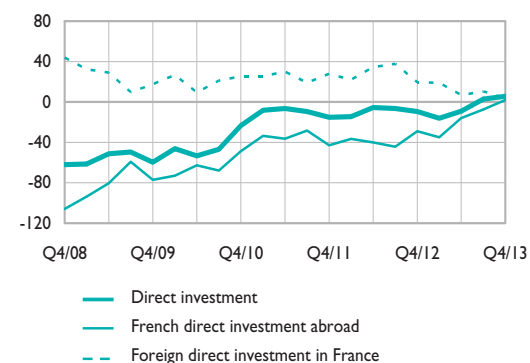
Table 7
Balance of payments – Financial flows (quarterly data) – France

(unadjusted data, EUR billions)

	2012	2013	2012	2013			
			Q4	Q1	Q2	Q3	Q4
Financial account	74.2	16.0	19.5	-24.6	1.6	17.0	22.0
Direct investment	-9.4	5.6	0.3	-2.7	1.8	3.4	3.1
French direct investment abroad	-28.9	1.9	-4.0	-0.8	-0.1	-2.5	5.3
of which equity capital and reinvested earnings	-40.7	-1.4	-8.9	-1.6	1.4	-1.0	-0.2
Foreign direct investment in France	19.5	3.7	4.3	-1.9	1.9	5.9	-2.2
of which equity capital and reinvested earnings	15.5	14.0	9.1	3.8	3.3	3.7	3.2
Portfolio investment	39.2	99.5	0.9	6.5	24.9	16.2	52.0
Assets	6.3	-51.3	-13.0	-37.4	-13.8	-13.7	13.6
Equity securities	-50.1	-45.5	-33.9	-13.3	4.4	-21.1	-15.5
Bonds and notes	78.8	-39.0	7.7	-25.5	-8.5	0.1	-5.1
Short-term debt securities	-22.4	33.3	13.1	1.4	-9.7	7.3	34.3
Liabilities	32.9	150.8	13.9	43.8	38.8	29.9	38.3
Equity securities	27.9	26.4	19.8	2.8	8.0	-2.0	17.7
Bonds and notes	41.7	96.6	13.8	21.3	29.3	12.5	33.4
Short-term debt securities	-36.7	27.8	-19.7	19.7	1.5	19.4	-12.8
Financial derivatives	14.3	16.1	9.1	4.3	5.9	-0.7	6.7
Other investment	34.1	-106.7	11.9	-33.1	-31.2	0.0	-42.3
Reserve assets	-4.0	1.5	-2.8	0.5	0.3	-1.9	2.6
Net errors and omissions	-29.4	9.8	-10.5	36.8	1.3	-8.1	-20.2

Direct investment account

(cumulated flows over 4 quarters)



Portfolio investment account

(cumulated flows over 4 quarters)

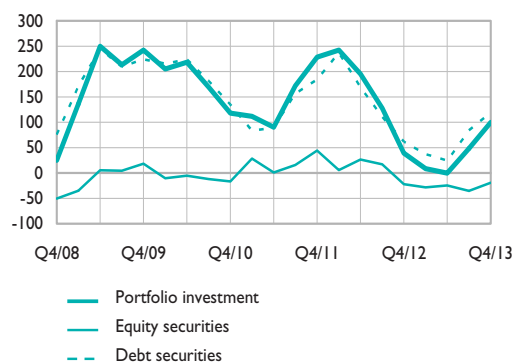


Table 8
Balance of payments – Geographical breakdown (quarterly data) – France

(unadjusted data, EUR billions)

	4th quarter 2013					
	EMU ^{a)}	EU-28 excl. EMU ^{b)}	USA	Japan	Switzerland	China
Current account	-16.8	3.5	2.5	1.0	2.3	na
Receipts	85.7	28.7	15.9	2.8	9.0	5.5
Expenditure	102.5	25.1	13.4	1.8	6.7	na
Goods	-22.5	1.9	0.8	0.9	0.1	-2.1
Receipts	50.5	14.3	7.2	1.7	3.3	3.6
Expenditure	73.0	12.4	6.5	0.9	3.1	5.8
Services	3.1	0.4	0.5	-0.1	0.6	0.5
Receipts	17.7	6.3	4.7	0.3	2.2	1.5
Expenditure	14.6	5.9	4.2	0.4	1.6	0.9
Income	4.9	2.5	1.2	0.2	2.4	na
Receipts	16.0	5.0	3.6	0.7	3.0	0.3
Expenditure ^{c)}	11.2	2.5	2.4	0.5	0.6	na
Current Transfers	-2.2	-1.2	0.0	0.0	-0.8	-0.1
Financial account						
Direct investment	-2.5	2.7	7.2	0.0	-3.3	-0.3
French direct investment abroad	3.5	0.5	8.1	0.1	-3.9	-0.3
Foreign direct investment in France	-6.0	2.2	-0.9	-0.1	0.6	0.0
Portfolio investment – Assets ^{d)}	7.8	4.4	6.4	-7.9	2.1	-0.7
Equity securities	-6.7	-1.3	1.0	-8.3	2.1	-0.6
Bonds and notes	-14.5	2.0	4.1	0.6	-0.1	0.0
Short-term debt securities	29.0	3.7	1.3	-0.2	0.1	-0.1
Other investment	4.1	-1.2	3.9	-1.3	-11.3	-0.8

a) 17 Member States (including Estonia as of 1 January 2011).

b) Denmark, United Kingdom, Sweden, European Institutions and New Member States (Czech Republic, Hungary, Latvia, Lithuania, Poland, Bulgaria, Romania, Croatia).

c) Geographical breakdown of portfolio investment income based on data compiled by the IMF (Coordinated Portfolio Investment Survey); data not available for China.

d) The geographical breakdown is not available for liabilities.

Table 9
Balance of payments (monthly data) – France

(unadjusted data, EUR billions)

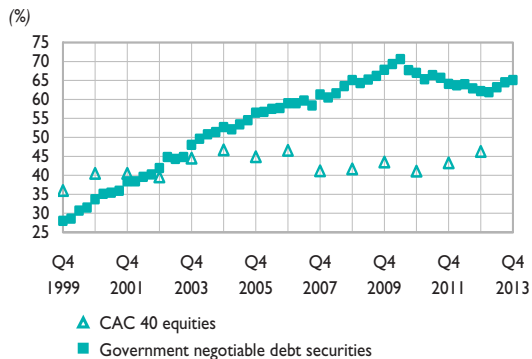
	2013	2014			12-month total	
		March	Jan.	Feb.	March	March
						2013
Current account	-2.3	-4.1	-4.2	-2.6	-45.1	-26.2
Goods	-3.9	-7.0	-4.0	-4.2	-68.5	-60.2
Services	2.2	1.0	1.9	2.9	31.1	38.1
Income	3.7	3.1	1.7	3.0	30.4	34.8
Current transfers	-4.2	-1.2	-3.8	-4.3	-38.0	-38.9
Capital account	0.1	0.0	0.5	0.3	-0.2	2.5
Financial account	10.9	-3.2	16.0	-0.2	25.5	53.2
Direct investment	0.9	-1.2	-1.9	-1.6	-16.1	3.6
<i>French direct investment abroad</i>	0.8	-1.7	-1.9	-1.5	-35.0	-2.3
Equity capital	1.0	-1.3	-1.3	-0.8	-31.1	1.4
Reinvested earnings	-0.5	-0.5	-1.0	-1.0	-6.0	-7.2
Other capital	0.3	0.2	0.4	0.3	2.1	3.4
Foreign direct investment in France	0.1	0.5	0.0	-0.1	18.9	5.9
Equity capital	1.9	1.2	0.5	0.2	18.0	11.5
Reinvested earnings	0.1	0.1	0.4	0.4	0.8	1.5
Other capital	-1.9	-0.8	-0.9	-0.7	0.1	-7.0
Portfolio investment	28.8	-31.1	13.8	46.1	8.5	121.9
Assets	7.1	-20.5	-5.9	22.4	-38.6	-17.9
Equity securities	-7.6	3.8	4.9	7.7	-58.1	-15.9
Bonds and notes	-0.5	-13.8	-3.4	-1.1	10.0	-31.8
Short-term debt securities	15.2	-10.4	-7.4	15.8	9.5	29.7
Liabilities	21.7	-10.6	19.7	23.7	47.2	139.8
Equity securities	-0.3	-1.6	-1.5	2.6	29.8	23.0
Bonds and notes	13.0	-11.4	18.9	14.9	33.7	97.5
Short-term debt securities	9.0	2.4	2.4	6.3	-16.3	19.2
Financial derivatives	3.2	3.1	1.5	0.1	19.1	16.6
Other investment	-23.3	28.9	3.2	-46.8	17.7	-88.3
Reserve assets	1.3	-3.0	-0.6	2.0	-3.7	-0.6
Net errors and omissions	-8.7	7.3	-12.3	2.5	19.7	-29.4

Table 10
France's international investment position (direct investment measured at book value)

(EUR billions)

	2009	2010	2011	2012	2013	2013
	Dec.	Dec.	Dec.	Dec.	Dec.	Q4
Assets	4,661.2	5,547.5	5,976.0	6,115.9	5,798.0	5,798.0
French direct investment abroad	1,036.0	1,109.3	1,142.8	1,167.4	1,134.8	1,134.8
<i>Equity capital and reinvested earnings</i>	726.1	835.3	852.6	889.9	865.8	865.8
<i>Other capital</i>	309.9	274.0	290.2	277.4	269.0	269.0
Portfolio investment (foreign securities held by residents)	2,049.9	2,078.0	1,826.7	1,947.9	2,053.1	2,053.1
Financial derivatives	273.5	868.0	1,237.1	1,301.6	960.7	960.7
Other investment	1,209.5	1,367.6	1,636.3	1,559.1	1,544.4	1,544.4
Reserve assets	92.4	124.5	133.1	139.9	105.1	105.1
Liabilities	-4,864.1	-5,742.4	-6,192.6	-6,439.1	-6,174.9	-6,174.9
Foreign direct investment in France	-683.9	-714.8	-737.3	-756.4	-756.6	-756.6
<i>Equity capital and reinvested earnings</i>	-408.4	-430.6	-443.8	-459.1	-473.1	-473.1
<i>Other capital</i>	-275.5	-284.2	-293.5	-297.2	-283.5	-283.5
Portfolio investment (French securities held by non-residents)	-2,299.7	-2,430.8	-2,425.5	-2,629.2	-2,819.3	-2,819.3
Financial derivatives	-311.8	-906.1	-1,278.6	-1,344.3	-1,013.2	-1,013.2
Other investment	-1,568.6	-1,690.7	-1,751.2	-1,709.2	-1,585.8	-1,585.8
Net position	-202.8	-194.9	-216.6	-323.1	-376.9	-376.9

Non-resident holdings of CAC 40 equities and government negotiable debt securities



France's international investment position

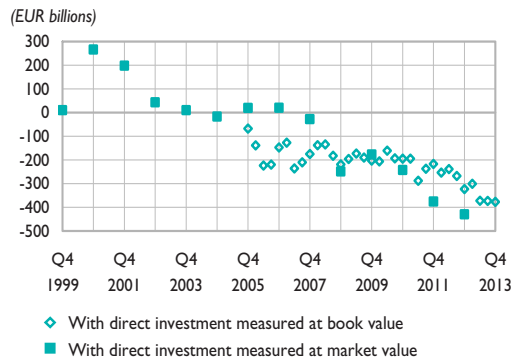
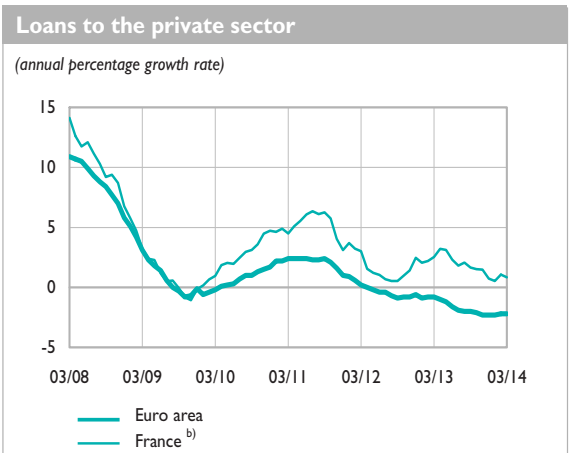
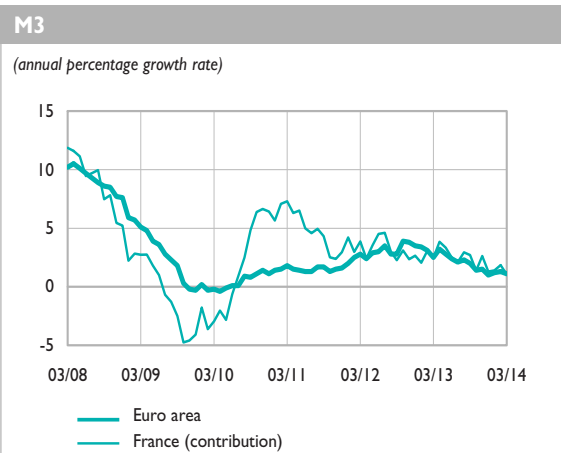
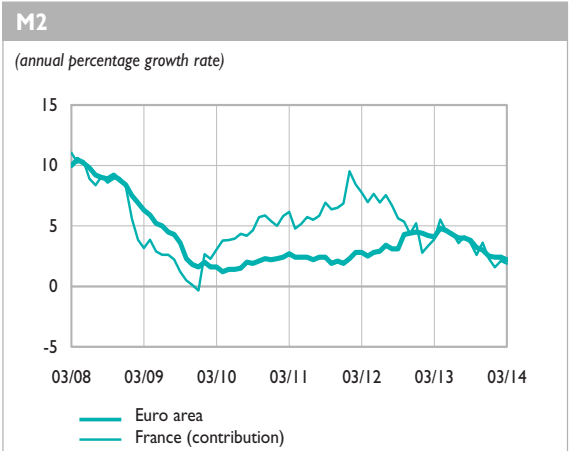
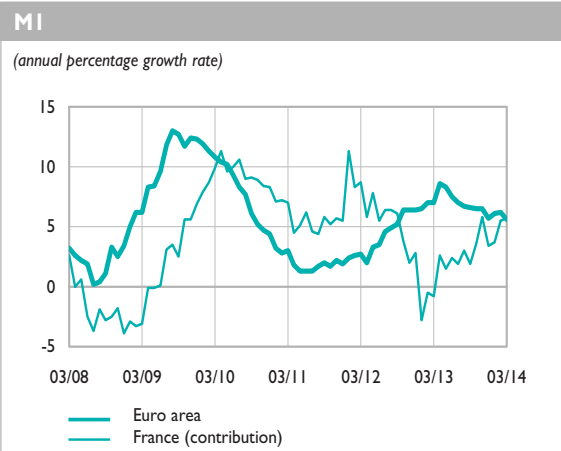


Table I
Main monetary and financial aggregates – France and the euro area

(annual percentage growth rate)

	2011	2012	2013	2013	2013				2014			
	Dec.	Dec.	Dec.	March	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	
M1												
Euro area ^{a)}	1.9	6.4	5.7	7.0	6.6	6.5	6.5	5.7	6.1	6.2	5.6	
France (contribution)	5.5	2.8	3.4	-0.8	1.9	3.6	5.8	3.4	3.7	5.5	5.7	
M2												
Euro area ^{a)}	1.9	4.5	2.5	4.1	3.8	3.2	3.0	2.5	2.4	2.4	2.2	
France (contribution)	6.8	5.2	2.3	3.9	3.6	2.6	3.6	2.3	1.6	2.1	1.9	
M3												
Euro area ^{a)}	1.6	3.5	1.0	2.5	2.0	1.4	1.5	1.0	1.2	1.3	1.1	
France (contribution)	3.0	2.6	1.3	2.5	2.7	1.4	2.6	1.3	1.4	1.8	1.0	
Loans to the private sector												
Euro area ^{a)}	1.0	-0.6	-2.3	-0.8	-2.0	-2.1	-2.3	-2.3	-2.3	-2.2	-2.2	
France ^{b)}	3.1	2.5	0.7	2.5	1.7	1.5	1.5	0.7	0.5	1.1	0.8	



a) Seasonal and calendar effect adjusted data.

b) Loans extended by MFIs resident in France to euro area residents excluding MFIs and central government.

Sources: Banque de France, European Central Bank.

Produced 20 May 2014

Table I2
Banque de France Monthly Statement ^{a)}

(outstanding amounts at the end of the period, EUR billions)

	2011	2012	2013	2013	2013	2014		
	Dec.	Dec.	Dec.	March	Dec.	Jan.	Feb.	March
Assets								
National territory	295.8	326.4	199.7	271.1	199.7	189.7	186.5	177.2
Loans	218.4	234.2	127.1	187.5	127.1	117.3	115.6	107.5
MFIs ^{b)}	218.2	234.0	127.0	187.3	127.0	117.1	115.4	107.3
General government	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other sectors	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Securities other than shares	76.9	92.1	72.5	83.6	72.5	72.3	70.9	69.6
MFIs	34.1	32.2	25.2	25.7	25.2	25.6	25.8	26.1
General government	42.9	59.9	47.3	57.9	47.3	46.7	45.0	43.5
Other sectors	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shares and other equity	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other euro area countries ^{b)}	106.8	87.6	91.4	92.6	91.4	91.9	92.5	92.4
Rest of the world ^{b)}	110.5	114.9	88.3	105.9	88.3	93.6	91.8	86.9
Gold	95.3	98.8	68.2	98.0	68.2	72.6	75.3	73.5
Not broken down by geographical area ^{c)}	105.3	109.6	107.6	104.8	107.6	101.1	100.3	102.5
Total	713.6	737.3	555.2	672.4	555.2	549.0	546.4	532.6
Liabilities								
National territory – Deposits	185.6	200.3	116.0	172.5	116.0	96.0	98.7	105.3
MFIs	176.2	194.8	112.2	159.8	112.2	94.4	97.2	104.1
General government	8.9	4.9	3.3	12.0	3.3	0.7	0.8	0.4
Other sectors	0.5	0.6	0.6	0.7	0.6	0.9	0.7	0.7
Other euro area countries – Deposits	79.6	73.9	34.1	46.2	34.1	48.2	45.2	29.7
Rest of the world – Deposits	143.4	146.0	112.6	140.6	112.6	113.8	109.1	104.6
Not broken down by geographical area	305.0	317.1	292.5	313.0	292.5	291.0	293.5	293.0
Banknotes and coins in circulation ^{d)}	169.0	173.5	181.7	170.6	181.7	176.8	177.0	178.0
of which coins ^{e)}	2.8	2.9	3.0	2.9	3.0	3.0	2.9	2.9
Debt securities issued	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital reserves and revaluation account	112.4	117.0	86.6	118.8	86.6	91.0	94.9	93.2
Other liabilities	23.6	26.5	24.1	23.6	24.1	23.2	21.6	21.8
Total ^{f)}	713.6	737.3	555.2	672.4	555.2	549.0	546.4	532.6

a) These statistics are transmitted to the European Central Bank, on the 15th working day following the end of the month to which they relate, within the production of the consolidated balance sheet of the monetary financial institutions (Regulation ECB/2008/32).

b) This item includes the outstanding amounts of market operations.

c) Including the adjustment linked to the method of accounting used for measuring the euro notes on the liability side of the balance sheet of the Banque de France since January 2002.

d) Since January 2002, banknotes in circulation are treated according to specific euro area accounting conventions to bring them in line with the capital key share. 8% of the total value of euro banknotes in circulation is allocated to the European Central Bank. The remaining 92% is broken down between the NCBs in proportion to their share in the paid-up capital of the ECB.

e) Coins in circulation are not a liability of MFIs in the participating Member States, but a liability of the central government. However, coins are part of the monetary aggregates and, by convention, this liability is to be entered under the category 'currency in circulation'. The counterpart to this liability is to be included within 'remaining assets'. (Regulation ECB/2008/32.)

f) The total of the balance sheet at end 2013 published in March 2014 (550 bn) can be calculated by subtracting from the total of the Monthly Statement at end December 2013 (552.2 bn): coins (3 bn) and miscellaneous amounts linked to the accounting gap between the statement established in the early January 2014 and the Annual Accounts, which include all the year-end entries (2.2 bn).

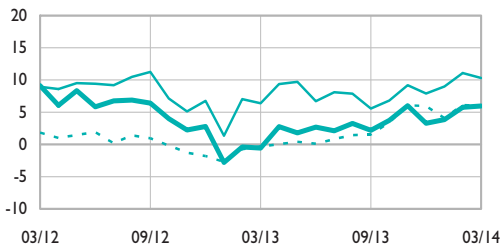
Table I3
Deposits – France

(outstanding amounts at the end of the period in EUR billions – % growth)

	2011	2012	2013	2013	2013	2014		
	Dec.	Dec.	Dec.	March	Dec.	Jan.	Feb.	March
Overnight deposits								
Total non-financial sectors (excluding central government)	546.3	555.9	582.3	531.4	582.3	553.3	555.5	564.2
Households and similar	284.4	279.2	295.5	277.9	295.5	289.0	290.4	294.3
Non-financial corporations	203.3	214.7	231.2	199.8	231.2	214.0	216.1	219.8
General government (excl. central government)	58.6	62.0	55.7	53.7	55.7	50.3	49.0	50.1
Other sectors	39.3	42.5	35.7	38.5	35.7	42.2	38.9	39.7
Total – Outstanding amounts	585.1	598.0	617.7	569.6	617.7	595.1	594.1	603.5
Total – Growth rate	5.3	2.8	3.3	-0.6	3.3	3.8	5.8	6.0
Passbook savings accounts								
"A" and "Blue" passbooks	214.7	247.2	263.2	258.9	263.2	264.9	264.7	265.4
Housing savings accounts	36.1	35.2	33.4	34.7	33.4	33.2	32.8	32.7
Sustainable development passbook accounts	69.4	92.0	100.7	96.9	100.7	101.4	101.5	101.9
People's savings passbooks	52.4	51.7	48.3	49.9	48.3	46.3	46.4	46.5
Youth passbooks	7.0	7.0	6.9	6.8	6.9	6.7	6.7	6.7
Taxable passbooks	179.7	178.7	172.5	179.4	172.5	175.3	175.8	178.5
Total – Outstanding amounts	559.3	611.7	625.1	626.6	625.1	627.8	627.9	631.6
Total – Growth rate	7.3	9.4	2.2	8.9	2.2	0.9	0.8	0.8

Overnight deposits

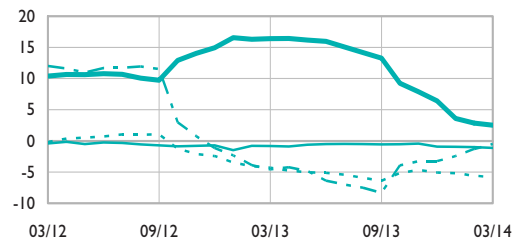
(annual growth rate)



— Total
- - - Non-financial corporations
..... Households
- . - Taxable passbooks

Passbook savings accounts

(annual growth rate)



— "A" and "Blue" passbooks
- - - Youth passbooks
..... Housing savings accounts
- . - Taxable passbooks

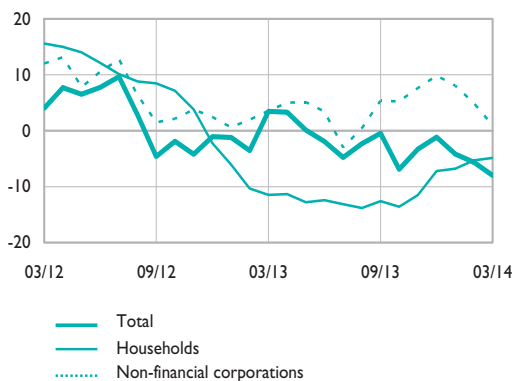
Table I4
Time deposits – France

(outstanding amounts at the end of the period in EUR billions – % growth)

	2011	2012	2013	2013	2013	2014		
	Dec.	Dec.	Dec.	March	Dec.	Jan.	Feb.	March
Deposits with agreed maturity up to two years								
Total non-financial sectors (excl. central government)	108.1	111.8	117.3	114.0	117.3	114.0	114.7	113.3
Households and similar	31.7	30.9	28.6	30.1	28.6	28.6	28.6	28.5
Non-financial corporations	75.5	79.9	87.7	83.0	87.7	84.3	85.1	83.7
General government (excl. central government)	1.0	0.9	1.0	0.9	1.0	1.0	1.0	1.1
Other sectors	42.7	40.7	33.5	41.9	33.5	31.2	29.4	30.2
Total – Outstanding amounts	150.9	152.5	150.7	155.9	150.7	145.2	144.1	143.5
Total – Growth rate	10.9	-1.1	-1.1	3.5	-1.1	-4.2	-5.6	-8.0
Deposits with agreed maturity of over two years								
Total non-financial sectors (excl. central government)	306.7	328.9	342.2	331.3	342.2	344.0	346.1	347.0
Households and similar	259.0	269.4	274.8	268.5	274.8	275.8	276.5	276.8
PEL	186.6	188.2	197.7	188.8	197.7	199.3	200.2	201.2
PEP	24.4	24.0	23.0	23.7	23.0	22.9	22.8	22.6
Other	48.0	57.1	54.1	56.0	54.1	53.7	53.6	53.0
Non-financial corporations	46.6	58.1	65.5	61.4	65.5	66.2	67.5	68.1
General government (excl. central government)	1.1	1.4	1.9	1.5	1.9	1.9	2.1	2.1
Other sectors	177.0	154.7	157.0	163.5	157.0	155.6	155.1	150.7
Total – Outstanding amounts	483.7	483.5	499.3	494.9	499.3	499.6	501.2	497.7
Total – Growth rate	18.8	0.3	3.4	-0.1	3.4	2.3	2.1	0.7

Deposits up to 2 years

(annual percentage growth rate)



Deposits over 2 years

(annual percentage growth rate)

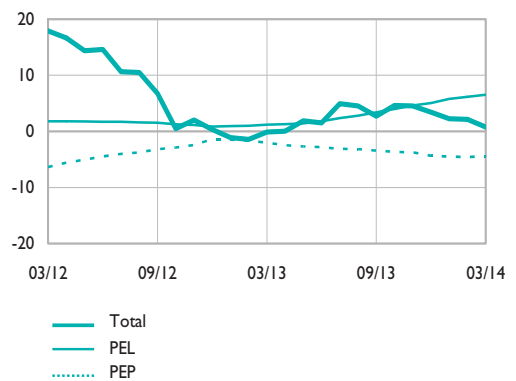


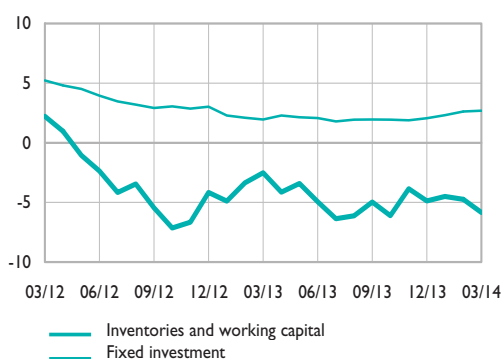
Table 15
Loans extended by credit institutions established in France to French residents – France

(outstanding amounts at the end of the period in EUR billions – % growth)

	2011	2012	2013	2013	2013		2014		
	Dec.	Dec.	Dec.	March	Nov.	Dec.	Jan.	Feb.	March
Loans to resident clients									
Private sector	2,053.7	2,100.0	2,114.9	2,116.3	2,122.4	2,114.9	2,122.9	2,131.8	2,134.4
General government	195.1	206.8	213.1	206.8	213.1	213.1	213.2	212.2	211.0
Total – Outstanding amounts	2,248.7	2,306.7	2,328.1	2,323.1	2,335.5	2,328.1	2,336.1	2,344.0	2,345.4
Private sector	3.1	2.5	0.7	2.5	1.5	0.7	0.5	1.1	0.8
General government	-6.7	6.1	2.8	6.2	3.1	2.8	1.7	2.4	2.0
Total – Growth rate	2.2	2.8	0.9	2.9	1.6	0.9	0.6	1.2	0.9
Loans to non-financial companies									
Fixed investment	547.1	563.0	568.0	561.2	564.8	568.0	569.0	570.8	570.2
Inventories and working capital	187.5	174.1	167.5	175.2	168.5	167.5	169.3	167.4	168.0
Other lending	81.2	82.0	81.3	81.5	80.5	81.3	78.8	79.0	79.5
Total – Outstanding amounts	815.9	819.1	816.7	817.9	813.8	816.7	817.1	817.2	817.7
Total – Growth rate	4.4	1.0	0.2	1.1	0.3	0.2	0.3	0.5	0.1
Loans to households									
Loans for house purchase	847.0	874.2	907.0	880.8	902.7	907.0	907.0	909.9	909.5
Consumer loans	161.1	160.4	157.3	157.2	156.3	157.3	156.7	156.6	156.3
Other lending	92.8	92.1	92.3	92.5	93.0	92.3	92.6	92.8	92.8
Total – Outstanding amounts	1,100.9	1,126.7	1,156.6	1,130.5	1,152.0	1,156.6	1,156.2	1,159.3	1,158.6
Total – Growth rate	5.6	2.3	2.5	1.8	2.6	2.5	2.5	2.9	2.5

Loans to non-financial companies – France

(annual percentage growth rate)



Loans to households – France

(annual percentage growth rate)

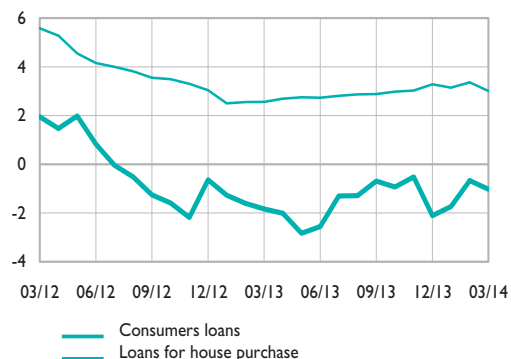


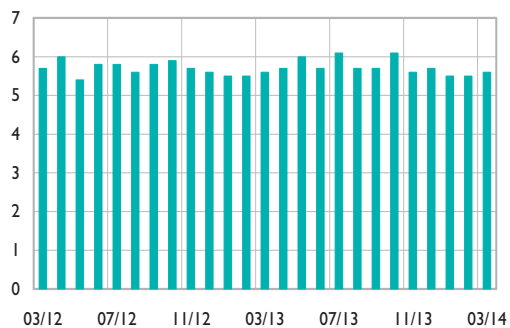
Table 16
New loans to residents, (excl. overdrafts) – France

(monthly flows - seasonally adjusted - in euro billions)

	2013			2014		
	Jan.	Feb.	March	Jan.	Feb.	March
Loans to non-financial corporations						
Loans ≤ 1 million euro ^{a)}	5.5	5.5	5.6	5.5	5.5	5.6
Loans > 1 million euro ^{a)}	13.6	12.1	13.0	9.3	10.7	10.3
Loans to households						
Cash loans to sole traders and individuals (excl. revolving consumer credit)	3.9	3.9	3.9	4.1	4.0	4.0
Housing loans	9.7	9.8	11.5	10.3	11.6	9.7

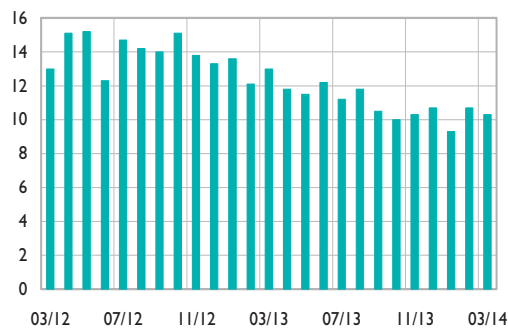
Non-financial corporations – Loans ≤ 1 million euro

(monthly flows - seasonally adjusted - in euro billions)



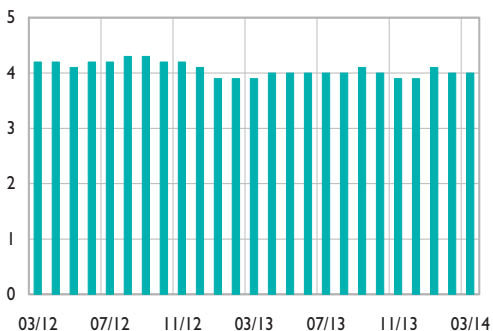
Non-financial corporations – Loans > 1 million euro

(monthly flows - seasonally adjusted - in euro billions)



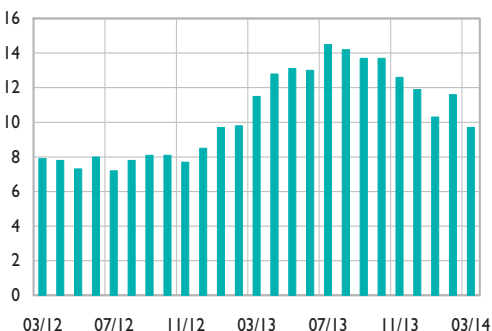
Households - Cash loans

(monthly flows - seasonally adjusted - in euro billions)



Households - Housing loans

(monthly flows - seasonally adjusted - in euro billions)



a) All initial rate fixation periods.

Table 17
Investment and financing – Insurance corporations and pension funds – Euro area and France

(EUR billions)

Euro area	Cumulated transaction flows over 4 quarters					Outstanding amounts
	2012	2013				2013
	Q4	Q1	Q2	Q3	Q4	Dec.
Financial assets						
Currency and deposits	-2.3	-7.7	-7.7	-14.9	-22.8	781.2
<i>of which deposits included in M3 ^{a)}</i>	15.1	11.0	7.6	2.7	-14.0	190.9
Short-term debt securities	-3.2	-0.5	-13.4	-22.3	-17.6	55.9
Long-term debt securities	137.2	96.3	109.0	110.2	133.2	3,105.0
Loans	9.2	11.3	10.3	1.2	4.5	493.1
Shares and other equity	90.5	96.7	94.5	131.3	138.1	2,920.4
<i>of which quoted shares</i>	-7.6	0.1	-0.4	9.5	1.3	439.3
Remaining net assets	-43.4	-25.1	-28.4	-32.8	-1.9	218.5
Financing						
Debt securities	6.6	5.4	3.3	2.8	-0.2	53.3
Loans	-15.4	0.3	-7.2	-23.0	-4.6	285.3
Shares and other equity	0.7	2.1	2.2	1.2	4.6	540.4
Insurance technical reserves	155.1	169.7	175.3	183.3	197.2	6,745.6
<i>Life insurance</i>	139.2	155.1	163.8	169.9	181.1	5,894.9
<i>Non-life insurance</i>	16.0	14.6	11.6	13.4	16.0	850.6
Net lending/net borrowing (B9B)	41.0	-6.5	-9.4	8.4	36.7	

(EUR billions)

France	Cumulated transaction flows over 4 quarters					Outstanding amounts
	2012	2013				2013
	Q4	Q1	Q2	Q3	Q4	Dec.
Financial assets						
Currency and deposits	2.8	2.1	5.2	7.1	3.3	33.9
Short-term debt securities	-9.4	-4.1	-13.0	-17.5	-8.1	18.9
Long-term debt securities	42.7	44.1	59.1	73.5	69.6	1,300.2
Loans	0.9	0.9	1.1	1.1	0.6	36.2
Shares and other equity	10.2	11.7	2.8	-5.4	-5.7	680.9
<i>of which quoted shares</i>	-10.4	-2.7	-3.3	-4.4	-3.7	75.8
Remaining net assets	-18.3	-14.6	-13.0	-10.6	-9.5	-6.7
Financing						
Debt securities	0.6	0.9	1.7	2.5	1.8	11.1
Loans	7.2	11.0	14.5	13.8	9.0	94.2
Shares and other equity	2.1	1.6	1.5	1.2	1.6	114.2
Insurance technical reserves	26.8	40.9	46.4	50.5	50.0	1,809.1
<i>Life insurance and pension funds</i>	19.8	31.3	37.1	40.0	39.5	1,539.2
<i>Non-life insurance</i>	7.0	9.6	9.3	10.4	10.5	269.9
Net lending/net borrowing (B9B)	-0.2	-3.1	-10.0	-7.0	-0.2	

a) Deposits with agreed maturity up to 2 years and redeemable at notice up to 3 months of insurance corporations held with MFIs and central government.

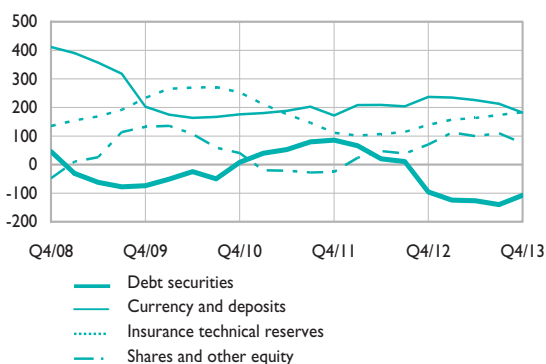
Table 18
Investment and financing – Households – Euro area

(EUR billions)

	Cumulated transaction flows over 4 quarters					Outstanding amounts
	2012	2013				2013
	Q4	Q1	Q2	Q3	Q4	Dec.
Financial assets						
Currency and deposits	236.5	234.6	225.4	212.8	182.1	7,223.6
<i>of which deposits included in M3^{a)}</i>	213.2	213.5	206.3	171.0	102.9	5,424.2
Short-term debt securities	-1.6	-15.7	-20.8	-28.0	-18.2	36.3
Long-term debt securities	-94.0	-108.9	-105.7	-111.8	-88.9	1,232.3
Shares and other equity	69.7	111.9	100.0	108.9	74.7	4,949.6
Quoted shares	4.3	9.4	0.2	-9.4	-14.3	906.0
Unquoted shares and other equity	58.6	60.4	41.6	55.8	41.4	2,563.0
Mutual fund shares	6.8	42.1	58.2	62.5	47.6	1,480.6
<i>of which money market fund shares</i>	-30.9	-39.0	-29.8	-26.5	-14.7	97.0
Insurance technical reserves	138.7	157.4	163.2	173.7	183.0	6,500.0
Remaining net assets	-34.8	-54.8	-71.8	-68.2	-58.3	-139.2
Financing						
Loans	14.1	-1.2	-12.2	-2.7	-20.1	6,151.8
<i>of which from euro area MFIs</i>	25.0	20.9	1.1	7.2	-4.4	5,268.2
Revaluation of financial assets						
Shares and other equity	287.9	233.1	283.6	323.2	444.2	
Insurance technical reserves	185.5	166.7	131.6	84.3	70.9	
Other flows	79.0	-31.2	66.2	31.9	3.7	
Change in net financial worth	852.8	694.2	783.9	729.6	813.3	

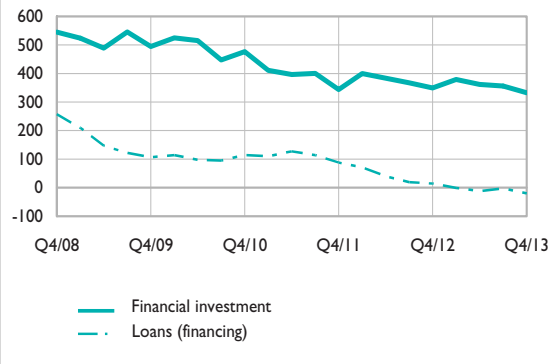
Investment flows

(EUR billions, cumulated flows over 4 quarters)



Investment and financing flows

(EUR billions, cumulated flows over 4 quarters)



a) Deposits with agreed maturity up to 2 years and redeemable at notice up to 3 months of households held with MFIs and central government.

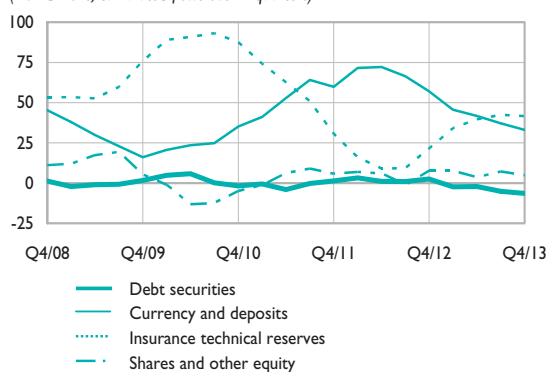
Table 19
Investment and financing – Households – France

(EUR billions)

	Cumulated transaction flows over 4 quarters					Outstanding amounts
	2012	2013				2013
	Q4	Q1	Q2	Q3	Q4	Dec.
Financial assets						
Currency and deposits	57.0	45.5	41.8	37.1	33.2	1,306.1
Short-term debt securities	-0.7	-0.5	-0.5	-0.5	-0.6	0.7
Long-term debt securities	3.3	-1.8	-1.6	-4.6	-5.9	59.7
Shares and other equity	7.7	7.7	3.7	7.2	4.9	1,082.0
Quoted shares	-5.8	-4.2	-6.1	-4.8	-5.7	171.6
Unquoted shares and other equity	22.3	23.2	20.4	23.9	25.0	610.4
Mutual fund shares	-8.8	-11.3	-10.7	-11.9	-14.4	300.0
<i>of which money market fund shares</i>	-8.3	-8.0	-7.9	-6.1	-5.6	17.8
Insurance technical reserves	21.5	34.2	39.6	42.4	41.7	1,636.6
Remaining net assets	3.4	15.9	31.7	20.0	22.7	20.9
Financing						
Loans	26.3	21.0	22.2	26.7	26.8	1,179.9
Revaluation of financial assets						
Shares and other equity	87.5	58.4	75.9	102.0	92.4	
Insurance technical reserves	24.6	16.4	23.4	26.5	22.4	
Other flows	12.8	7.1	5.4	-0.3	-1.5	
Change in net financial worth	190.9	162.0	197.1	203.1	182.6	

Investment flows

(EUR billions, cumulated flows over 4 quarters)



Investment and financing flows

(EUR billions, cumulated flows over 4 quarters)

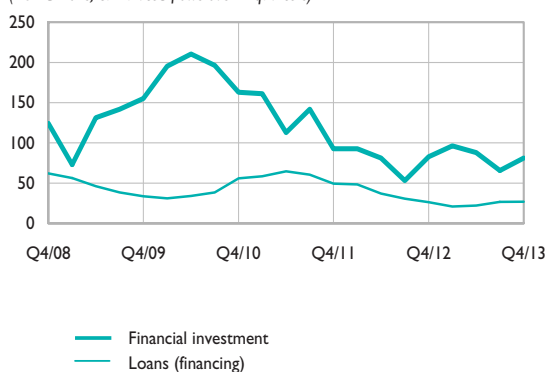


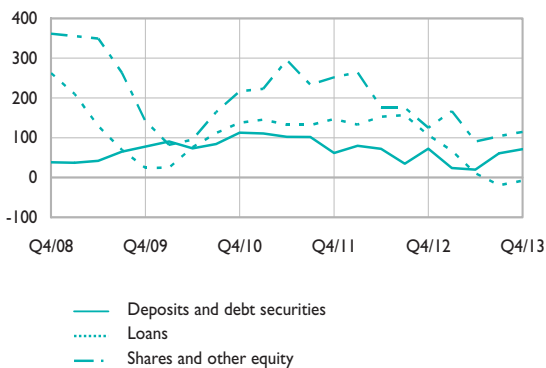
Table 20
Investment and financing – Non-financial corporations – Euro area

(EUR billions)

	Cumulated transaction flows over 4 quarters					Outstanding amounts
	2012	2013				2013
	Q4	Q1	Q2	Q3	Q4	Dec.
Financial assets						
Currency and deposits	70.7	44.7	49.0	90.2	112.3	2,167.8
<i>of which deposits included in M3 ^{a)}</i>	70.1	75.9	76.1	86.7	101.9	1,753.3
Debt securities	1.7	-21.1	-29.3	-29.8	-40.9	318.5
Loans	106.5	66.9	10.5	-19.4	-7.9	3,133.6
Shares and other equity	125.0	166.3	90.4	103.7	114.6	8,963.6
Insurance technical reserves	4.3	4.5	4.1	4.4	2.9	177.6
Remaining net assets	-17.6	0.2	63.0	29.4	39.4	200.7
Financing						
Debt	160.3	122.9	35.2	-22.2	-5.8	9,899.3
Loans	37.2	13.9	-58.2	-112.8	-91.9	8,461.7
<i>of which from euro area MFIs</i>	-108.5	-115.1	-157.4	-165.7	-133.8	4,344.8
Debt securities	118.7	105.0	89.8	87.2	82.7	1,085.0
Pension fund reserves	4.4	4.0	3.7	3.3	3.4	352.5
Shares and other equity	190.5	169.9	154.5	181.9	189.7	15,018.0
Quoted shares	26.5	10.8	20.8	22.8	30.5	4,515.1
Unquoted shares and other equity	164.0	159.1	133.7	159.1	159.2	10,502.9
Net lending/net borrowing (B9B)	-60.2	-31.3	-2.1	18.9	36.6	

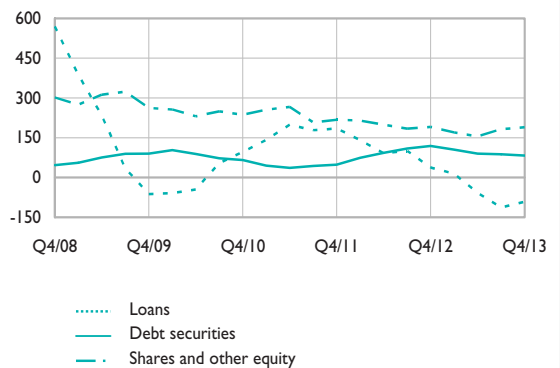
Investment flows

(EUR billions, cumulated flows over 4 quarters)



Financing flows

(EUR billions, cumulated flows over 4 quarters)



a) Deposits with agreed maturity up to 2 years and redeemable at notice up to 3 months of non-financial corporations held with MFIs and central government.

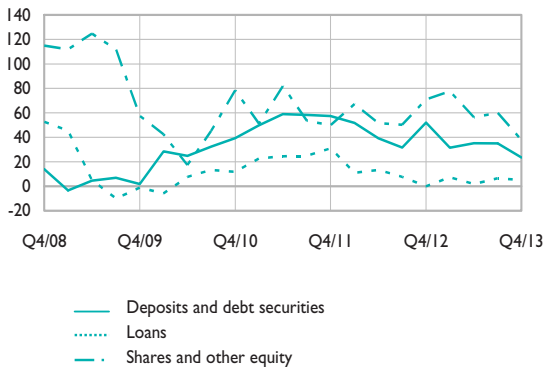
Table 21
Investment and financing – Non-financial corporations – France

(EUR billions)

	Cumulated transaction flows over 4 quarters					Outstanding amounts
	2012	2013				2013
	Q4	Q1	Q2	Q3	Q4	Dec.
Financial assets						
Currency and deposits	53.4	49.1	49.1	45.7	43.5	493.4
Debt securities	-1.3	-17.4	-13.8	-10.7	-20.0	50.7
Loans	-0.2	7.2	1.8	6.4	5.0	726.2
Shares and other equity	70.8	77.5	56.4	59.9	37.8	3,172.3
Insurance technical reserves	0.7	0.8	0.4	0.4	0.1	47.6
Remaining net assets	-29.8	-23.2	-19.8	-33.8	-11.7	-21.6
Financing						
Debt	52.1	41.0	4.1	14.0	26.9	2,123.0
Loans	-0.9	0.0	-19.2	-14.3	5.5	1,618.2
Debt securities	53.0	41.0	23.2	28.3	21.4	504.7
Shares and other equity	87.9	72.9	73.1	75.0	77.2	4,917.0
Quoted shares	10.4	9.4	11.6	11.7	9.7	1,324.4
Unquoted shares and other equity	77.5	63.5	61.5	63.3	67.5	3,592.6
Net lending/net borrowing (B9B)	-46.5	-19.8	-3.2	-21.0	-49.3	

Investment flows

(EUR billions, cumulated flows over 4 quarters)



Financing flows

(EUR billions, cumulated flows over 4 quarters)

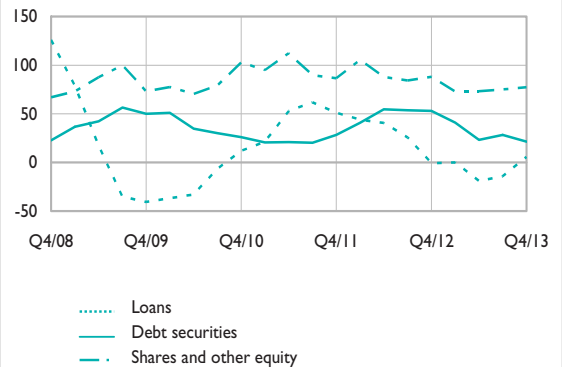


Table 22
Interest rates on bank deposits – France and the euro area

(average monthly rates – %)

	2012	2013	2013	2013		2014		
	Dec.	Dec.	March	Nov.	Dec.	Jan.	Feb.	March
Euro area								
Overnight deposits – households	0.39	0.29	0.36	0.29	0.29	0.28	0.28	0.28
Deposits redeemable at notice up to 3 months – households	1.59	1.11	1.37	1.12	1.11	1.09	1.10	1.07
Time deposits with agreed maturity over 2 years – non-financial corporations	2.16	1.63	1.99	1.73	1.63	1.81	1.75	1.58
France								
"A" passbooks (end of period)	2.25	1.25	1.75	1.25	1.25	1.25	1.25	1.25
Regulated savings deposits	2.25	1.27	1.77	1.27	1.27	1.26	1.27	1.27
Market rate savings deposits	1.82	1.25	1.54	1.25	1.25	1.20	1.28	1.21
Deposits with agreed maturity up to 2 years	2.26	1.97	2.23	2.00	1.97	1.91	1.99	1.94
Deposits with agreed maturity over 2 years	3.01	2.91	3.00	2.96	2.91	2.90	3.02	2.91

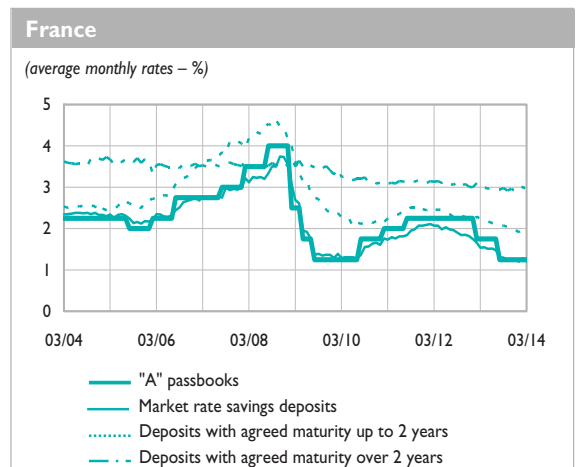
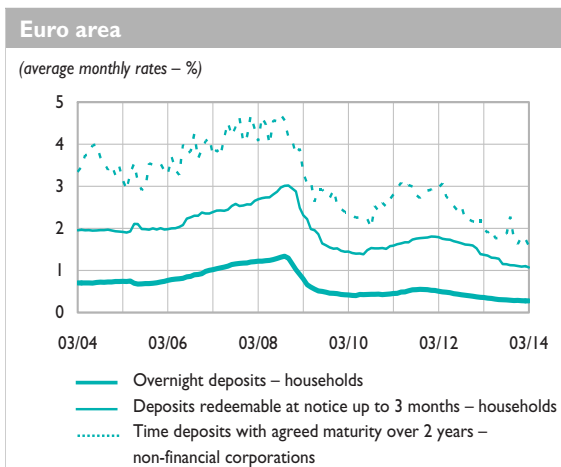
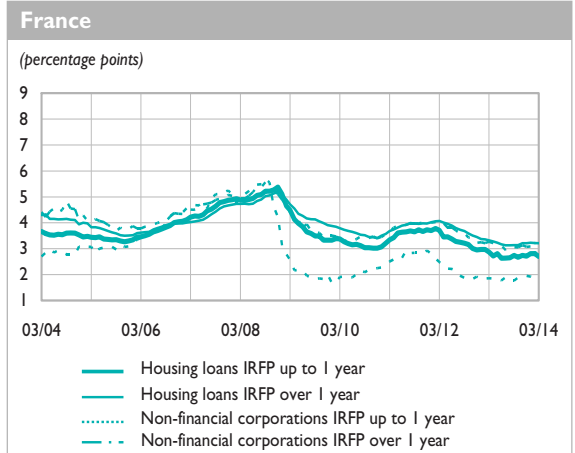
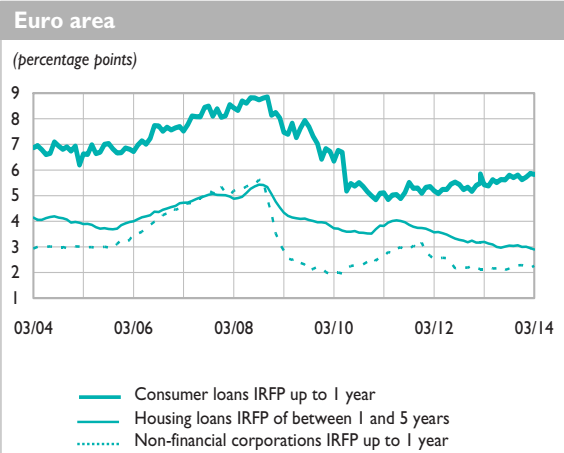


Table 23
Interest rates on bank loans – France and the euro area

(average monthly rate – %)

	2013									2014		
	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
Euro area												
Consumer loans												
Floating rate and IRFP of up to 1 year ^{a)}	5.38	5.62	5.51	5.63	5.62	5.80	5.71	5.81	5.63	5.73	5.87	5.83
Loans for house purchase												
Floating rate and IRFP of between 1 and 5 years	3.13	3.09	3.00	2.97	3.01	3.05	3.04	3.06	3.00	3.01	2.95	2.90
Non financial corporations of over EUR 1 million												
IRFP of up to 1 year ^{a)}	2.20	2.16	2.17	2.22	2.10	2.15	2.25	2.28	2.29	2.25	2.18	2.26
France												
Consumer loans	5.99	5.92	5.85	5.75	5.76	5.76	5.73	5.82	5.83	5.90	5.85	5.78
Loans for house purchase												
IRFP of up to 1 year ^{a)}	2.72	2.81	2.63	2.64	2.65	2.74	2.67	2.74	2.71	2.81	2.81	2.70
IRFP of over 1 year ^{a)}	3.28	3.23	3.17	3.13	3.13	3.14	3.14	3.21	3.21	3.23	3.22	3.21
Non-financial corporations												
IRFP of up to 1 year ^{a)}	1.85	1.82	1.77	1.89	1.77	1.76	1.88	1.87	1.95	1.92	1.87	1.96
IRFP of over 1 year ^{a)}	3.21	3.18	3.11	2.94	3.05	3.06	3.05	3.13	3.07	3.09	3.07	3.06



a) IRFP: initial rate fixation period i.e. the period for which the rate of a loan is fixed.
 IRFP ≤ 1 year: loans for which the rate is adjusted at least once a year + fixed-rate loans with an initial maturity of up to 1 year.
 IRFP > 1 year: loans for which the rate is adjusted less than once a year + fixed-rate loans with an initial maturity of over 1 year.

Table 24
Usury rates on loans to households and cost of business credit – France

(%)

Usury ceiling with effect from the 1st day of the reference period	2013		2014	
	July	Oct.	Jan.	April
Loans to households under Articles L312-1 to L312-36 of the french Consumer Code (housing loans)				
Fixed-rate loans	5.23	5.03	5.04	5.19
Floating-rate loans	4.68	4.45	4.51	4.64
Bridge loans	5.44	5.29	5.23	5.39
Loans to households not within the scope of Articles L312-1 to L312-36 of the French Consumer Code (consumer loans)				
Loans up to EUR 3,000	20.09	20.23	20.23	20.27
Loans comprised between EUR 3,000 and EUR 6,000	15.77	15.17	15.12	15.09
Loans over EUR 6,000	11.05	10.52	10.35	10.21

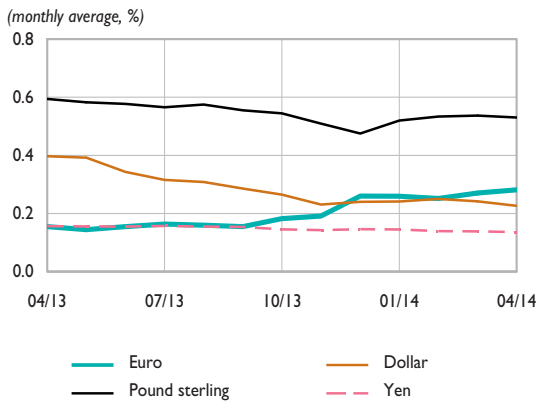
	2013				2014
	Jan.	April	July	Oct.	Jan.
Loans to enterprises					
Discount					
up to EUR 15,245	2.57	2.75	2.69	3.09	3.10
EUR 15,245 to EUR 45,735	2.77	2.98	3.23	3.91	3.63
EUR 45,735 to EUR 76,225	2.90	3.26	3.04	3.32	3.25
EUR 76,225 to EUR 304,898	2.33	2.27	2.15	2.52	2.40
EUR 304,898 to EUR 1,524,490	1.44	1.60	1.42	1.55	1.76
over EUR 1,524,490	1.05	0.90	0.85	1.10	1.00
Overdrafts					
up to EUR 15,245	9.79	9.84	9.92	9.94	9.98
EUR 15,245 to EUR 45,735	6.01	6.39	6.19	6.66	6.82
EUR 45,735 to EUR 76,225	4.43	4.50	4.55	5.11	5.52
EUR 76,225 to EUR 304,898	2.74	3.40	3.69	3.87	4.16
EUR 304,898 to EUR 1,524,490	1.82	1.95	1.83	2.13	2.41
over EUR 1,524,490	1.19	1.24	1.15	1.36	1.38
Other short-term loans					
up to EUR 15,245	3.40	3.57	3.43	3.63	3.47
EUR 15,245 to EUR 45,735	3.05	3.09	3.15	3.39	3.10
EUR 45,735 to EUR 76,225	2.75	2.57	2.61	2.73	2.64
EUR 76,225 to EUR 304,898	2.13	2.19	2.22	2.21	2.40
EUR 304,898 to EUR 1,524,490	1.67	1.61	1.74	1.72	1.70
over EUR 1,524,490	1.76	1.74	1.80	1.92	1.92
Medium and long-term loans					
up to EUR 15,245	3.51	3.23	3.20	3.22	3.20
EUR 15,245 to EUR 45,735	3.13	2.97	2.89	2.95	2.89
EUR 45,735 to EUR 76,225	3.08	2.93	2.88	2.89	2.92
EUR 76,225 to EUR 304,898	3.13	3.07	2.92	2.96	2.96
EUR 304,898 to EUR 1,524,490	2.99	2.86	2.78	2.83	2.90
over EUR 1,524,490	2.55	2.49	2.38	2.50	2.44

Table 25
Interest rates

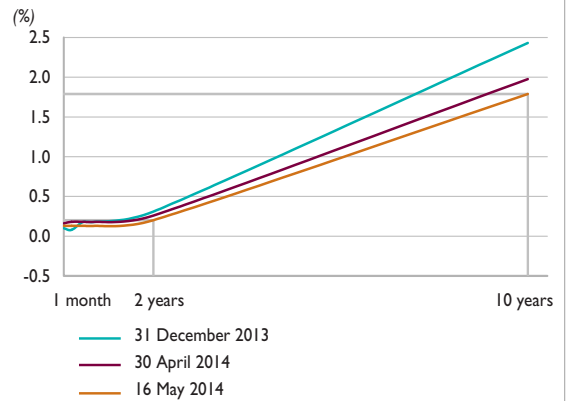
(%)

	Monthly average ^{a)}										Key interest rates at 16/05/14	
	2013						2014					
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April		
Short-term interbank interest rates												
Euro												0.25
Overnight	0.07	0.06	0.07	0.09	0.11	0.13	0.17	0.13	0.14	0.22		
3-month	0.16	0.16	0.15	0.18	0.19	0.26	0.26	0.25	0.27	0.28		
1-year	0.43	0.48	0.46	0.51	0.46	0.54	0.55	0.54	0.55	0.57		
Pound sterling												0.50
Overnight	0.47	0.47	0.45	0.45	0.44	0.44	0.45	0.45	0.44	0.44		
3-month	0.57	0.57	0.56	0.54	0.51	0.48	0.52	0.53	0.54	0.53		
1-year	0.88	0.87	0.89	0.86	0.86	0.85	0.86	0.91	0.89	0.92		
Dollar												0.25
Overnight	0.16	0.15	0.14	0.15	0.13	0.12	0.13	0.14	0.13	0.14		
3-month	0.32	0.31	0.29	0.26	0.23	0.24	0.24	0.25	0.24	0.23		
1-year	0.69	0.68	0.64	0.58	0.55	0.55	0.57	0.57	0.56	0.55		
Yen												0.10
Overnight	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.06		
3-month	0.16	0.15	0.15	0.15	0.14	0.15	0.14	0.14	0.14	0.14		
1-year	0.34	0.34	0.33	0.33	0.32	0.27	0.27	0.27	0.26	0.25		
10-year benchmark government bond yields ^{b)}												
France	2.25	2.36	2.49	2.39	2.27	2.33	2.38	2.25	2.15	2.03		
Germany	1.62	1.80	1.93	1.81	1.72	1.85	1.78	1.66	1.60	1.53		
Euro area	3.10	3.10	3.41	3.16	3.17	3.31	3.21	3.09	2.89	2.61		
United Kingdom	2.36	2.62	2.89	2.69	2.75	2.93	2.86	2.75	2.73	2.68		
United States	2.57	2.75	2.83	2.62	2.73	2.89	2.85	2.70	2.72	2.70		
Japan	0.83	0.76	0.72	0.63	0.62	0.68	0.68	0.60	0.62	0.62		

3-month interbank market rates



Yield curve for French government bonds



a) Short-term: the interbank average of rates situated in the middle of the range between bid and ask rates. Quotes taken from Reuters, posted at 4.30pm for the euro and 11.30am for other currencies.

b) Benchmark bonds: rates posted by Reuters at 4.30pm.

Table 26
Banking system liquidity and refinancing operations – Euro area

(EUR billions, daily average for the reserve maintenance period from 12 March to 8 April 2014)

	Liquidity providing	Liquidity absorbing	Net contribution
Contribution to banking system liquidity			
(a) Eurosystem monetary policy operations	868.2	204.7	663.4
Main refinancing operations	105.4		105.4
Longer-term refinancing operations	534.6		534.6
Standing facilities	0.7	29.2	-28.6
Other	227.5	175.5	52.0
(b) Other factors affecting banking system liquidity	543.9	1,012.2	-468.2
Banknotes in circulation		938.4	-938.4
Government deposits with the Eurosystem		73.8	-73.8
Net foreign assets (including gold)	518.9		518.9
Other factors (net)	25.1		25.1
(c) Reserves maintained by credit institutions (a) + (b)			195.2
<i>including reserve requirements</i>			<i>103.6</i>

Net contribution to banking system liquidity

(EUR billions, daily average for the reserve maintenance period from 12 March to 8 April 2014)

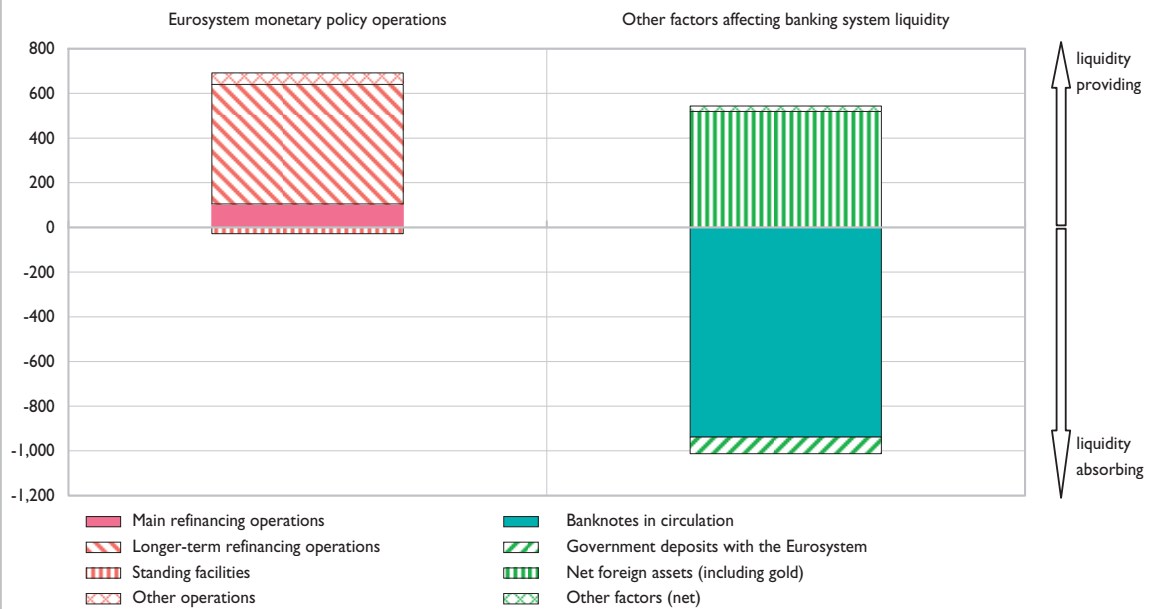


Table 27
Eurosystem key rates; minimum reserves

(%)

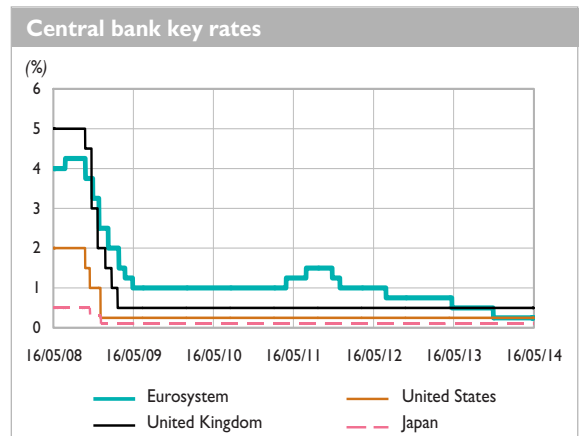
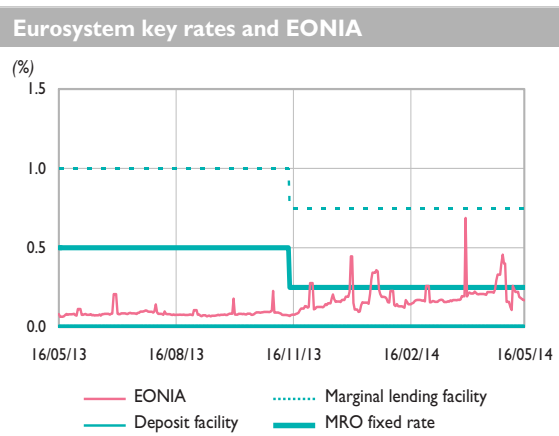
Key rates for the Eurosystem (latest changes)						
Main refinancing operations			Standing facilities			
Date of		Fixed rate	Date of		Deposit	Marginal lending
decision	settlement		decision	settlement		
05/07/12	11/07/12	0.75	05/07/12	11/07/12	0.00	1.50
02/05/13	08/05/13	0.50	02/05/13	08/05/13	0.00	1.00
07/11/13	13/11/13	0.25	07/11/13	13/11/13	0.00	0.75

(%)

Main refinancing operations				Longer-term refinancing operations		
		Marginal rate	Weighted average rate			Marginal rate
2014	9 April ^{a)}	0.25	0.25	2014	12 March	0.25
	16 April	0.25	0.25		27 March	0.25
	23 April	0.25	0.25		9 April	0.25
	30 April	0.25	0.25		14 May	0.25
	7 May	0.25	0.25		15 May	0.25
	14 May	0.25	0.25		16 May	0.25

(EUR billions – rates as a %)

Minimum reserves (daily averages)								
Reserve maintenance period ending on		Required reserves		Current accounts		Excess reserves		Interest rate on minimum reserves
		Euro area	France	Euro area	France	Euro area	France	
2013	12 November	103.80	19.70	244.90	41.60	141.10	21.90	0.50
	10 December	103.30	19.60	220.20	36.00	116.90	16.40	0.25
2014	14 January	103.40	19.60	248.10	43.10	144.80	23.50	0.25
	11 February	103.60	19.40	216.00	38.40	112.40	19.00	0.25
	11 March	102.80	19.80	201.10	33.50	98.30	13.70	0.25
	8 April	103.60	19.80	195.20	30.60	91.60	10.70	0.25



a) Fixed rate tender procedure.

Sources: European Central Bank, ESCB.

Produced 20 May 2014

Table 28
Negotiable debt securities – France

Certificates of deposit			
	EUR billions ^{a)}		Number of issuers
	Issues	Stocks	
15/02/14 to 21/02/14	41.14	283.96	150
22/02/14 to 28/02/14	43.24	284.44	148
01/03/14 to 07/03/14	37.75	282.71	150
08/03/14 to 14/03/14	40.65	285.51	151
15/03/14 to 21/03/14	33.78	283.82	151
22/03/14 to 28/03/14	38.81	277.80	150
29/03/14 to 04/04/14	41.91	270.64	147
05/04/14 to 11/04/14	41.41	273.97	148
12/04/14 to 18/04/14	37.60	272.36	148
19/04/14 to 25/04/14	41.79	272.58	149
26/04/14 to 02/05/14	37.38	267.43	150
03/05/14 to 09/05/14	37.70	268.50	151
10/05/14 to 16/05/14	52.97	269.05	148

Commercial paper			
	EUR billions ^{a)}		Number of issuers
	Issues	Stocks	
15/02/14 to 21/02/14	7.06	53.90	95
22/02/14 to 28/02/14	7.28	54.18	97
01/03/14 to 07/03/14	7.02	51.22	98
08/03/14 to 14/03/14	14.87	55.53	98
15/03/14 to 21/03/14	12.26	61.18	101
22/03/14 to 28/03/14	5.60	60.98	102
29/03/14 to 04/04/14	9.81	64.06	103
05/04/14 to 11/04/14	13.39	64.87	105
12/04/14 to 18/04/14	6.09	62.30	105
19/04/14 to 25/04/14	7.17	56.42	103
26/04/14 to 02/05/14	6.41	56.09	103
03/05/14 to 09/05/14	7.75	55.43	105
10/05/14 to 16/05/14	8.97	53.75	104

Negotiable medium-term notes			
	EUR billions ^{a)}		Number of issuers
	Issues	Stocks	
15/02/14 to 21/02/14	0.34	75.29	114
22/02/14 to 28/02/14	0.38	75.33	114
01/03/14 to 07/03/14	0.27	74.13	115
08/03/14 to 14/03/14	0.20	74.27	115
15/03/14 to 21/03/14	0.28	74.24	115
22/03/14 to 28/03/14	0.25	73.89	115
29/03/14 to 04/04/14	0.19	73.78	115
05/04/14 to 11/04/14	0.30	73.61	114
12/04/14 to 18/04/14	0.36	73.62	114
19/04/14 to 25/04/14	0.15	73.64	114
26/04/14 to 02/05/14	0.01	73.19	114
03/05/14 to 09/05/14	0.13	73.19	114
10/05/14 to 16/05/14	0.18	73.23	114

a) Issues in euro are cumulative over the reference period. Outstanding amounts are calculated from the cut-off date (the last day of the period under review).

Source: Banque de France.

Produced 20 May 2014

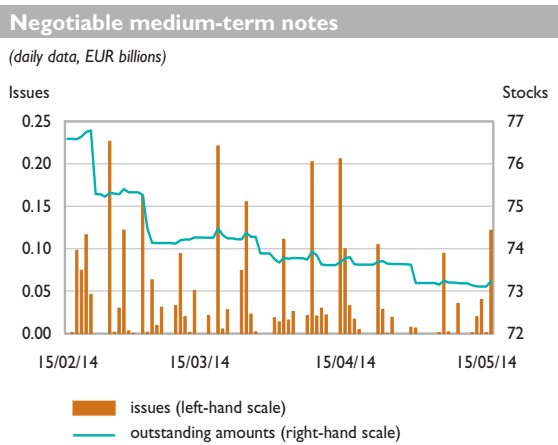
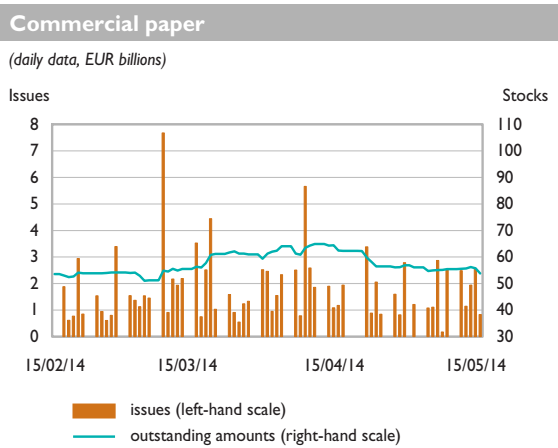
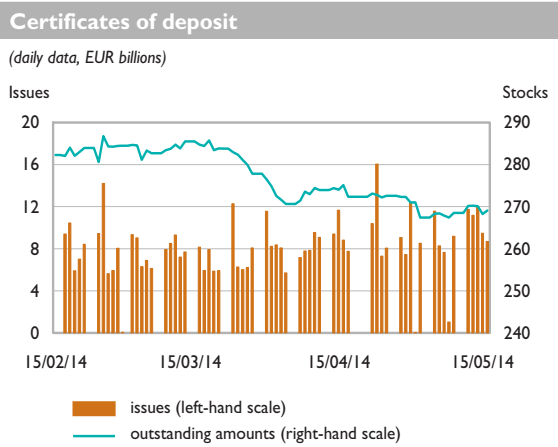
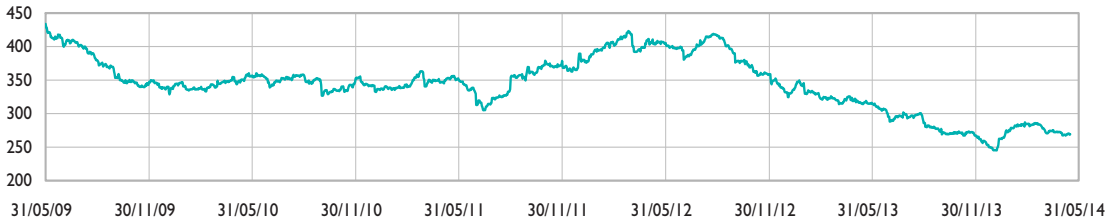


Table 29
Negotiable debt securities – France

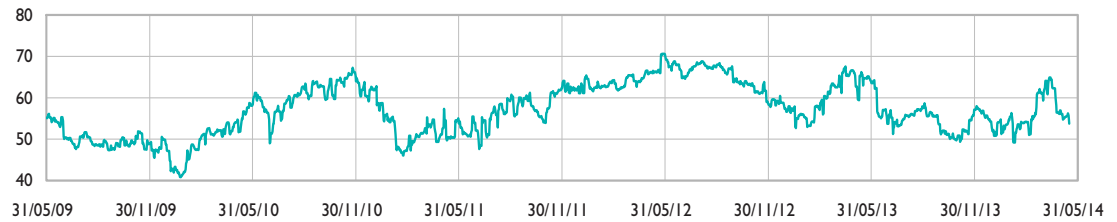
Certificates of deposit

(daily outstanding amounts in EUR billions)



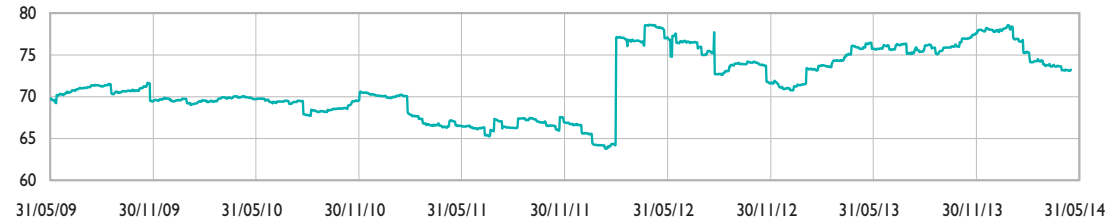
Commercial paper

(daily outstanding amounts in EUR billions)



Negotiable medium-term notes

(daily outstanding amounts in EUR billions)



Negotiable debt securities, cumulated outstandings

(daily outstanding amounts in EUR billions)



Source: Banque de France.

Produced 20 May 2014

Table 30
Investment funds' investments – France

(EUR billions)

	2013			2014
	June	Sept.	Dec.	March
Net assets of investment funds' investments by category				
Money-market funds	335.85	329.53	318.23	323.32
Bond mutual funds	204.64	206.42	207.97	
Equity mutual funds	240.86	257.09	272.18	
Mixed funds	258.12	266.13	272.23	
Funds of alternative funds	13.28	12.41	12.51	
Guaranteed-performance mutual funds	0.00	0.00	0.00	
Structured funds ("fonds à formule")	46.22	45.33	43.14	

Net assets of money-market funds

(EUR billions)

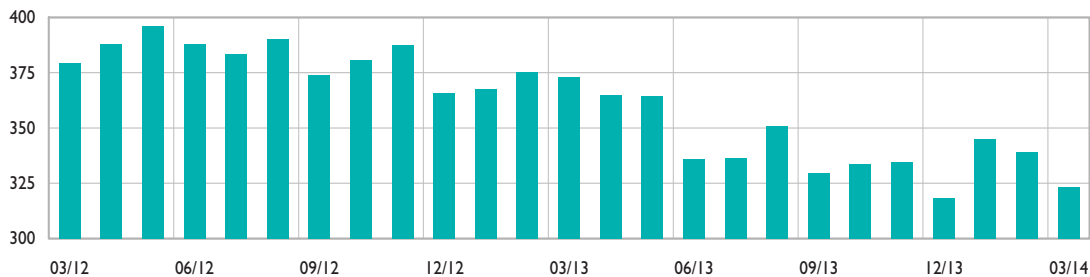


Table 3 I
Debt securities and quoted shares issued by French residents

(EUR billions)

	Outstanding amounts ^{a)}		Net issues ^{b)}			
	2013	2014	12-month total	2014		
	March ^{c)}	March ^{c)}		Jan. ^{c)}	Feb. ^{c)}	March ^{c)}
Debt securities issued by French residents						
Total	3,336.6	3,451.6	115.0	27.8	24.4	19.5
Non-financial corporations	487.0	517.7	30.7	12.0	3.8	0.0
Short-term (≤ 1 year)	38.6	40.3	1.8	4.7	-0.2	-0.2
Long-term (> 1 year)	448.5	477.4	28.9	7.3	4.0	0.2
General government	1,585.9	1,677.7	91.8	2.1	16.0	19.6
Short-term (≤ 1 year)	208.4	224.2	15.8	-3.7	5.1	13.3
Long-term (> 1 year)	1,377.5	1,453.5	76.0	5.7	10.9	6.2
Monetary financial institutions ^{d)}	1,124.4	1,130.1	5.7	21.1	4.8	-1.7
Short-term (≤ 1 year)	287.8	258.7	-29.2	28.6	4.1	-9.3
Long-term (> 1 year) ^{d)}	836.6	871.4	34.8	-7.5	0.8	7.7
Non-monetary financial institutions ^{e)}	139.3	126.1	-13.1	-7.3	-0.2	1.6

(EUR billions)

	Outstanding amounts ^{f)}		Net issues ^{b)}			Gross issues ^{g)}	Repurchases ^{g)}
	2013	2014	12-month total	2014		12-month total	12-month total
	March	March		Feb.	March		
French quoted shares							
Total	1,325.6	1,623.4	14.3	1.1	1.3	18.1	3.8
Non-financial corporations	1,172.1	1,390.7	12.7	1.0	1.3	16.4	3.8
Monetary financial institutions	102.9	161.5	0.7	0.1	0.1	0.7	0.0
Non-monetary financial institutions	50.6	71.2	0.9	0.1	0.0	1.0	0.0

a) Nominal values for outstanding amounts of debt securities.

b) Monthly data are seasonally adjusted. The 12-month total is unadjusted.

c) Data possibly revised.

d) Excluding the impact of intra-group transactions between banks.

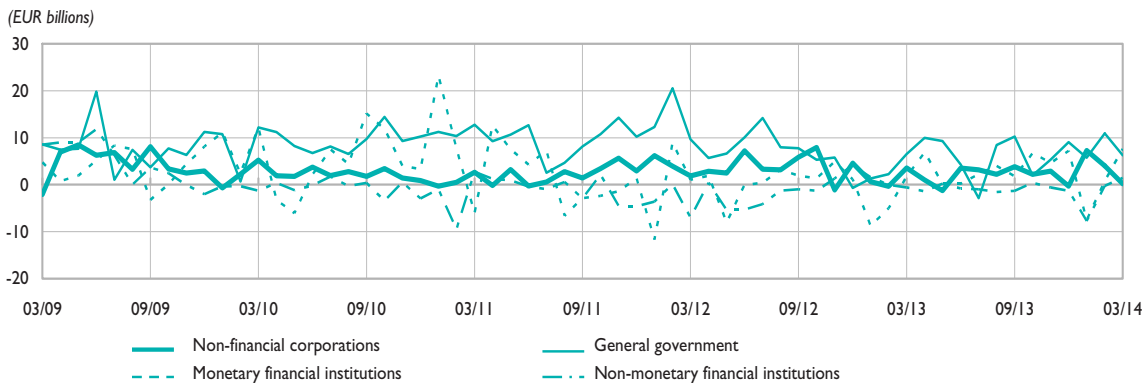
e) Including units issued by SPVs.

f) Market values for outstanding amounts of quoted shares.

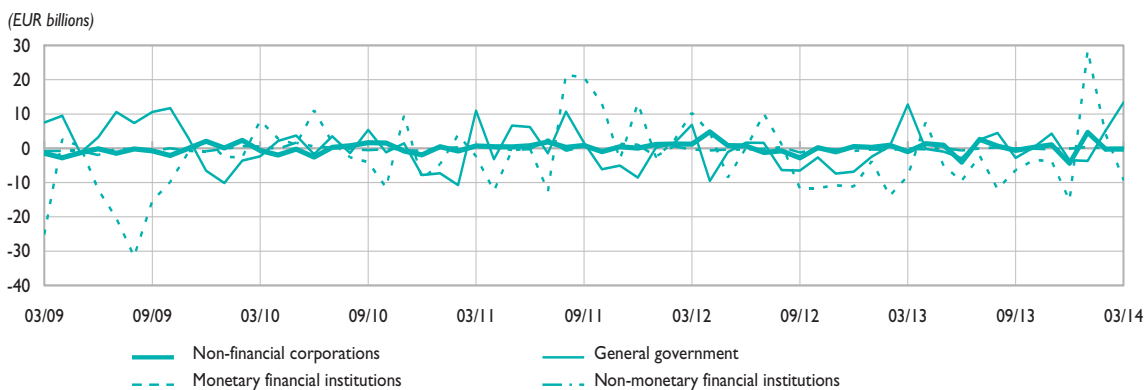
g) Non-seasonally adjusted data.

Table 32
Debt securities and quoted shares issued by French residents, by sector

Net issues of long-term debt securities by French residents (seasonally adjusted)



Net issues of short-term debt securities by French residents (seasonally adjusted)



Net issues of quoted shares by French residents (seasonally adjusted)

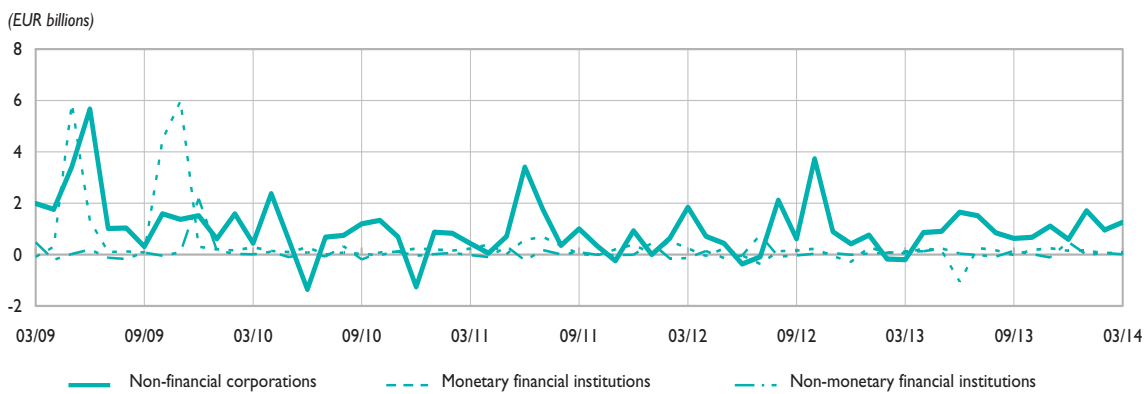


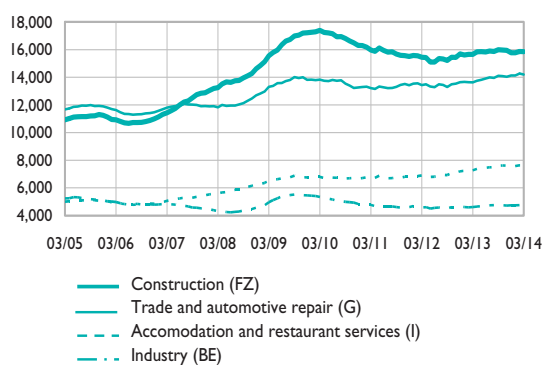
Table 33
Company failures by economic sector – France

(number of companies, unadjusted data, 12-month total)

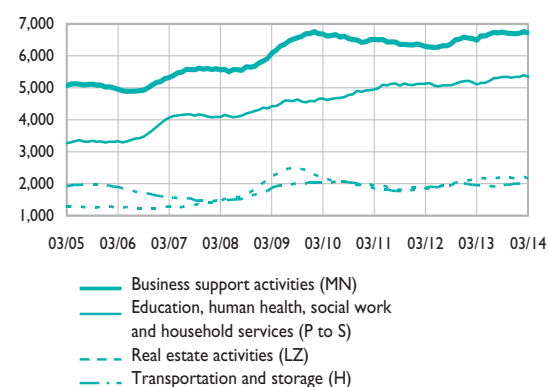
	2013											2014	
	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
Agriculture, forestry and fishing (AZ)	1,221	1,226	1,222	1,251	1,258	1,268	1,286	1,280	1,276	1,303	1,323	1,342	1,334
Industry (BE)	4,624	4,657	4,697	4,685	4,753	4,767	4,782	4,750	4,730	4,747	4,754	4,757	4,722
Construction (FZ)	15,653	15,840	15,859	15,830	15,901	15,869	15,991	15,978	15,953	15,773	15,775	15,862	15,861
Trade and automotive repair (G)	13,632	13,749	13,823	13,911	13,998	13,957	14,114	14,090	14,046	14,135	14,131	14,271	14,203
Transportation and storage (H)	1,953	1,937	1,938	1,923	1,915	1,920	1,951	1,968	1,975	2,004	1,999	2,027	2,021
Accommodation and restaurant services (I)	7,271	7,373	7,420	7,452	7,498	7,485	7,597	7,631	7,617	7,606	7,587	7,648	7,621
Information and communication sector (JZ)	1,495	1,520	1,516	1,520	1,568	1,560	1,547	1,560	1,581	1,606	1,600	1,611	1,633
Financial and insurance activities (KZ)	1,131	1,131	1,113	1,108	1,131	1,126	1,135	1,144	1,148	1,170	1,198	1,213	1,206
Real estate activities (LZ)	2,136	2,174	2,179	2,187	2,173	2,188	2,190	2,194	2,188	2,169	2,181	2,212	2,169
Business support activities (MN)	6,488	6,631	6,625	6,679	6,732	6,717	6,742	6,712	6,698	6,689	6,706	6,754	6,719
Education, human health, social work and household services (P to S)	5,101	5,150	5,153	5,217	5,301	5,313	5,340	5,345	5,314	5,340	5,341	5,395	5,352
Sector unknown	91	88	95	96	97	94	93	94	89	87	88	97	103
Total sectors	60,796	61,476	61,640	61,859	62,325	62,264	62,768	62,746	62,615	62,629	62,683	63,189	62,944

Company failures – 12-month total

(number of companies – unadjusted data)



(number of companies – unadjusted data)



NB: The two-letter codes correspond to the aggregation level A10, and the one-letter codes to revised NAF sections 2 A21.
Data for last month are preliminary.

Table 34
Retail payment systems – France

(daily average in EUR millions, % share for the last month)

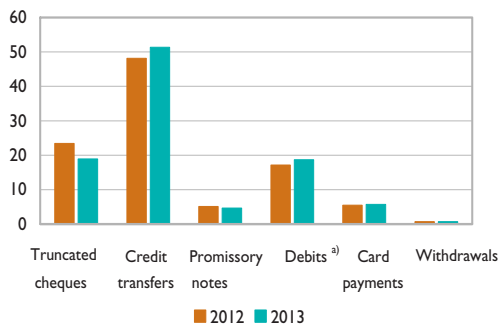
	2010	2011	2012	2013	2014			2014
					Feb.	March	April	Share
Cheques	5,590	5,478	4,947	3,986	3,828	3,627	4,041	17.8
Credit transfers	8,865	9,646	10,167	10,827	11,177	10,808	11,970	52.7
of which SEPA credit transfers	683	2,555	4,130	5,967	10,064	9,939	11,147	49.1
Promissory notes	1,138	1,142	1,079	981	938	932	1,044	4.6
Direct debits	1,827	1,938	2,004	2,048	1,958	1,819	2,139	9.4
Interbank payment orders	133	130	131	129	163	80	88	0.4
Electronic payment orders	1,141	1,343	1,491	1,766	1,590	1,613	1,989	8.8
Card payments	1,009	1,085	1,152	1,200	1,174	1,201	1,289	5.7
ATM withdrawals	140	145	146	147	139	144	158	0.7
Total	19,844	20,907	21,116	21,085	20,968	20,225	22,718	100.0

(daily average in thousands of transactions, % share for the last month)

	2010	2011	2012	2013	2014			2014
					Feb.	March	April	Share
Cheques	9,507	9,112	8,588	8,040	7,675	7,329	8,328	14.1
Credit transfers	7,356	7,549	7,593	7,722	8,244	7,973	8,579	14.6
of which SEPA credit transfers	270	1,400	2,154	3,641	7,497	7,403	8,051	13.7
Promissory notes	311	303	291	281	275	271	306	0.5
Direct debits	8,194	8,502	8,680	8,737	8,651	8,269	10,420	17.7
Interbank payment orders	364	342	320	301	292	238	244	0.4
Electronic payment orders	66	76	101	127	126	76	174	0.3
Card payments	21,505	22,969	24,489	25,868	25,793	26,153	28,281	48.0
ATM withdrawals	2,375	2,422	2,407	2,397	2,303	2,399	2,593	4.4
Total	49,677	51,275	52,469	53,472	53,360	52,707	58,924	100.0

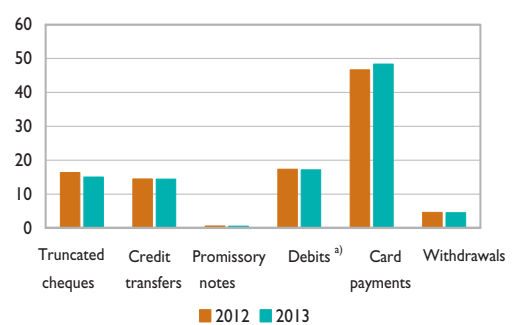
Market share developments
for main non-cash means of payment

(% of amounts exchanged)



Market share developments
for main non-cash means of payment

(% of volumes exchanged)



a) Debits: direct debits, interbank payment orders and electronic payment orders.

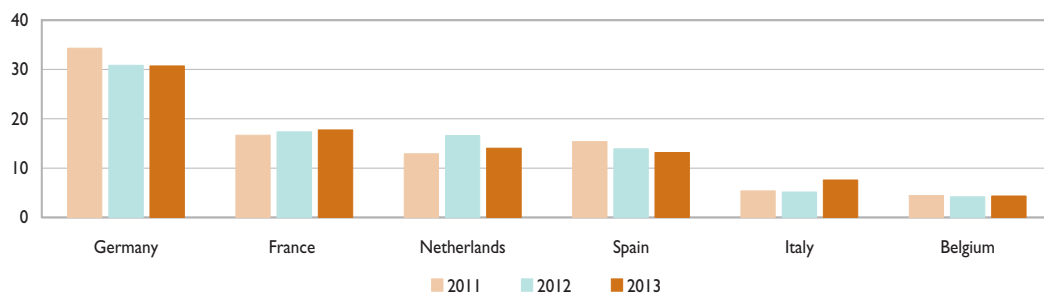
Table 35
Large-value payment systems – EU

(daily average in EUR billions, % share for the last month)

	2010	2011	2012	2013	2014			2014
					Feb.	March	April	Share
France	365	398	431	343	332	352	380	18.0
Germany	829	818	764	594	606	621	664	31.6
Austria	27	27	25	21	25	27	29	1.4
Belgium	95	106	104	84	88	88	92	4.4
Cyprus	2	2	3	1	0	0	0	0.0
Spain	342	367	345	255	249	253	265	12.6
Estonia	–	1	1	1	1	1	1	0.0
Finland	35	47	85	39	37	35	37	1.8
Greece	28	23	20	34	29	27	37	1.8
Ireland	30	21	17	15	15	16	17	0.8
Italy	129	129	128	147	165	172	183	8.7
Latvia	–	–	–	–	1	2	2	0.1
Luxembourg	40	57	70	67	68	66	71	3.4
Malta	0	0	1	0	1	0	1	0.0
Netherlands ^{a)}	300	308	412	272	240	239	249	11.8
Portugal	20	22	14	11	11	11	13	0.6
Slovakia	3	3	3	2	2	2	3	0.1
Slovenia	2	2	3	2	2	2	4	0.2
EPM-ECB	37	36	35	29	37	40	40	1.9
Total TARGET2 euro area ^{b)}	2,283	2,368	2,462	1,918	1,909	1,953	2,087	99.2
Non-euro area	16	17	15	17	16	16	16	0.8
Total TARGET2 EU ^{b)}	2,299	2,385	2,477	1,935	1,925	1,969	2,103	100.0
Euro1 ^{c)}	241	249	226	191	183	186	na	

Market share of each financial centre in the TARGET2 system

(% of turnover)



The sum of the components may not be equal to the total (or to 100) due to rounding.

Since January 2009, a new methodology for collecting and reporting statistics has been established on the TARGET2 data to improve data quality. This must be taken into account when comparing 2009 data with previous data.

a) Since 19 May 2008, the operations of the United Kingdom pass in transit by this country.

b) Variable composition according to the countries which participate in the systems of payment in euro.

c) Euro1 (EBA): clearing system of the Euro Banking Association. Euro1 data include retail payments recorded in STEP1.

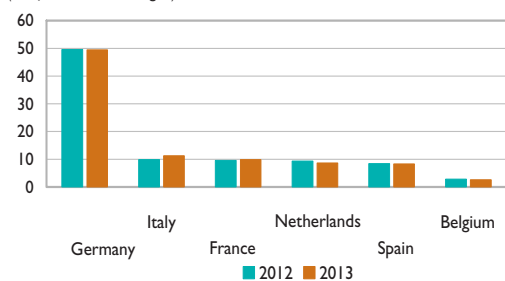
Table 36
Large-value payment systems – EU

(daily average in number of transactions, % share for the last month)

	2010	2011	2012	2013	2014			2014
					Feb.	March	April	Share
France	31,850	34,139	33,830	35,753	37,426	38,206	40,517	10.6
Germany	173,218	172,884	175,611	179,655	178,279	177,664	184,508	48.4
Austria	5,266	6,294	6,711	4,719	4,606	4,668	5,055	1.3
Belgium	9,454	10,265	9,955	9,322	9,956	10,076	11,619	3.0
Cyprus	466	515	613	872	555	542	585	0.2
Spain	29,195	29,509	29,760	30,105	29,594	29,573	29,685	7.8
Estonia	–	329	360	417	453	469	508	0.1
Finland	1,589	1,571	1,611	1,596	1,558	1,596	1,645	0.4
Greece	5,904	5,861	4,335	4,292	3,313	3,189	3,316	0.9
Ireland	4,961	4,376	4,012	3,589	3,455	3,484	3,870	1.0
Italy	33,649	33,643	34,837	40,711	44,725	47,550	48,591	12.7
Latvia	–	–	–	–	1,335	1,355	1,439	0.4
Luxembourg	3,033	3,229	3,509	4,398	5,040	4,919	5,149	1.4
Malta	65	72	157	236	324	311	402	0.1
Netherlands ^{a)}	33,304	32,490	33,144	31,300	27,743	26,891	28,205	7.4
Portugal	4,206	4,165	4,166	4,276	4,691	4,720	4,876	1.3
Slovakia	582	730	1,090	1,255	1,477	1,010	959	0.3
Slovenia	3,023	3,039	2,786	2,697	2,681	2,733	3,028	0.8
EPM-ECB	333	379	553	590	679	686	688	0.2
Total TARGET2 euro area^{b)}	340,099	343,488	347,040	355,785	357,888	359,645	374,645	98.3
Non-euro area	3,281	5,017	7,145	7,313	6,248	6,278	6,626	1.7
Total TARGET2 EU^{b)}	343,380	348,505	354,185	363,099	364,136	365,924	381,271	100.0
Euro1^{c)}	343,380	348,505	354,185	363,099	230,872	234,890	na	

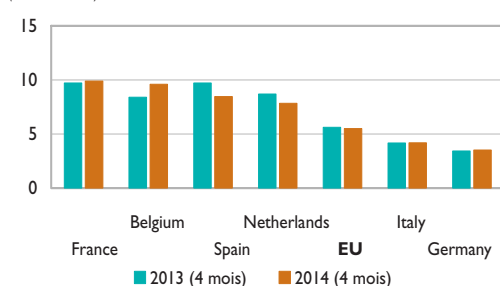
Market share of each financial centre in the TARGET2 system

(% of volumes exchanged)



Average transaction amount in the TARGET2 system

(EUR millions)



The sum of the components may not be equal to the total (or to 100) due to rounding.

Since January 2009, a new methodology for collecting and reporting statistics has been established on the TARGET2 data to improve data quality. This must be taken into account when comparing 2009 data with previous data.

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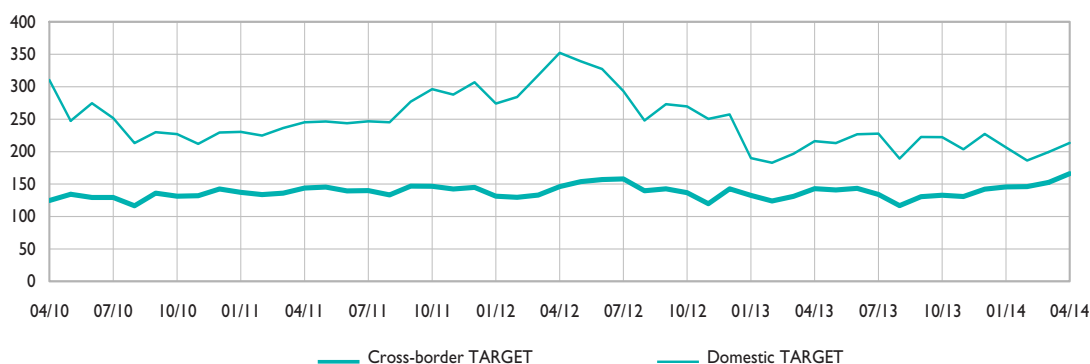
Table 37
Large-value payment systems – France

(daily average in EUR billions, % share for the last month)

	2010	2011	2012	2013	2014			2014
					Feb.	March	April	Share
Collateral used in domestic TARGET^{b)}								
French negotiable securities	105.7	81.6	127.4	109.8	71.7	71.0	68.7	22.6
Private claims	149.8	146.4	189.9	180.7	164.1	163.8	164.4	54.1
Securities collateralised through CCBM	76.9	60.5	53.7	63.7	66.0	64.1	66.6	21.9
Other securities ^{c)}	5.9	3.5	2.7	3.4	4.0	3.9	4.4	1.4
Total	338.3	292.0	373.8	357.6	305.8	302.8	304.1	100.0

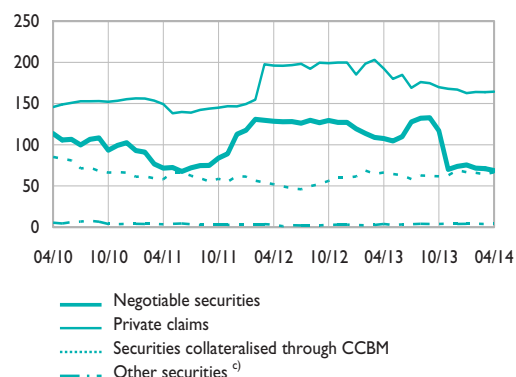
Monthly change in amounts exchanged in French payment systems^{a)}

(EUR billions, daily average)

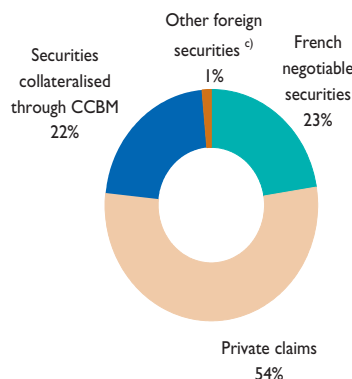


Monthly change in collateral^{b)}

(EUR billions, daily average)



Collateral used in April 2014^{b)}



a) Since 18 February 2008, TBF (the French component of TARGET) and PNS systems have been replaced by TARGET2-Banque de France, the single French large-value payment system.

b) Until 15 February 2008, the indicated amounts corresponded to collateral used for intraday credit in TBF. Since the go-live of the "3G" system (Global management of collateral) and TARGET2-Banque de France on 18 February 2008, the amounts represent the collateral posted in a single pool of assets and that can be used for monetary policy and/or intraday credit operations.

c) Other foreign securities submitted via links between securities settlement systems.

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Published by

Banque de France
39 rue Croix des Petits-Champs
75001 Paris

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Imprint

Banque de France

Registration of copyright

May 2014

Internet

<http://www.banque-france.fr/en/publications/banque-de-france-bulletins/quarterly-selection-of-articles.html>

