QUARTERLY SELECTION OF ARTICLES

BANQUE DE FRANCE BULLETIN

SPRING 2008

11

BANQUE DE FRANCE

EUROSYSTÈME

114-011

Subscription form

❑ **My personal details have changed. Please update my subscription information according:**

Subscription number: .....

First name: ..... Surname: .....

Company:..... Job title: .....

Address: .....

Post code: ..... Town: .....

Country: .....

❑ **I wish to cancel my subscription to the *Quarterly Selection of Articles* of the Banque de France:**

Subscription number: .....

First name: ..... Surname: .....

❑ **I wish to subscribe to the *Quarterly Selection of Articles* of the Banque de France:**

First name: ..... Surname: .....

❑ Personal subscription

Address: .....

.....

Post code: .....

Town: .....

Country: .....

❑ Professional subscription

Job title: .....

Company: .....

Activity: .....

Address: .....

.....

Post code: .....

Town: .....

Country: .....

Please return this form by:

fax: +33 (0)1 42 92 29 77

e-mail: abonnement.publication@banque-france.fr

post:

BANQUE DE FRANCE
Service des Publications économiques et du Site internet
Code courrier 43-1396
F-75049 PARIS CEDEX 01

BANQUE DE FRANCE
EUROSYSTÈME

Contents

Articles

Published articles

Other publications

Statistics

The macroeconomic impact of structural reforms

Olivier de Bandt
Macroeconomic Analysis and Forecasting Directorate

Olivier Vigna
Macroeconomic Analysis and Forecasting Directorate
Euro Area Outlook Division

It is often argued that differences in economic performance are mainly explained by structural factors. Accordingly, most countries are engaged to a greater or lesser extent in structural reforms on their product & services and labour markets. The economic literature is clear on the long-term benefits of these reforms: they raise potential output, reduce unemployment and make economies more resilient to macroeconomic shocks, thereby facilitating the conduct of monetary policy. The question, then, particularly for public policymakers, is how to successfully implement structural policies.

Countries have to identify the optimal strategy that will minimise the short-term costs that introducing reforms may incur. Unlocking potential synergies between reforms is key in this regard, insofar as product market reforms boost real wages and employment, while labour market reforms may negatively impact real wages in the short term even as the employment situation improves.

This article considers reform efforts in OECD countries. It begins by analysing the lessons of economic theory, drawing a distinction between long-term gains and short-term dynamic effects. The next section looks at successful programmes in several countries, demonstrating that although countries may start from different points, having certain initial conditions in place is important to giving reforms the best chance of success and to making the reform process itself as credible as possible.

Keywords: structural reforms, product market, labour market, potential growth.

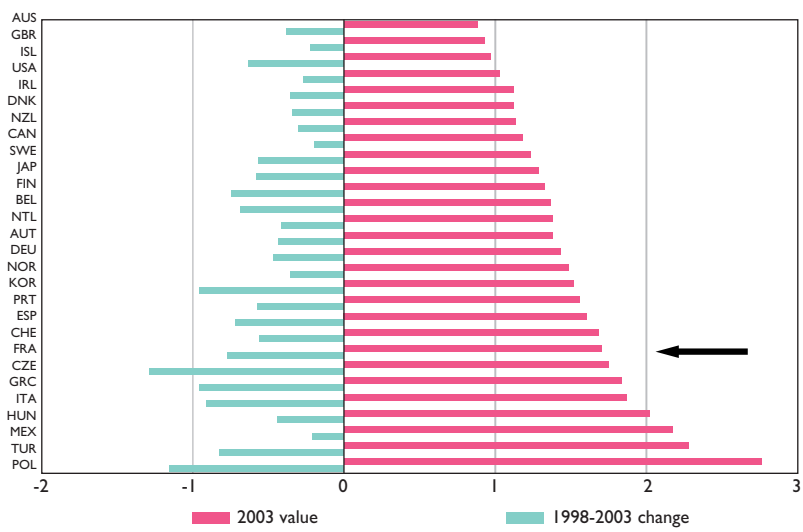
JEL codes: C51, E24, E31, E32, L51

NB: C. Cahn, A. Devulder and N. Maggiar of the Research and Forecasting Division provided assistance in using the ACDM model (2007) to simulate the impact of product market reforms in a general equilibrium setting.

Developed countries, particularly those in the euro area, are having to contend with the emergence of new partners, like China and India, that are gaining market share as part of a shift that will eventually change the world economic rankings. Yet not all developed countries are rising to the challenge. Some are doing better than others at holding their positions across a range of measures, including per capita wealth. Supply-side capacity is a key factor in a country's ability to increase its per capita wealth. This is why international institutions like the Organisation for Economic Cooperation and Development (OECD) and the International Monetary Fund (IMF) stress the importance of structural reforms, particularly on product & services and labour markets, and emphasise the need to adjust the institutions that govern the balance of supply and demand on these markets, such as price setting rules and competition law.[1]

OECD countries have all introduced reforms to their product and labour markets in the recent period. Between 1998 and 2003, according to OECD data, almost all countries undertook structural reforms aimed at reducing their product market regulation (PMR) indicator, an OECD measure that ranges from 0 to 6, with a higher value indicating stricter regulations (cf. Chart 1).[2]

Chart 1 PMR indicator: value and change

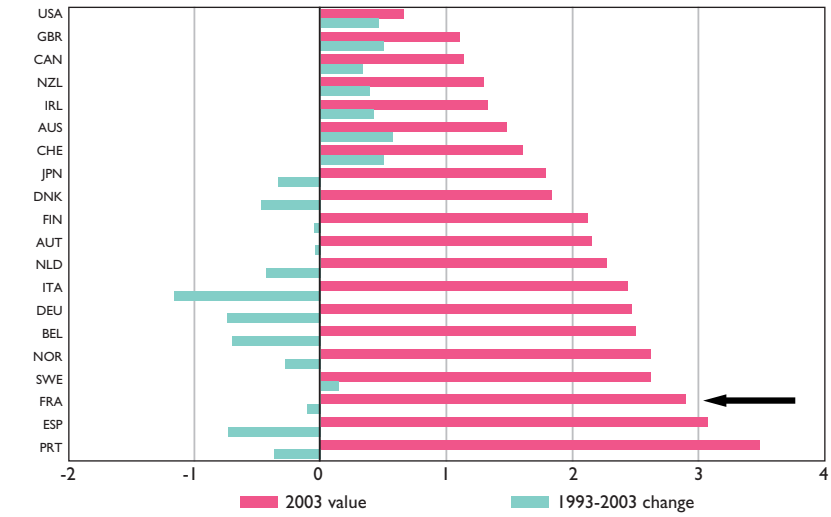


Source: OECD.

1 This article does not deal with other types of reforms, particularly public finance, welfare and finance sector reforms.

2 PMR indicators give an overall measure of the institutional restrictions placed on companies in terms of setting prices or their ability to freely determine their strategy. They aggregate indicators measuring (1) barriers to entrepreneurship or competition, (2) the size of the public sector. In this paper, they are used as gauges of competition on the product market, insofar as barriers to entrepreneurship act as barriers to entry in these sectors. The size of the public sector mostly acts as a gauge of rigidities in the price formation process, but it is also to some extent a barrier to free entry. To compile its employment protection legislation (EPL) indicator, the OECD combines indicators that measure regulations governing work contracts, dismissal legislation and the generosity of benefit schemes. These indicators provide a measure of the bargaining power of workers even if they do not include, for example, minimum wage regulations.

Chart 2 EPL indicator: value and change



Source: OECD.

Even so, a hard core of regulations persists in virtually all countries (Conway et al., 2005), although the proportion of such regulations varies considerably from country to country.

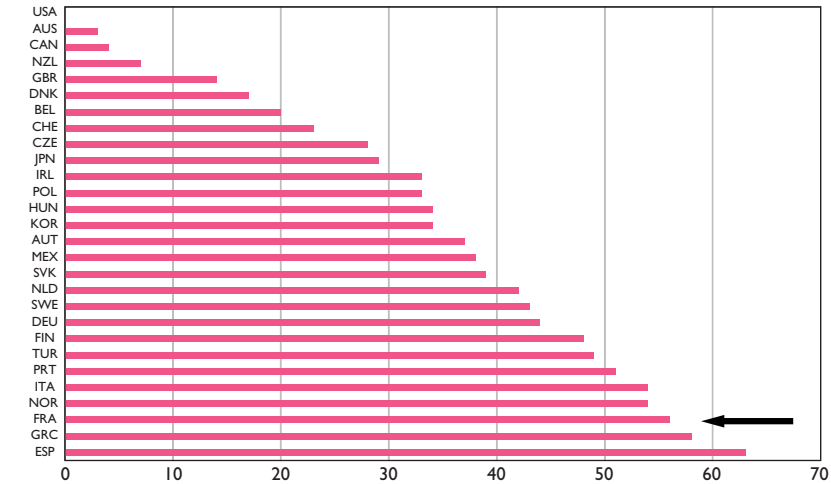
Readings obtained for the PMR indicator and for the employment protection legislation (EPL) indicator, a gauge of regulations on the labour market, show that euro area countries, and particularly France, regulate far more strictly than the United States, the United Kingdom, Canada and Australia (cf. Chart 2 for the labour market).

The World Bank also compiles its own labour market indicator, the rigidity of employment index (REI), which ranges from 0 to 100, with higher values indicating tighter regulations. The REI reveals the same broad cross-country diversity. Again, France's regulations look stricter than those of other developed countries (cf. Chart 3).

Cross-country differences in regulations raise questions about the foreseeable effects of structural reforms. Clearly, such regulatory differences mean that the same structural reforms cannot be introduced everywhere, nor will reforms have identical effects in all countries. Even so, economists are in fairly broad agreement about the expected long-run macroeconomic gains of structural reforms,[3] although short-term costs are widely mentioned as a barrier. These costs are linked to the direct effect of removing rents,

3 See Freeman (2005) for a more nuanced treatment of this point.

Chart 3 Rigidity of employment index



Source: World Bank (2006).

or the advantages enjoyed by agents with market power, which results in resistance to change.[4] Short-term costs are also due to short-term adjustments, like the costs of adjusting to the new environment and conversion costs, because macroeconomic knock-on effects take time to materialise. Employment, for instance, increases only gradually following a labour market reform. Furthermore, it is necessary to decide which institutions to reform and which rents to reduce, because some of them may be supportive of efficiency and equity. Take for example the role of labour unions in wage bargaining (Burda and Wyplosz, 1998). A country like Denmark features a high level of competition on product and labour markets, but also a high percentage of union membership.

The aim of this paper is to shed light on the macroeconomic effects of structural reforms, pointing out not just the long-term gains but also the main short-term impediments and ways of reducing them.

After describing the main conclusions of the theoretical literature, particularly those derived from general equilibrium models, the article analyses empirical research findings and looks at successful reform programmes in OECD countries, showing how countries can best benefit from the macroeconomic effects of structural reforms.

4 Delpla and Wyplosz (2007) suggest compensating rentiers by having the government buy out their rents (cf. below).

1| Lessons from economic theory: long-term gains, but transitional costs must be kept to a minimum

There is a consensus that modern economies are not all identically competitive and that some economic agents enjoy rents that allow them to receive remuneration for their services or a price for the goods that they produce in excess of the value that they would obtain in a setting of pure and perfect competition. These rents are sometimes justified by the existence of long-run relationships between economic agents (insurance motive). Whatever the case may be, prices are somewhat sticky, i.e. companies do not revise their prices continuously, and wages are determined for a set period. Naturally enough, companies also seek to differentiate their products in an effort to ease competitive pressures (modern economies are often described as being monopolistically competitive). Finally, regulations and the institutional framework may interact with these behaviour patterns, thereby increasing rents.

Under such imperfect competition, economic theory demonstrates that structural reforms make economies more resilient to shocks by increasing competition, which boosts potential supply, and by reducing wage and price setting rigidities. These reforms help to redistribute market rents between agents, temporarily creating winners and losers, although there are typically more winners in the long run. It is therefore important to analyse the procedures used, so as to minimise the short-term costs associated with certain reforms.

1|1 Long-term gains

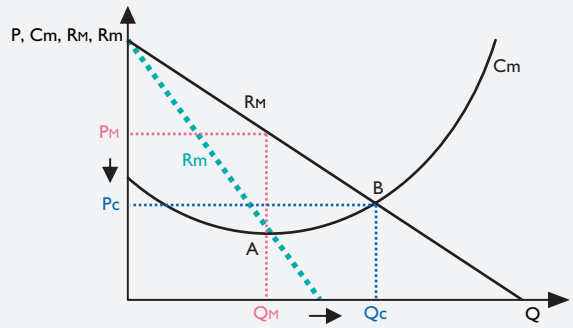
By raising the level of competition, structural reforms increase the economy's long-term potential supply. They are also intended to make economies more resilient, i.e. better able to respond to or rebound from shocks. In these two ways, they facilitate the conduct of monetary policy, which is why central banks support the introduction of structural reforms.

Potential growth

From a theoretical perspective, the long-term effects of increased competition on a given market can be studied with reference to a monopoly that, in the face of inelastic demand, initially maximises profit by raising prices and reducing quantities supplied. A competition-friendly economic policy will increase the price elasticity of demand, which leads, in partial equilibrium, to higher output volumes and lower price levels (cf. Box 1A). Greater

Box 1a

Product market reform: introducing competition reduces prices and increases output



A monopoly company determines its output by setting marginal cost (Cm) equal to marginal revenue (Rm), i.e. output QM at price PM (itself set according to the average revenue RM curve). If lowering barriers to entry introduces competition, then output, determined by equating marginal cost and average revenue (RM), increases to Qc, and the selling price declines to Pc. The equilibrium moves from point A to point B.

competition on the product market therefore boosts volumes sold, while reducing prices, so stimulating output and consumption.

We now factor in market interactions, i.e. we shift to a general equilibrium approach.

Stylised models

In the economic literature, the effect of a structural reform is generally analysed within the framework of a WS/PS model (cf. Box 1B). By taking this approach, it is possible to determine where the real wage/employment equilibrium lies on the labour market, given the level of competition on product and labour markets. Here, in partial equilibrium, increased competition on the product market will cause the labour demand (PS) curve to shift up and right, i.e. resulting in higher levels for real wages and employment (cf. Box 3). Similarly, a labour market reform that reduces unemployment benefits, for example, may, under certain conditions, lead to a decline in the reservation wage and so cause the labour supply (WS) curve to move to the right, resulting in an increase in employment at the cost of a reduction in the real wage (cf. Box 1C).

BOX 1B

WS/PS model

The impact of structural reforms is often studied in partial or general equilibrium using a wage setting/price setting (WS/PS) model, derived from the work of Layard et al. (1991), representing simultaneous equilibrium on labour and product markets. The model is based on optimising behaviour by suppliers of labour, i.e. workers and job-seekers, and firms.

*We identify a supply, or labour demand (*PS*), function for the product market:*

$$p = (1+\mu)\frac{wL}{\alpha Y} \qquad (1)$$

*The price offered on the product market (*p*) depends on the markup (an increase in* μ *corresponds to a decline in the absolute value of the price elasticity of product demand).* L/Y *is the inverse of labour productivity and* α *is the share of labour in value added for a Cobb Douglas function. As Boxes 1C and 1D show, the* PS *curve expresses a decreasing relationship between real wages and employment. The labour supply function (WS) is written:*

$$\frac{w}{p} = (1+m)RR = (1+m)\,f(U) \qquad (2)$$

where $f'(U) \leq 0$ *(*U *is the unemployment rate).*

The real wage is a function of a markup (1 + m) *that is determined by the bargaining power of workers and the reservation wage (*RR*), i.e. the minimum wage at which people of working age are prepared to apply for jobs on the labour market. The reservation wage is itself a decreasing function of the unemployment rate* U*: if the unemployment rate goes up, workers will lower the reservation wage.*

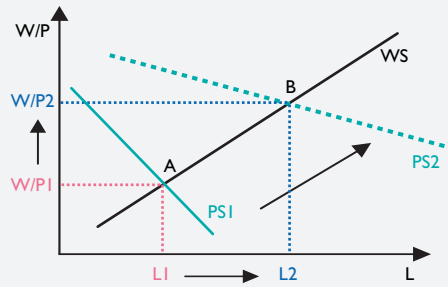
*Equation (2) can be re-written as a relationship between the real wage and employment (*L*) by reintroducing the exogenous labour force* $(\bar{L})$ *:* $U = 1 - \frac{L}{\bar{L}}$. *The WS curve shows an increasing relationship between real wages and employment (cf. Boxes 1C and 1D).*

Blanchard and Giavazzi (2003), however, insist on the need for an overall general equilibrium approach to study a policy of deregulation conducted simultaneously on the labour and product markets.

In their model, workers and firms share the markup generated by the absence of perfect competition on the product market. Increased competition on the product market leads to higher real wages as a result of two opposing movements: consumers benefit from lower prices but this effect is partly mitigated because workers have to accept a drop in wage since companies have reduced their markup on the product market (the lower markup is spread between workers and firms). Overall, from a real wage perspective,

BOX 1C

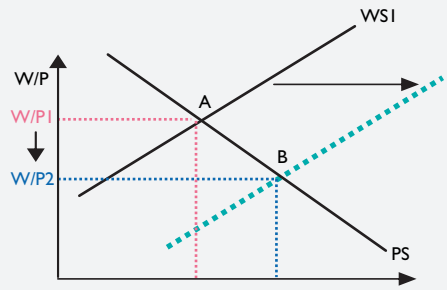
Labour market reform: increasing competition on the product market boosts labour demand (and hence employment) and real wages



After an increase in competition on the product market, demand for labour moves from PS1 *to* PS2*, and the* PS *curve becomes flatter. Real wages increase from* W/P1 *to* W/P2*, and employment shifts from* L1 *to* L2*.*

BOX 1D

Labour market reform: total employment is increased by reducing the rigidities that affect real wages



*Several factors play a part in slowing the downward adjustment to real wages (*W/P*), which inhibits job creation. These include the existence of a statutory minimum wage, the amount and duration of job-seeker benefits, the degree to which pay bargaining is centralised and the length of time for which wages are set. For example, if workers agree to wages not being indexed to prices immediately because of stiffer competition on the labour market, they consent either to work the same amount for a smaller real wage, or to work more for the same wage. In both cases, the* WS *curve shifts to the right. If removing these rigidities allows the real wage to move to a lower level (from* W/P1 *to* W/P2*), labour supply increases (from* WS1 *to* WS2*). In the end, total employment climbs from* L1 *to* L2*, and the equilibrium moves from point* A *to point* B*.*

Table 1 Dynamic effects in Blanchard and Giavazzi (2003)

	Impact of:	Short run			Long run		
		Markup	w/p	U	Markup	w/p	U
Products and services	Increased product substitutability	–	+	–	0	0	0
	Reduced entry costs	0	0	0	–	+	–
Labour	Reduced bargaining power	Profit: +	–	0	0	0	–

households gain more as consumers from increased competition on the product market than they lose as workers, because real wages rise over the long term. Obviously, households also win because of the increase in employment. And indeed, there is a parallel decline in unemployment over the long run in Blanchard and Giavazzi's central scenario (cf. Table 1, long-run impact on U (unemployment) of a reduction in entry costs).

Deregulation of the labour market causes real wages to fall in the short term and unemployment to fall in the long term. However, the impact of deregulation on unemployment depends on assumptions about how the market functions (cf. Box 2). Blanchard and Giavazzi feel that the most likely situation is one where deregulation of the labour market, by causing real wages to fall, increases short-term profits without causing a short-term reduction in unemployment. Rather, unemployment declines in the long run (cf. last row of Table 1).

Quantified general equilibrium models

Simulations based on general equilibrium models are used to quantify the impact of structural reforms in greater detail. Using the IMF's Global Economic Model (GEM), which is a multi-country dynamic stochastic general equilibrium (DSGE) model, Bayoumi et al. (2004) study the impact of introducing reforms in the overall euro area, while Everaert et al. (2006) look at national-level reforms, considering one large economy, France, and one small country, Belgium. They find that product market reforms, by reducing the price level, lead to increased consumption and hours worked, a very significant increase in capital stock, as well as a rise in real wages. Labour market reforms increase output, consumption and especially hours worked. They also lead to a slight decrease in the real wage, reflecting the fact that prices do not fall by as much as wages because companies increase their markup. These conclusions square with Banque de France simulations for the product market (cf. Box 3) based on the model by Adjémian et al. (2007) (hereafter ACDM, 2007), where a fall in firms' markup on the product market leads to increased consumption, investment, real wages and hours worked (cf. Table 2).

Table 2 Macroeconomic impact of structural reforms on product and labour markets

Source	Calibration	Long-run impact				
		Output	Consumption	Investment	Hours worked	Sacrifice ratio
Discussion Paper No. 4481, CEPR, 7/2004	Raise competition in Europe to the US level by reducing the euro area markup (a)	Euro area: +12.4% Rest of the world: +0.8%	Euro area: +8.3% Rest of the world: +1.3%	Euro area: +21.2% Rest of the world: +0.7%		Euro area ratio goes from 2 to 1.4
Everaert & Schule, IMF, Working Paper No. 06/137	Reduce the markup in France (b)	France: +16.0% (+17.3% if reforms are synchronised across the euro area)	France: +13.1% (+14.5% if reforms are synchronised across the euro area)	France (capital stock): +22.5% (+24.4% if reforms are synchronised across the euro area)		
Banque de France	Reduce the markup, product market only: -10 points	5.3%	+2.1%	+10%	+1.8%	

(a) Product market: -12 points (-9%); labour market: -14 points (-11%).
(b) Traded goods: -8 points (-7%); non-traded: -24 points (-17%); labour market: -30 points (-22%).
NB: These variants concern the markup, defined on the product market as $P = (1 + \mu)$ CUT, *where* $1 + \mu$ *is the markup and CUT stands for unit labour costs. A similar definition is used for the labour market, measuring the ability of workers to have their labour valued at a higher level than their individual productivity. In both cases, a reduction in the markup from 1.3 to 1.2 appears in the table as a 10-point reduction.*

In the GEM, end-of-period utility is greater than the initial utility measured before the reform: in other words, reforms enhance well-being. In the ACDM model (2007), end-of-period utility is identical to utility at the beginning of the period, which means that the additional consumption generated after the reforms leads to additional well-being that makes up for the loss of utility linked to the increase in the number of hours worked. However, this is merely a stylised model of a consumer/worker who makes a tradeoff between consumption and leisure. It does not consider the additional well-being created by the reduction in unemployment. Factoring in this structural reform-related gain would lend support to the argument that economic well-being increases after reforms.

Making economies more resilient to potential growth shocks

The second long-term goal of structural reforms is to reduce wage and price setting rigidities, because these alter the economy's ability to adjust to shocks, and hence the effectiveness of monetary policy. In the context

Box 2

Blanchard and Giavazzi's model (2003)

Blanchard et al. (2003) study a slightly modified version of the WS/PS model.

1/ They begin by considering that real wages have no impact on employment.

• Under monopolistic competition (firms differentiate their products) and in partial equilibrium, firms, indexed by i, set prices by applying a markup relative to the reservation wage f(U) that in turn depends on unemployment (if unemployment is high, the reservation wage will be low):

$$\frac{P_i}{P} = (1+\mu)\, f(U) \quad \text{where } f'(U) \leq 0 \qquad (1)$$

Workers bargain with firms on distribution of the markup. If ß measures the bargaining power of workers $(0 \leq ß \leq 1)$ *the real wage is determined by:*

$$\frac{W_i}{P} = (1+\beta\mu)\, f(U) \qquad (2)$$

(if $ß = 1$*, workers get the full markup and firms get nothing)*

• In general equilibrium and in the short run, if firms are assumed to be symmetrical, then $\frac{P_i}{P} = 1$ *(all firms cannot raise their relative prices simultaneously) and unemployment will therefore be determined by* $\frac{1}{1+\mu} = f(U)$ *(greater competition on the product market, i.e. a decline in* μ*, leads to a reduction in* U*, because* $f'(U) \leq 0$*) and*

$$\frac{W_i}{P} = \frac{(1+\beta\mu)}{(1+\mu)} \qquad (3)$$

The real wage is therefore a decreasing function of μ *consumers gain more than workers lose if* μ *declines.*

• In general equilibrium and in the long run, with free entry, firms' profit is equal to entry cost c and the real wage is given by:

$$\frac{W_i}{P} = 1 - c \qquad (4)$$

(as before, we apply the principle of distributing value added, equal to the unit price of 1, between workers and firms).

Greater competition on the product market enabled by a decline in the entry cost c, the central scenario for Blanchard and Giavazzi (2003), causes the real wage to increase. Unemployment falls in both the short and the long run. In the event of a reduction in the bargaining power of workers (decline in ß), the real wage falls temporarily in the short run according to (3) and corporate profitability improves. In the long run, however,

.../...

.../...
the entry of new firms will reduce μ, which will reduce unemployment U in the long run, while the real wage will revert to its initial position, as indicated in Table 1.

Overall, product market deregulation leads to an increase in real wages, but usually unemployment only goes down in the long run. Labour market deregulation causes the real wage to decline in the short run, while unemployment only falls in the long run.

2/ To modify this conclusion, Blanchard and Giavazzi (2003) are forced to consider another model that is closer to the WS/PS model, in which prices are formed by a markup on real wages and not on the reservation wage.

In partial equilibrium, this means replacing (1) with:

$$\frac{P_i}{P} = (1+\mu)\frac{W}{P} \qquad (5)$$

while (3) is unchanged. In general equilibrium, we have, replacing (5) in (3): $1 = (1+\mu)(1+\beta\mu)\, f(U)$*, and a decline in μ or ß causes a reduction in U in the short and long run, and no longer only in the long run.*

of the general equilibrium models mentioned above, the frequency with which firms modify their prices or price indexing approach, and the frequency, duration and scope of wage agreements, directly affect the slope and position of WS and PS curves, and hence the ability of economies to respond to short-term – particularly inflationary – shocks. Increased price rigidity means that real variables, notably the unemployment rate, will overadjust. Sticky prices cause the economy to revert more slowly to its equilibrium path, i.e. to price stability. Several empirical studies (including Barro, 1996) have demonstrated that this type of situation can affect an economy's long-run growth.

From a monetary policy perspective, reducing rigidities can lower the sacrifice ratio, i.e. the cumulative output cost needed to reduce inflation permanently by one percentage point (cf. Coffinet et al., 2007 for labour market reforms). However, structural reforms may also make consumption slightly more volatile relative to changes in output in certain countries, while making it less volatile relative to changes in employment (Ernst et al., 2006).

1|2 Dynamic effects that need to be controlled in the short term

General equilibrium models can also be used to measure the dynamic effects of implementing reforms and to identify the kinds of reforms that will reduce the short-term costs that are often associated with these

effects. Three different dimensions need to be considered: cross-country synchronisation, coordination of reforms on different markets, and expectation effects linked to reform announcements.

Synchronising reforms across countries

A key question is that of spillovers from domestic structural reforms to reforms carried out in other countries. Bayoumi et al. (2004) use the GEM to measure how much additional growth is generated in the rest of the world following reforms in the euro area (cf. Table 2). By lowering prices, product market reforms cause the real exchange rate to depreciate, which stimulates domestic exports as well as consumption in other countries.

However, Everaert et al. (2006) stress that the impact of reforms depends on the size of the economy: a small country that is a price taker will find it easier to increase output without lowering prices and temporarily depressing domestic demand. Country size also appears to have a bearing on monetary policy (cf. Box 3, ACDM, 2007). In the euro area, for example, the single monetary policy cannot respond to the nominal effects of structural reforms unless there is a significant impact on euro area inflation (as expressed by the Taylor rule). This situation is less likely when a small country implements reforms. However, when reforms are conducted simultaneously in several countries, the monetary policy reaction can reduce the short-term adjustment costs associated with the reforms because a cut in policy rates following a price reduction will lead to a larger temporary increase in consumption and investment that will help to smooth short-term recourse to the workforce.[5]

Coordinating reforms on different markets

Coordinating reforms is another central issue, given the interactions between labour and product markets. Blanchard et al. (2003) suggest deregulating the product market first, which increases the real wage, as a means of mitigating the short-term impact of deregulating the labour market, which causes the real wage to decline temporarily. Partial deregulation of the product market should be avoided. Such a move would not modify prices in all sectors and would lead to a small increase in the real wage, which would not support an increase in consumption.

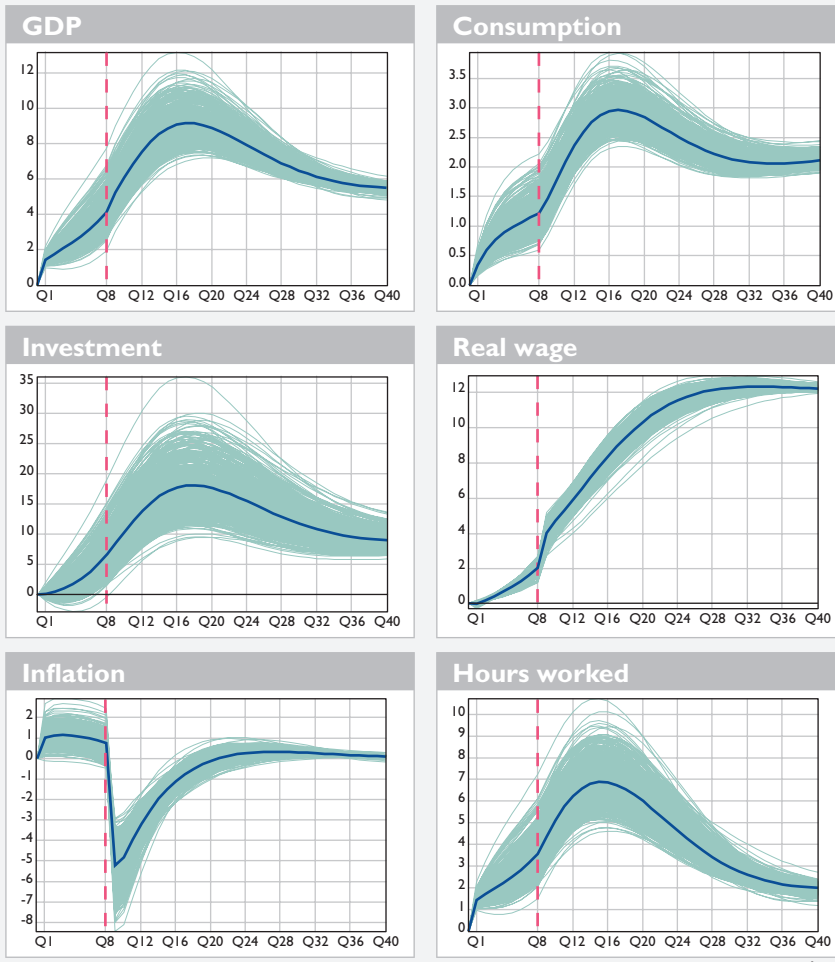
Everaert et al. (2006) focus on simultaneous product and labour market reforms as a way to lessen the risks of monetary tightening in small countries conducting reforms in isolation (cf. above). In the absence of a monetary policy reaction, a decline in prices following product market deregulation

5 *The presence of rigidities leads to transitional fluctuations in real variables, particularly employment, without affecting the long-run employment equilibrium (cf. Box 3). If rigidities are absent, the economy reaches its long-term target more swiftly and more directly, which is a preferable outcome in terms of collective utility.*

Box 3

SImulating the effects of increased competition on the product market[1]

The following charts plot responses to product market reforms in simulations run by the Banque de France using the dynamic general equilibrium model by Adjémian et al. (2007). The model is estimated for the euro area using data for the 1990-2005 period. Assuming monopolistic competition, the value of the price elasticity of demand for products, which determines firms' markup, is close to the values seen in the literature for the euro area. Using this situation as a base, we observe the effects of announcing a permanent markup-reducing shock in the first quarter (Q1) and implementing it in Q8, i.e. two years afterwards. The shock corresponds to a 10-point decline in firms' markup between the initial steady state and the final steady state.

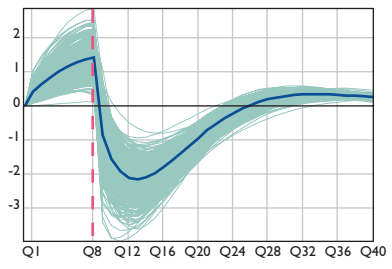


1 Box prepared by C. Cahn, A. Devulder and N. Maggiar

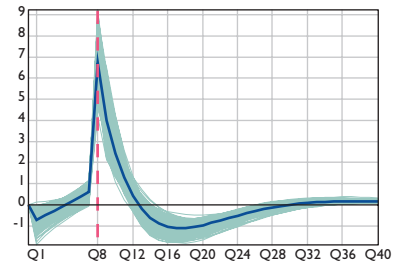
.../...

.../...

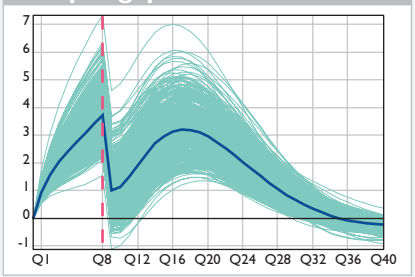
Nominal interest rate



Real interest rate



Output gap



NB: Charts of real variables show the % deviation from the baseline.
The inflation chart shows the points deviation from the annualised rates of the baseline.
The output gap is the differential between output and potential output as a %.
The shaded area corresponds to confidence intervals reflecting uncertainty in estimating the model's parameters.

Announcing the reform: from Q1 to Q8

As soon as the reform is announced, and before it is implemented, firms anticipate a reduction in their monopoly power and gradually introduce the necessary production capacity. Firms optimise the pace at which capacity expands according to the presence of real rigidities in the use of inputs, i.e. labour and productive capital. Increased labour demand prompts households to bargain for an increase in their real wage – an increase that will also depend on the presence of nominal rigidities. The rise in real wages positively impacts household consumption. Increased demand for productive capital raises the rate of return for capital-owning households, pushing up the capacity utilisation rate (the presence of an additional cost for households restricts the increase in capacity utilisation) and investment (the presence of an investment adjustment cost slows this increase).

Furthermore, these increased input costs (real wage rate and the rate of return on capital) eat into firms' markups even before the reform comes into effect. To stem the profit decline, companies partly pass on the increases to their prices, thereby creating slight inflationary pressure between Q1 and Q8. The monetary authority responds to this pressure by gradually raising nominal interest rates in the run-up to the shock, thereby limiting the decline in the real interest rate between Q1 and Q8, which smoothes the increase in consumption. Overall, the announcement of the reform has an expansionary effect on the economy and the output gap becomes positive. Even so, despite the increase in consumption, the excess growth causes a slight deterioration in the instantaneous utility of households, who are required to work more.

.../...

.../...

Implementing the reform: from Q8 onwards

Stiffer competition (exogenous decline in the markup) immediately causes prices to fall, since firms are forced to cut prices to hold onto market share. The monetary authority responds instantly by lowering the nominal interest rate. As they did before, when the shock was announced, monopolistically competitive firms continue to increase output volumes, and hence their demand for labour and productive capital. Demand from firms continues therefore to sustain the real wage and the rate of return on capital. The decline in inflation triggers an automatic increase in the real wage in Q9, just after the reform, with nominal wages changing slowly owing to rigidities. Overall, consumption and investment are stimulated until Q16/Q18. The economy therefore embarks on an expansionary path after the shock, with output increasing for two years.

The presence of rigidities in the model causes the real variables of the economy to overadjust: after increasing for around two years, consumption, labour, the capacity utilisation rate, investment and hence GDP all ease towards their new steady state. This property enables the model to reproduce the classic hump-shaped response of economies to this kind of shock. Note that potential output increases sharply when the shock occurs, while the increase in real GDP is conditioned by the presence of price rigidities, with the result that the output gap narrows in Q8. That said, the output gap remains positive throughout the transition to the new steady state. It closes after around 36 quarters, or seven years after the shock. Households' instantaneous utility continues to deteriorate for two years after the reform before improving once again, with the negative impact from hours worked equalling the increase in consumption.

In conclusion, a product market reform has an expansionary impact on the economy. For a 10-point decline in the markup, GDP is 5.3% higher than the baseline in the long run, and demand for labour increases by 1.8%, i.e. there is net job creation. Despite a temporary downturn when the shock is announced, the well-being of households, measured by the model's instantaneous utility function, moves to a new steady state that is virtually the same as its starting level. Note also that in this model, firms' profits are entirely redistributed to households. The increase in their long-run purchasing power is therefore exclusively linked to the increase in wealth production.

causes the real interest rate to rise. Generally, though, monetary policy does not react instantly to reforms, owing to uncertainty about the government's determination to complete the reform programme. The slowness of the monetary policy reaction also reflects uncertainty about the response by economic agents, who have to revise their expectations upwards gradually, creating a lag in the upside adjustment to potential supply.

Reform expectations

The information provided to economic agents about current or forthcoming reforms is crucial too. Announcing reforms ahead of time may be a useful

way to reduce short-term adjustment costs, according to the findings of simulations performed using the ACDM (2007). If product market deregulation is announced two years before it is actually implemented, firms adjust immediately but gradually, given the presence of real rigidities (which act as a barrier to a large, abrupt increase in the workforce and capital stock) and nominal rigidities (affecting price and wage setting, as mentioned above). As Box 3 shows, factors of production, i.e. hours worked and investment, come under stronger short-term pressure. Inflationary pressures then lead the European Central Bank to temporarily hike short-term interest rates. Inflation goes down beginning on the reform date, prompting the monetary authorities to cancel the previous increase in interest rates and reduce rates further. If the reform is not announced in advance, economic agents increase factors of production much more rapidly in the short term, before partially reducing them subsequently (humped shape of GDP, consumption, investment and hours worked charts).

2| Successful reform programmes

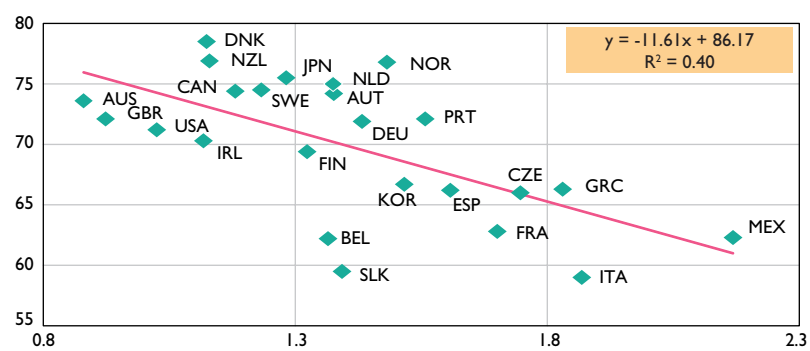
Having looked at the results of the stylised models, we will now review some structural reform programmes in OECD countries.

2|1 A diverse range of situations

On the labour market, taking a univariate and hence highly simplifying approach, we see a negative correlation between the employment rate and product market regulation in the country sample (cf. Chart 4). Countries with less stringent product market regulation post higher employment rates.

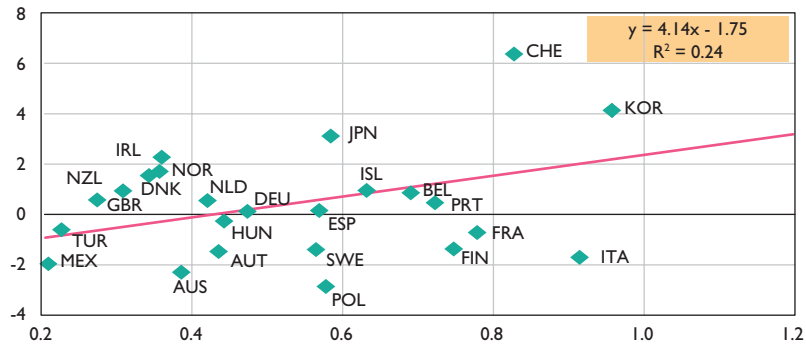
Chart 4 Product market regulation and employment rate

(y axis: employment rate, 2006; x axis: PMR, 2003)



Source: OECD.

Chart 5 Reduction in product market regulation (PMR)[a] (x axis) and annual growth rate of labour productivity (y axis)
(2003-1998, economy-wide)

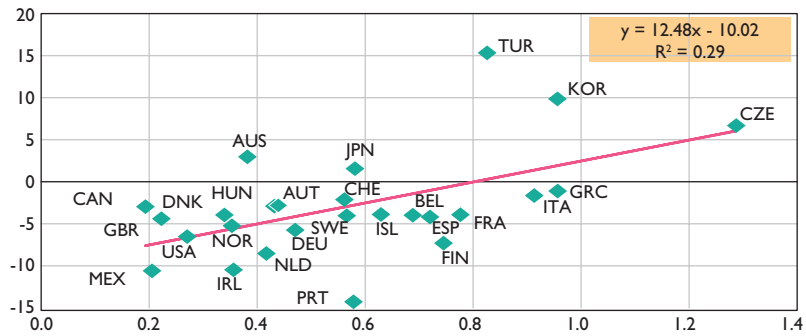


(a) Intensity of the reduction in regulation = PMR 1998 – PMR 2003.
Source: OECD.

Over the last decade, the annual growth rate of labour productivity has been slightly higher in economies that reduced product market regulations as measured by the PMR indicator. Countries that did most to liberalise their economies saw a slightly stronger surge in productivity (cf. Chart 5).

Moreover, countries that were most active in easing product market regulations also recorded slightly faster annual growth rates n investment (cf. Chart 6). Reducing entry barriers plays a crucial role in this respect, as shown by the work of Alesina et al. (2005).

Chart 6 Reduction in product market regulation (PMR)[a] (x axis) and growth rate of investment (y axis)[b]
(y axis: employment rate, 2006; x axis: PMR, 2003)



(a) Intensity of the reduction in regulation = PMR 1998 – PMR 2003.
(b) Annual growth in GFCF (2004-2002 average – 1999-1997 average).
Source: OECD.

Table 3 Long-run impact of structural reforms according to OECD simulations

Source	Method	Long-run impact		
		Total factor productivity (TFP)	GDP/ capita	Unemployment
Bassanini and Duval, OECD Working Paper No. 486, 2006	10% reduction in the tax wedge			Unemployment rate lowered by 2.8% on average in the OECD
	10% reduction in unemployment benefits			Unemployment rate lowered by 1.2% on average in the OECD
OECD, Working Paper No. 432, 2005	Align tariffs, restrictions on foreign investment and the PMR indicator with OECD best practice		+3.5% in the EU-15	
Nicoletti and Scarpetta, OECD, Working Paper No. 347, 2003	Bring the share of public corporations in value added to the OECD average	TFP annual growth rate: +0.7% in certain European countries		
	Bring administrative and commercial entry barriers to the OECD average	TFP annual growth rate in the manufacturing sector: +0.1% to +0.2% in certain European countries		

The extra investment growth should be considered in relation to the impact of product market regulation on the labour input. Bertrand and Kramarz (2002) make this point, demonstrating that the 1974 Royer Act in France, which put up barriers to large retailers, caused slower job creation in the retail sector.

More generally, simulations carried out by the OECD and others on the impact of structural reforms to product and labour markets attest to the positive long-run gains in productivity, per capital GDP and unemployment (cf. Table 3).

To take actual examples, the cycle of labour market reforms (Hartz Acts I to IV) undertaken by Germany between 2002 and 2005 adjusted employment policy to help unemployed people get jobs and targeted an increase in the working age population. As a result, German unemployment has fallen steadily since early 2005, recording an almost three-point decline. More recently, Italy has talked about introducing various reforms to eliminate barriers to competition, including liberalising professional fees and authorising the exercise of certain professions where licences are mandatory.

However, deregulating markets to improve the economy's performance, particularly from an employment perspective, is more effective when a number of initial conditions are in place.

2|2 The importance of initial conditions

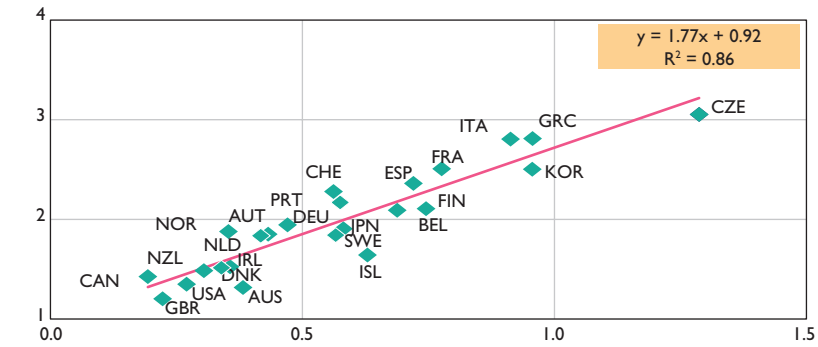
Having certain favourable factors established before structural reforms are implemented is viewed as a requirement for these measures to succeed (see for example references cited by Høj et al., 2006, Duval et al., 2005, and the IMF, 2003). Governments that believe they need to reform the way their economy functions will be keen to have these facilitating conditions in place ahead of time.

To give future policies the best chance of success, a pragmatic strategy must be taken to overcome resistance. Future gains may be uncertain, while there are no doubts about the short-term costs. This frequently supports a bias towards the security offered by leaving the situation as is. The status quo bias will be more pronounced if long-term gains are diluted or spread across a large number of beneficiaries, while the costs are concentrated with and borne by a minority.

However, most of the factors that have been identified in past decades as structural reform-friendly are fairly broadly exogenous, in the sense that they depend only marginally on the national authorities. The following factors have been cited, although the empirical evidence remains shaky (Høj et al., 2006; Duval et al., 2005; Pitlik, 2003):

• ***the onset of fairly pronounced economic crises*** that convince the majority of people that the current situation cannot go on. The crisis exposes the failure of existing policies and adds to the sense of urgency, showing that the now-untenable situation could not be any worse. The economic difficulties of the United Kingdom and New Zealand in the 1980s factored into the decision by the then policymakers to take a firm line, rather than negotiate, when introducing reforms. However, labour market reforms are typically rare during crises, with authorities seemingly reluctant to worsen the impact for workers who are already having to cope with a downturn in economic conditions (IMF, 2004). In this regard, the most favourable scenario is a cyclical upswing: after a period of slacker economic growth in which the electorate votes in a reform-minded government, the new government then benefits from favourable economic conditions in which to implement reforms. However, empirical evidence from the recent experiences of OECD countries shows that reforms were easier to introduce if the 1998 PMR indicator was already at a high level, i.e. if the country was already in a critical situation (cf. Chart 7);

Chart 7 1998 PMR indicator (y axis) and reduction in regulation between 1998 and 2003[a] (x axis)



(a) Intensity of the reduction in regulation = PMR 1998 – PMR 2003.
Source: OECD.

• ***demonstration, contagion or emulation effects*** created when trade partners successfully conduct reforms. These effects and the need to coordinate economic policies, emphasised in part one, may be further strengthened by factors like peer pressure, experience-sharing in international forums or the enhanced competitiveness of reforming neighbours. This helps to explain the international nature and synchronisation of reforms around the world in the last 30 years;

• ***the country's degree of openness, size and productive specialisation.*** A small economy that is dependent on the outside and heavily exposed to an asymmetric external shock will need to be able to adjust quickly to changes in its environment;

• ***an outside anchor,*** like membership of a monetary or customs union, compliance with an exchange rate target, or international commitments, such as the 1986 Single European Act or the 2000 Lisbon Strategy, is an incentive to introduce reforms to comply with the stated objectives;

• ***the foreseeable term of the authority with decision-making power:*** in principle, compared with a government that is up for re-election, a government with a clear space of time in which to take action, particularly at the start of its term, is better shielded from pressure and lobbying by coalitions or minorities that think they will be affected by the reforms;

• ***separate and balanced institutional powers,*** which prevent vetoes from being exercised as well as arbitrary decisions, thus facilitating conflict management and bargaining during the future changes. Some studies (Persson, 2003) find that governments are better able to overcome blockages if they are formed after majoritarian elections than if they are formed after proportional elections. However, there is also a greater risk of

reversal in such circumstances. Proportional elections, meanwhile, favour more moderate and gradual reforms that are less likely to be reversed. Furthermore, the number of parties and the extent to which they share reform philosophies, particularly in terms of striking a balance between social equity and economic efficiency, will have a bearing on whether stable pro-reform coalitions can be formed. Coalitions that were formed too recently or that are unprepared to tackle the forthcoming obstacles will probably be less inclined to introduce reforms that might be looked on unfavourably by certain constituencies. In this case, the government will secure its reform mandate if it is backed by a solid parliamentary majority, an outcome that is more likely in majoritarian than proportional systems;

• ***demographic factors:*** a population with a high average age will be less likely to value the expected gains from reforms than a younger population and will therefore be less favourable to the changes. Conversely (IMF, 2004), since the financial viability of pay-as-you-go pension systems is buttressed by increased employment and labour force participation, which generate contributions that benefit retirees, these sorts of labour market reforms may also be supported when the population comprises a large share of elderly people.

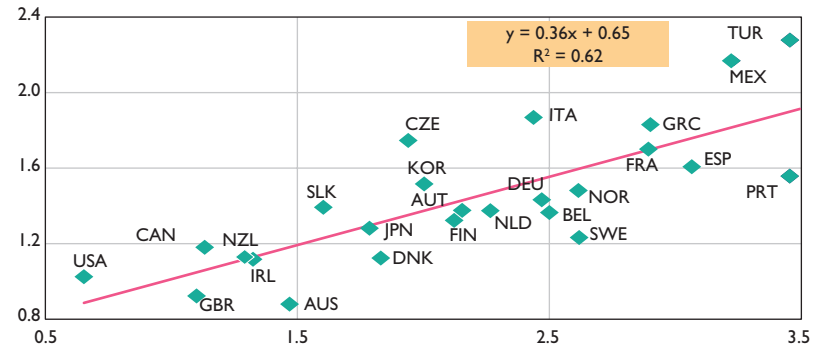
A smaller number of the initial conditions needed to promote successful reforms can be described as endogenous in the sense that they depend at least partly on the ability of the national authorities to take action. They include:

• ***sound public finances*** that make it possible to finance measures to offset the impact on population groups that are most exposed in the short term to the risk of a temporary decline in their income – assuming these groups can be easily identified. This is what the Netherlands did in the 1990s by introducing tax measures to support its labour market reform.[6] By contrast, existing efforts to consolidate the public finances could deprive authorities of the support that they might need to instigate certain reforms. This is precisely why the government deficit/GDP ceiling in the 2005 revised version of the Stability and Growth Pact takes account of structural efforts to improve the public finances when the latter are assessed;

• mutually advantageous ***reinforcing effects, spillovers and knock-on effects*** between reforms, as mentioned in part one. For example, an empirical within-country correlation can be seen (cf. Chart 8) between PMR and EPL indicators (Nicoletti et al., 2005).

6 *Given the political difficulty of conducting a swift global reform across all markets, plus the ability of rentiers to create resistance, Delpla and Wyplosz (2007) suggest buying out the rents, with financing provided through a 20-year loan. For a country like France, however, this creates the problem of durably overshooting the 60% threshold for the government debt/GDP ratio required under the Maastricht Treaty.*

Chart 8 EPL (x axis) – PMR (y axis) correlation



Source: OECD, 2003.

2|3 A clear strategy

Obviously, the same reform will have different outcomes in different countries. For this reason, the ideal timing, i.e. the optimal sequence of product and/or labour market reforms, as well as the most effective level of intensity when applying the reforms, will depend on country-specific factors, both economic and otherwise. For example (Ernst et al., 2006), increasing labour market flexibility will reduce the sacrifice ratio, as indicated in part one, but will also create greater risk of bouts of unemployment for households.

Even so, a number of stylised facts can be picked out. First, as Blanchard and Giavazzi (2003, cf. above) suggest, reforming product markets first can facilitate later reforms on the labour market. And indeed (Brandt et al., 2005; Duval et al., 2005), increasing competitive pressure on product markets lessens the market power of incumbent firms, and is therefore likely to lead to lower prices. This stimulates economic activity and demand for labour, and, by increasing employment opportunities, reduces the desire among workers to defend labour market rules.

Second, a labour market reform instigated after a product market reform may be more effective if it concentrates initially on temporary work contracts (Høj et al., 2006). As Spain and Portugal discovered with the programmes that they implemented in the mid 1980s and 1990s respectively, easing the rules governing temporary work contracts can increase the share of hiring under these sorts of contracts. This builds additional public support for the idea that reforming permanent work contracts is desirable in terms of both social equity and economic efficiency.

Third, the success of structural reforms in the euro area depends, particularly in the case of large countries and the most open economies, on setting

shared objectives (Tabellini et al., 2004), on having sufficient incentives in favour of reforms (Nicoletti et al., 2003) and on coordinating the efforts of domestic authorities to introduce the policies. In this regard, the Lisbon Strategy, which set shared objectives with fixed deadlines, was an important milestone in the reform process (Trichet, 2006).

In practical terms (Pisani-Ferry et al., 2006), the main factors in ensuring the success of reforms include establishing a reform programme — and potentially putting a nationally recognised figure in charge of it —, pressure from public opinion, published comparisons of different countries' performances and information-sharing by the local, national and international authorities that are in charge of particular types of reform. However, the potential results from increased coordination of structural reforms should not be overestimated (Duval et al., 2005). Depending on its starting point, each country faces challenges that require particular and hence non-standardised reforms. For example, the public consensus about the need for change (Eijffinger et al., 2006) and the effectiveness of the legal system have a key bearing on the likelihood of the future policies proving successful (Bertola, 2004). Similarly, reforms impact supply and demand differently across countries, such that the expected effects remain uncertain to some extent, unless the public authorities make a clear commitment to the reforms. Finally, if the national authorities are forced to take overly stringent coordinating measures as a result of tough international commitments, there may be an adverse effect if the subsidiarity principle is contradicted, potentially undermining public support as well as ignoring the local conditions needed to ensure policy success.

Introducing reforms, particularly, but not only, on product and labour markets, is the best way to boost economic growth potential and limit the risks of inflation. Specifically in the case of the euro area, such reforms, if implemented in an efficient manner, should help prepare member states to face the challenges of globalisation and the rise of emerging economies.

To mitigate short-term costs, however, the gains that these reforms are expected to deliver in the long run must translate into policy coordination across markets and, to a certain extent, across countries. The potential long-term gains of reforms could be compromised by insufficient complementarities between reforms, the risks of a lack of cooperation at the international level, or an inadequate commitment on the part of government.

Appendix

Impact of structural reforms on the product market
(results of simulations using general equilibrium models)

Source	Calibration	Long-run impact				
		Output	Consumption	Investment	Hours worked	Sacrifice ratio
Bayoumi, Laxton & Pesenti, Discussion Paper No. 4481, CEPR, 7/2004	Reduce the markup on the euro area product market: -12 pts	Euro area: +8.6% Rest of the world: +0.7%	Euro area: +4.9% Rest of the world: +1.0%	Euro area: +17.0% Rest of the world: +0.5%		Euro area ratio goes from 2 to 1.7
Everaert & Schule, IMF, Working Paper No. 06/137 (product market (traded) + services (non-traded))	Reduce the markup on the French product market: -16 pts	France: +8.9%	France: +6.4%	France (capital stock): +15%	France: +7.6%	
Banque de France: ACDM 2007	Reduce the markup on the euro area product market: -10 points	Euro area: +5.3%	Euro area: +2.1%	Euro area: +10%	Euro area: +1.8%	

NB: These variants concern the markup, defined as $P = 1 + \mu$ CUT, *where* $1 + \mu$ *is the markup and* CUT *stands for unit labour costs. For example, a reduction in the markup from 1.3 to 1.2 appears in the table as a 10-point reduction.*

Bibliography

Adjémian (S.), Cahn (C.), Devulder (A.) and Maggiar (N.) (2007)
"*Variantes en univers incertain*", *Économie et Prévision*, Special Issue "*Développements récents des DSGE*", forthcoming.

Alesina (A.), Ardagna (S.), Nicoletti (G.) and Schiantarelli (F.) (2005)
"Regulation and investment", *Journal of the European Economic Association*, 3 (4), pp. 791-825, June.

Barro (R.) (1996)
"Inflation and Growth", Federal Reserve Bank of Saint Louis, *Economic Review*, May/June.

Bassanini (A.) and Duval (R.) (2006)
"Employment patterns in OECD countries: reassessing the role of policies and institutions", *OECD Economics Department Working Papers*, No. 486, June.

Bayoumi (T.), Laxton (D.) and Pesenti (P.) (2004)
"Benefits and spillovers of greater competition in Europe: a macroeconomic assessment", CEPR, *Discussion Paper*, No. 4481, July.

Bertola (G.) (2004)
"Labor market institutions in a changing world", *Moneda y Credito*, 218, pp. 61-98, March.

Bertrand (M.) and Kramarz (F.) (2002)
"Does entry regulation hinder job creation? Evidence from the French retail industry", *Quarterly Journal of Economics*, November, pp. 1369-1413.

Blanchard (O.) and Giavazzi (F.) (2003)
"Macroeconomic effects of regulation and deregulation in goods and labor markets", *Quarterly Journal of Economics*, 118, pp. 879-907.

Brandt (N.), Burniaux (J.-M.) and Duval (R.) (2005)
"Assessing the OECD jobs strategy: past developments and reforms", *OECD Economics Department Working Papers*, No. 429.

Burda (M.) and Wyplosz (C.) (1998)
Macroeconomics, a European text, Oxford University Press.

Coffinet (J.), Matheron (J.) and Poilly (C.) (2007)
"Estimations du ratio de sacrifice dans la zone euro", Bulletin de la Banque de France, January.

Conway (P.), Janod (V.) and Nicoletti (G.) (2005)
"Product market regulation in OECD countries: 1998 to 2003", *OECD Economics Department Working Papers*, No. 419, April.

Delpla (J) and Wyplosz (C) (2007)
La fin des privilèges : payer pour réformer, Hachette Littératures.

Duval (R.) and Elmeskov (J.) (2005)
"The effects of EMU on structural reforms in labour and product markets", *OECD Economics Department Working Papers*, No. 438, July.

Eijffinger (S.) and Rossi (A.) (2006)
"Structural reforms and growth: product and labor market deregulations", CEPR, *Discussion Paper*, No. 5988, December.

Ernst (E.), Gong (G.), Semmler (W.) and Bukevicuite (L.) (2006)
"Quantifying the impact of structural reforms", *European Central Bank Working Paper Series*, No. 666, August.

Everaert (L.) and Schule (W.) (2006)
"Structural reforms in the euro area: economic impact and role of synchronization across markets and countries", *IMF Working Paper* WP/06/137, June.

Freeman (R.) (2005)
"Labour market institutions without blinders: the debate over flexibility and labour market performance", *NBER Working Paper*, No. 11286, April.

Høj (J.), Galasso (V.), Nicoletti (G.) and Dang (T.) (2006)
"The political economy of structural reform: empirical evidence from OECD countries", *OECD Economics Department Working Papers,* No. 501, July.

IMF (2003)
"Unemployment and labor market institutions: why reforms pay off", *World Economic Outlook*, Chapter IV, April.

IMF (2004)
"Fostering structural reforms in industrial countries", *World Economic Outlook*, Chapter III, April.

Layard (P.), Nickell (S.) and Jackman (R.) (1991)
Unemployment: macroeconomic performance and the labour market, Oxford University Press.

Nicoletti (G.) and Scarpetta (S.) (2003)
"Regulation, productivity and growth: OECD evidence", *OECD Economics Department Working Papers*, No. 347, January.

Nicoletti (G.) and Scarpetta (S.) (2005)
"Product market reforms and employment in OECD countries", *OECD Economics Department Working Papers*, No. 472, December.

OECD (2005)
"The benefits of liberalising product markets and reducing barriers to international trade and investment", *Working Papers*, No. 432.

Persson (T.) (2003)
"Consequences of constitutions", *NBER Working Paper*, No. 10170.

Pisani-Ferry (J) and Sapir (A.) (2006)
"Last exit to Lisbon", *Bruegel Policy Brief*, 2006/2, March.

Pitlik (H.) and Wirth (S.) (2003)
"Do crises promote the extent of economic liberalization?: an empirical test", *European Journal of Political Economy*, Vol. 19, pp. 565-581.

Tabellini (G.) and Wyplosz (C.) (2004)
"*Réformes structurelles et coordination en Europe*", *Report to the Conseil d'Analyse économique*, No. 51, November.

Trichet (J.-C.) (2006)
"How to elevate the potential growth rate of Europe", Speech, Ludwig Erhard Lecture, Berlin, 16 October.

Recent trends in productivity: structural acceleration in the euro area and deceleration in the United States?

Pamfili Antipa, Gilbert Cette, Laure Frey, Rémy Lecat, Olivier Vigna
Macroeconomic Analysis and Forecasting Directorate

Since the mid-1990s, the long-standing trend of Europe's catching-up with the United States' productivity levels and GDP per capita has been interrupted, as productivity accelerates in the United States and decelerates in Europe. While the United States have fully benefited from the information and communication technology (ICT) revolution, Europe has had to meet the challenges of large scale sectoral restructuring, low employment rates and structural rigidities.

The analyses presented in this paper indicate that these recent trends in the two regions could be reversed in the near future. Labour productivity could slow down in the United States as ICT contributes less to its momentum. At the same time, it could pick up in Europe thanks to less unfavourable sectoral structure effects in the short term and to faster ICT diffusion coupled with ongoing structural reforms in the long term. Nevertheless, although a further increase in EU employment rates in line with the Lisbon agenda would be favourable in terms of GDP per capita, it could also weigh on productivity trends in the euro area.

As the developments examined in this paper are recent, further analysis is required to confirm such a scenario and recent revisions to US productivity figures demonstrate that real time analysis may prove difficult.

Keywords: productivity, information and communication technology (ICT), sectoral dynamics, structural trends.
JEL codes: E24, F43, J24, 033, 047

NB: We would like to thank A.C. Chavy-Martin and V. Vogel for their indispensable contributions to the data base construction, computations and editing of this article. Valuable remarks were also contributed by F. Daveri (Univesity of Parma). The authors are entirely responsible for any residual mistakes or omissions in this article.

Since the mid-1990s, the long-standing trend of Europe's catching up with the United States' productivity levels and GDP per capita has been interrupted, as productivity accelerates in the United States and decelerates in Europe. The United States have fully benefited from the information and communication technology (ICT) revolution, while Europe has had to meet the challenges of major sectoral restructuring, low employment rates and structural rigidities.

In 2006, productivity growth in the euro area outpaced that of the United States.[1] Although this has already occurred twice during the last decade (in 1997 and 2000), there are some tentative signs that this trend could be partially structural. In Europe, productivity and employment rebounded at the same time. This should have weighed on productivity growth, since the already employed are, at least for an initial period, more productive on average than new entrants in the job market. In the United States, on the contrary, employment should have adjusted faster at this stage of the cycle.

A more detailed analysis reveals a number of structural developments: Europe should finally reap the full benefits from the information technology revolution. Ongoing structural reforms in Europe have been significant and should eventually pay off as well. In contrast, without a fresh technological drive, ICT contribution to productivity growth could wane in the United States.

The diagnosis of a structural change in the productivity regime bears far-reaching consequences for economic policy. Another lag in Europe's catching-up with the United States' productivity levels would lead to a decline in relative living standards, unless Europe's employment rate increases significantly. This would call into question European economic policy, particularly with respect to its social dimension. A structural acceleration in European productivity would lead to a long-term increase in the natural rate of interest. In the short/medium-term, its effect on inflationary pressures and therefore on the conduct of monetary policy is, however, uncertain, as it depends on the relative impact of accelerating productivity growth on the dynamics of supply and demand. On the supply side, the impact is fairly mechanical. Regarding demand, it depends on the economic agents' perception of this change and on its duration. A large body of literature has been devoted to analysing these mechanisms (see for example Bowman, 2004; Issing, 2004; and Cette and Pfister, 2004).

First, we will examine the latest developments in productivity growth by using recent research carried out at the Banque de France to determine

1 This study is based on data available at 31 July 2007. It therefore includes the 2007 annual revision of US national accounts (see Box). It takes into consideration the total economy in order to ensure an international comparability of results, since the boundaries of the private sector differ from one country to the next.

structural productivity trends. Second, we will study the dynamics of ICT diffusion, which is proving to be a major determinant of productivity growth. The last section presents the results from a shift-share analysis that suggest a halt in the sectoral adjustments may have weighed on the euro area's productivity growth during the past decade.

1| Recent developments in productivity in the United States and in the euro area: a trend reversal?

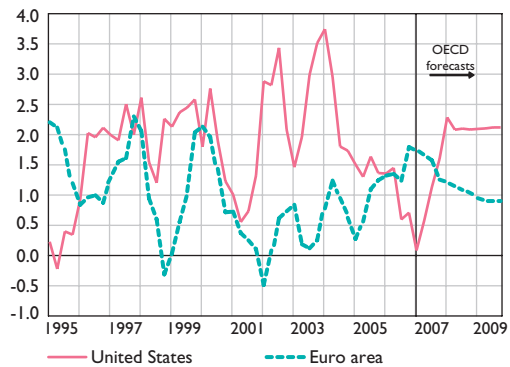
Growth in per capita productivity has registered sharply contrasting trends in the United States and the euro area recently, as shown in Chart 1.

Following a period of stop-and-go between 1995 and 2002, year-on-year per capita productivity growth rates embarked on an upward trend in the euro area, accelerating from around 0.2% in 2002 to 1.4% in 2006 and to over 1.7% at the end of 2006. This acceleration in the euro area's productivity growth rate seems to have spread to most sectors.

By contrast, per capita productivity has slowed markedly since 2005 in the United States, following a period of sustained growth between 2002 and 2004. Indeed, employment accelerated considerably in 2005, while value added decelerated. As a result, per capita productivity growth slowed down to 1.5% in 2005 and to 1.0% in 2006 after a 2.5% increase in 2004. The current weakness in per capita productivity growth does not

Chart 1 Per capita productivity

(in total economy, yoy, %)



Sources: BEA, BLS, Eurostat, INSEE, Banque de France, OECD forecasts.

BOX

The impact of the revision to the US national accounts on productivity indicators

During the annual revision of the national accounts which takes place in July of each year, the Bureau of Economic Analysis revised annual GDP growth between 2003 and 2006 significantly downwards, from 3.5% to 3.2%. In July 2005 and July 2006, the magnitude of the annual revision for the four preceding years was comparable (-0.3 percentage point).

The latest revision has downgraded the level of per capita productivity growth during the period 2003-2006 from 2.0% to 1.7% (see Table and Chart).

The employment figures used in this article, i.e. the series for total employment published by the OECD according to national accounts concepts, are based on statistics calculated by the Bureau of Labour Statistics, which are revised in January of each year. Some economists consider that these figures should be revised downwards, as the adjustment to employment in the construction sector was very limited considering the decline in this sector's production levels. An inaccurate calculation of illegal workers could notably be at the origin of an under-estimate of the adjustment to employment during the current slowdown.

Revision of GDP and per capita productivity in July 2007

(annual average, as a %)

	GDP		Per capita productivity	
	Before revision	After revision	Before revision	After revision
2004	3.9	3.6	2.8	2.5
2005	3.2	3.1	1.6	1.5
2006	3.3	2.9	1.5	1.0
2007 *	1.5	1.2	0.5	0.3

** Average for H1 2007.*
Source: BEA.

Per capita productivity in the United States and following revision of national accounts in July 2007

(in total economy, yoy, %)

Sources: BEA, OECD.

seem to originate from a specific sectoral trend.[2] In 2005, the sectors that contributed the most to the slowdown in productivity growth were those hit by a cyclical downturn, i.e. the manufacturing industry (slowdown in per capita productivity from around 7.8% in 2004 to 2.8% in 2005) and the real estate sector (from around 4.2% in 2004 to 1.1% in 2005). However, per capita productivity growth partially rebounded in these sectors in 2005 (to around 3.5% and 3.6% respectively), while other sectors have contributed to the continued slowdown.

Taking the number of hours worked into account does not change this overall assessment: hours worked per employee have decreased in the two regions at the same pace since 2002 (-0.7% between 2002 and 2006[3]) and slightly faster in the euro area in 2006 (-0.2%, versus -0.1%).

Consequently, year-on-year productivity growth in Q4 2006 and Q1 2007 was higher in the euro area than in the United States, for the first time since 2000.

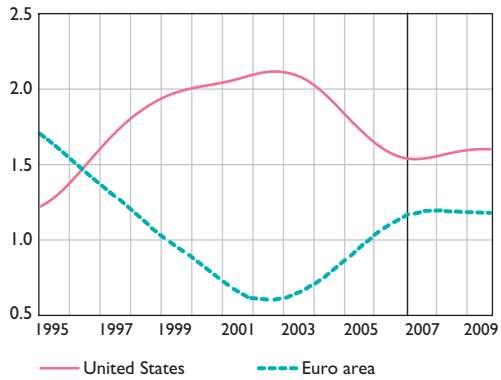
Contrasting assessments have been made concerning these developments and recent trends in productivity growth. For the United States, Kahn and Rich (2006) have tried to estimate a trend in productivity growth in real time on the basis of a common trend between labour productivity, real labour costs per hour worked and real household consumption per hour worked. They conclude that the structural trend in US productivity should remain on a high-growth regime (2.9%, compared with 1.3% for a low-growth regime). However, this estimate is based on the hypothesis that households forecast their productivity correctly and that one-off factors may not distort their underlying indicators. In the case of the United States, significant wealth effects related to developments in the real estate market have sustained real consumption. As a result, trends in the latter could fail to reflect actual productivity expectations. Furthermore, trends in consumption per hour worked over the past decade do not appear to be lastingly sustainable, as reflected in the decline in the savings ratio during this period.

Regarding the euro area, the European Commission (2006) considers that recent developments in productivity growth correspond to a hiatus in and a reversal of the downward trend observed in the 1980s. Their assessment is based on a filtering of the cycle and on the widespread nature of the rebound in productivity, with all sectors benefiting from it. This analysis is not shared by Mc Morrow and Röger (2007), who consider that during the period 2007-2011 there is unlikely to be a significant upturn in underlying productivity growth in the euro area, although they do acknowledge that the implementation of the Lisbon agenda would yield considerable

2 The revised data of value added by industry are not available yet. Consequently, productivity trends by sector are not entirely coherent with those of the total economy.
3 Source: OECD, Economic Outlook, June 2007. Euro area: EU-12 excluding Portugal.

Chart 2 Per capita productivity, cyclically adjusted

(in total economy, HP1600 filter, yoy, %)



Sources: BEA, BLS, Eurostat, INSEE, Banque de France, OECD forecasts.

benefits. Indeed, they attribute the slowdown in total factor productivity (TFP) during the 1990s to unresolved structural problems, such as an excessive specialisation in low- and medium-tech industries, and a failure to exploit ICT.

The analysis in this article tends, nonetheless, to confirm that recent trends in productivity growth both in the United States and the euro area are at least partially structural.

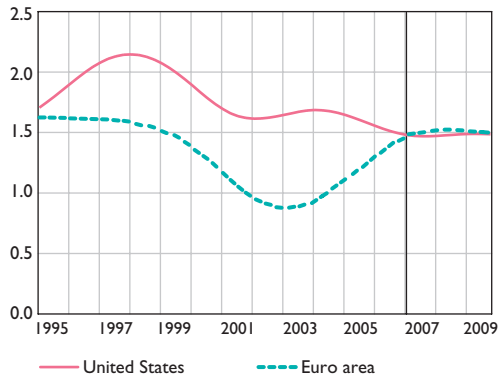
Taking into account cyclical differences via the use of a Hodrick-Prescott filter shows that since 2003, per capita productivity growth in the euro area has been converging towards that of the United States, due both to a deceleration in the United States and acceleration in the euro area (see Chart 2).[4]

However, since 1997, filtered productivity growth has nonetheless been higher in the United States and should remain so throughout the forecasting horizon.[5] Nevertheless, as productivity growth in the euro area increased during six years, reaching a maximum of around 1.5 percentage points in 2002, the difference between the two continents in terms of productivity growth decreased during the following period. According to forecasts, this gap should stabilise at around 0.4 percentage points between 2007 and 2009, with filtered per capita productivity growth of around 1.2% in the euro area and 1.6% in the United States.

4 On Charts 2 and 3, historical data are extended after Q1 2007 by forecasts in order to limit edge effects at the end of the period under implementation of the Hodrick-Prescott filter.
5 The forecasts used are based on the OECD's "Economic Outlook".

Chart 3 Per capita productivity adjusted for cyclical effects (excluding effects of changes in the employment rate)

(in total economy, HP1600 filter, yoy, %)



NB: Adjustment for changes in the employment rate according to the method used by Bourlès and Cette (2007).
Sources: BEA, BLS, Eurostat, INSEE, Banque de France, OECD forecasts.

Apart from the business cycle, some other non-structural factors may affect productivity growth. In particular, working time and employment rates[6] differ markedly between the euro area and the United States, both in terms of levels and trends. Given the decreasing returns of working time and employment rates, it therefore seems useful to adjust productivity growth for changes in these two variables, according to the method used by Bourlès and Cette (2007). Due to incomplete statistical information on working time throughout the euro area, only the effects of changes in the employment rate were taken into account. Thus, the adjustment made consists of removing the effects of changes in the employment rate from productivity trends, assuming a stable elasticity of working time relative to the employment rate.[7] The filtering used to adjust for cyclical effects is carried out subsequently.

As shown in Chart 3, the adjustment for cyclical effects and variations in employment rates narrows the gap between the productivity growth rate in the euro area and the United States that has been widening since 1996. At its widest in 2003, the gap is now only of 0.8 percentage points. In recent years, observed productivity growth per capita has slowed in the euro area owing to a rise in the employment rate (up 3.1 points at the end of 2006 from 64.4% in Q1 2000) while a decline in the employment rate (down 3.4 points at the end of 2006 from 80.2% in Q1 2000) made a positive contribution to observed productivity growth in the United States.

6 Employment rates have been calculated on the population aged 15 to 64. However, employment figures in the US have not been restated in a satisfactory manner for workers over 65 years old.
7 The value used for the semi-elasticity of productivity in relation to the employment rate is -0.431. See Bourlès and Cette (2007).

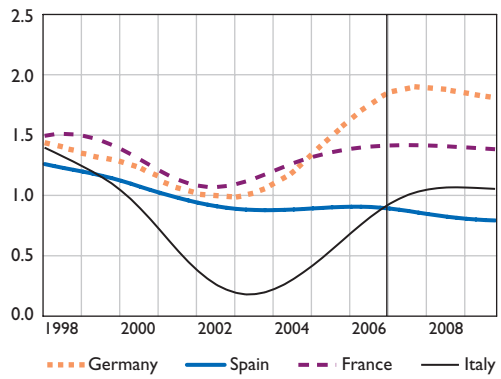
Furthermore, productivity growth filtered and adjusted for changes in the euro area employment rate should catch up with that of the United States as of 2007, for the first time in fourteen years. Hence, the productivity growth rate is expected to be around 1.5% in both regions.

Within the euro area, year-on-year per capita productivity growth, filtered and adjusted for the effects of changes in employment rates, varies significantly among the main euro area countries (see Chart 4).

Having slowed down between 2002 and 2003 to 1.1% in France, 1.0% in Germany, 0.9% in Spain and 0.2% in Italy, trend productivity accelerated in all of these countries, apart from Spain. For 2007, productivity growth is projected at 1.4% in France, 1.9% in Germany, 0.9% in Spain and 1.0% in Italy. Up to the end of the projection horizon in 2009, the difference in the trend productivity growth rates in the four large European economies remains significant, with a one-point gap between Germany (1.8%) and Spain (0.8%).

Chart 4 Per capita productivity adjusted for cyclical effects (excluding effects of changes in the employment rate)

(in total economy, HP1600 filter, yoy, %)



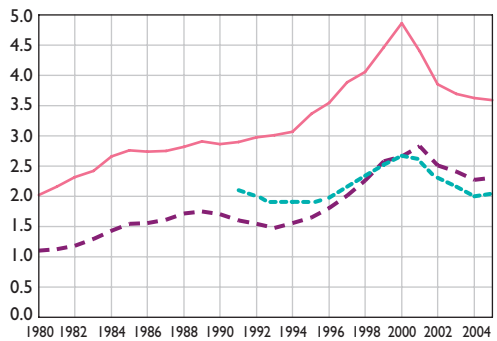
NB: Adjustment for changes in the employment rate according to the method used by Bourlès and Cette (2007).
Sources: BEA, BLS, Eurostat, INSEE, Banque de France, OECD forecasts.

2| Information and Communication Technologies (ICT): contributing to the decline in productivity growth in the United States and the upturn in the euro area?

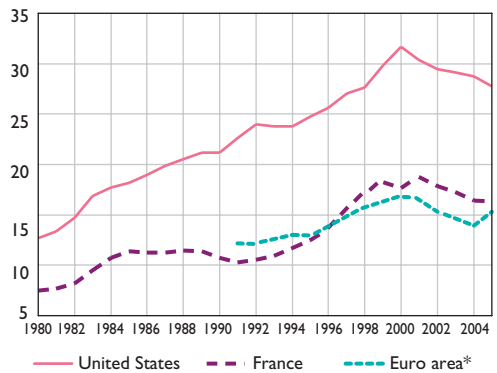
ICT diffusion (measured via the ICT investment rate or the share of ICT in investment expenditure) increased continuously in the euro area and in the United States from 1980 to 2000 (see Chart 5). ICT expenditure was undeniably boosted during the second half of the 1990s owing to fears related to the millennium bug. Following the bursting of the new technologies bubble in 2000-2001, the diffusion of ICT seems to have generally stabilised in the two regions. However, the very level of this

Chart 5 Rate of investment in ICT

(as a % of GDP)



(as a % of total non-residential investment)



** Euro area: excluding Luxembourg from 1991 to 2003; France, Germany and Spain for 2004; France and Germany for 2005.*
Sources: OECD, Eurostat.

diffusion seems much higher in the United States than in the euro area and two questions therefore arise:

• why has the level of ICT diffusion stopped increasing since 2000?

• and why is there such a large gap in ICT diffusion between the euro area and the United States?

The stabilisation of ICT diffusion in the United States from 2000 onwards could be due to various factors.

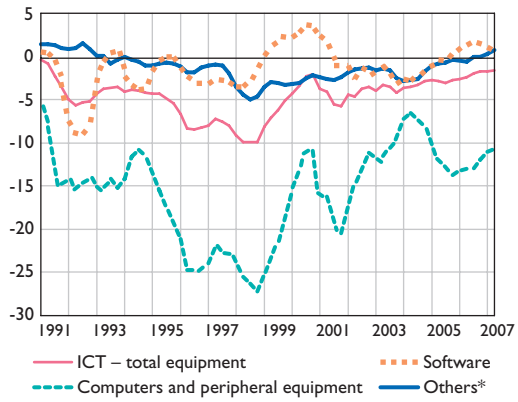
First, the relative decline in ICT prices implies that ICT diffusion may still continue to increase in volume while the ICT investment rate and the share of ICT in investment expenditure, measured in value terms, remain stable. However, the faster depreciation rate of ICT capital may have dampened this volume effect.

Moreover, it seems that ICT prices have declined less significantly since the end of the 1990s than beforehand (see Chart 6). More precisely, computer hardware prices declined faster during the second half of the 1990s and have picked up since 2000 to a growth rate closer to that observed before 1995.

This slowdown in the decline of ICT prices could explain the deceleration of ICT diffusion. This is so, because on the one hand the price elasticity of ICT investment is negative and significant (see Cette et al., 2005). On the other hand, the slowdown in the decline of ICT prices may reflect a slowdown in the productivity gains of these products and hence in incentives to renew the existing ICT capital stock and to substitute ICT for other production factors.

Chart 6 ICT prices in the United States

(year-on-year % change)



NB: Including communication equipment, non-medical instruments and medical equipment.
Source: BEA.

One salient question is why the decline in ICT prices has slowed down since the beginning of the 2000s. Aizcorbe, Oliner and Sichel (2006) have analysed this question in detail. In their opinion, the slowdown of ICT price reductions is due to an increase in the profit margins in the production process of semiconductors and not the result of a change in the rate of productivity gains of semiconductors. This analysis is based on data gathered from semiconductor producers themselves.

However, the question remains as to why there has been a stabilisation in ICT diffusion and not just a slowdown. One reason for this could be that the slowdown in the decline in ICT prices has been concomitant with the emergence of an "optimum" level of ICT diffusion. ICT diffusion could not progress indefinitely. The current threshold of ICT diffusion could therefore correspond to a level that reflects certain complementarities between ICT investment and non-ICT investment (irrespective of the speed of ICT productivity gains, the use of a personal computer also requires a table and a chair!).

Another reason for the stabilisation of ICT diffusion could be greater selectivity in ICT investment resulting from overinvestment during the 1990s. Although ICT diffusion may have stabilised, the impact of ICT on productivity may have increased simultaneously, as shown by the acceleration in TFP since the beginning of the 2000s in non-ICT producing sectors (see Jorgenson, Ho and Stiroh, 2007).

Therefore, what are the prospects for ICT diffusion and productivity growth? According to Jorgenson, Ho and Stiroh (2007), who cite the 2005 edition of the "international technology roadmap for semiconductors", the frequency of new chip releases increased after the mid-1990s, thus shortening the product life cycle from three to two years. However, they also indicate that this could revert back to a three-year life cycle as of the mid-2000s. As the underlying assumption is that ICT contribution to TFP growth is weakening, their central scenario for hourly labour productivity growth is based on the rate diminishing from 3.1% in the first half of the 2000s

Average annual trends in the price of investment expenditure relative to the price of GDP

(as a %)

	1960-2006	1960-1970	1970-1980	1980-1990	1990-2000	2000-2006
Total investments	-1.3	-1.0	0.1	-1.8	-2.5	-1.4
Capital goods	-2.4	-1.7	-0.9	-2.5	-3.6	-3.4
ICT	-6.0	-4.3	-6.5	-5.9	-7.4	-5.9
o/w:						
Computer hardware	-19.5	-22.8	-22.9	-16.0	-19.3	-14.7
Computer software	-4.4	-3.9	-5.6	-5.2	-3.7	-3.3
Communication equipment	-2.4	-1.2	-2.5	-1.5	-3.2	-4.1

Source: BEA.

to 2.5% thereafter, which is slightly below the rate observed during the second half of the 1990s (2.7%).

Analysing the impact of ICT diffusion, Fosler and Van Ark (2007) remark that the slowdown in productivity concerns the non-industrial activities. They point out that ICT contribution to productivity growth, particularly in the services sector, may well have reached a peak and that a potential second wave of ICT-driven expansion is still to come.

Regarding the second issue, the lower level of ICT diffusion in the euro area than in the United States could be principally due to differences in the levels of education and rigidities in product and labour markets.

An efficient use of ICT requires a more highly qualified labour force on average than for the use of other technologies. It also calls for a degree of organisational flexibility which may be hampered by product and labour market regulations. These relationships have been illustrated by various works (e.g. OECD, 2003) and confirmed by econometric studies (e.g. Gust and Marquez, 2004 and Aghion et al., 2007). Due to the lower average level of education of its working-age population and greater rigidities in the product and labour markets, the euro area has benefited less (in terms of productivity) from ICT use than the United States. For this reason, ICT diffusion is expected to remain lower in the euro area than in the United States. Chart 7 illustrates these relationships.

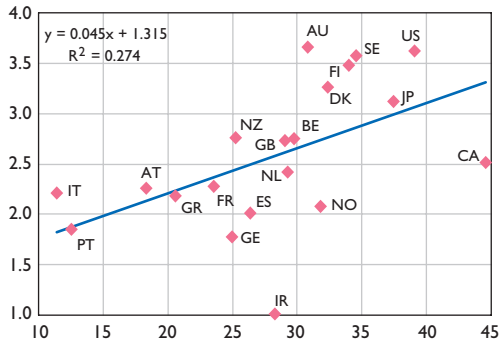
In Europe, the gradual increase in the average level of education of the working-age population and the current implementation of reforms to product and labour markets inspire a certain degree of optimism concerning the prospects for productivity growth in the coming years. In the 15-member European Union, the proportion of 20 to 24 year olds with secondary education increased from 69.2% in 1995 to 74.8% in 2006. Major labour market reforms have already been carried out, particularly in Germany (Hartz reforms), and several other major European countries (notably France and Italy) also plan to implement ambitious reforms in product and labour markets.

In a recent study, Bloom et al. (2007) show that in the United Kingdom, subsidiaries of US multinationals implement ICT more efficiently, all other things being equal, than similar firms that are not subsidiaries of US companies. This suggests that the corporate culture in the United States differs from that of the euro area, especially when it comes to ICT diffusion and productivity growth. However, this type of cultural gap may narrow spontaneously through imitation, as has been the case in the past.

Chart 7 Information and communication technologies (ICT)

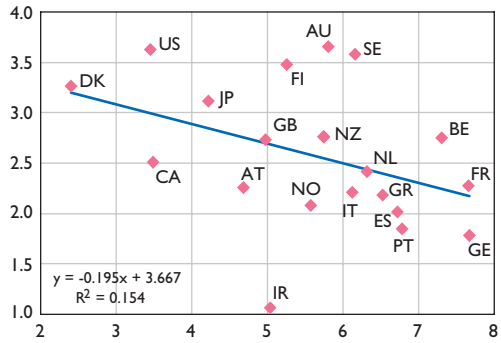
ICT and education

(x-axis: proportion of college-educated service sector workers in the population aged 25 to 64, as a %; y-axis: ICT investment rate, as a %)



ICT and rigidity

(x-axis: employment protection legislation index; y-axis: ICT investment rate, as a %)



Other factors that have managed to slow down ICT diffusion in the past have now ceased to exist. One example is high Internet connection costs in certain European countries that resulted from insufficient competition and the depreciation of the euro against the dollar, which increased the price of imported ICT.

Finally, significant levels of European direct investment in the United States at the beginning of the current decade, mainly in the field of new technologies[8] may favour the transfer of technology and the narrowing of productivity gaps via imitation.

8 *R.A. De Santis, R. Anderton and A. Hiizen (2004).*

3| How do sectoral dynamics influence productivity growth at the national level?

A recent Banque de France study[9] has examined productivity growth in the main European economies, the euro area as a whole and the United States. This analysis particularly aimed to examine possible sectoral effects that could have influenced the slowdown in euro area productivity growth.

The retail sector in Spain, the construction sector in Germany and the industrial sector in Spain and Italy have slowed productivity growth at national levels. Note that no sector contributes negatively to US productivity growth. Chart 8 shows the growth rates of value added and employment in the aforementioned sectors.

• The negative contribution of the construction sector in Germany is due to an inherited imbalance from German reunification (see Chart 8A). Following reunification and due to significant housing subsidies, the sector expanded considerably until the mid-1990s. Over the past decade, overcapacities were reduced in the construction sector, shaving around a quarter of a percentage point off Germany's GDP growth[10] (the construction sector's negative contribution in terms of productivity growth was minus 0.2 percentage points between 1995 and 2006). In contrast, Chart 8A shows that as of 2005, growth in value added and in employment has picked up markedly, allowing us to assume that the adjustment in the construction sector is over. Various other indicators seem to support this scenario: in Q1 2007, gross fixed capital formation in the construction industry increased by 15.3% in comparison with Q1 2006.

• If the retail sector penalised productivity growth in Spain, this was due to weak growth in value added in comparison to the dynamic growth in employment (Chart 8B).

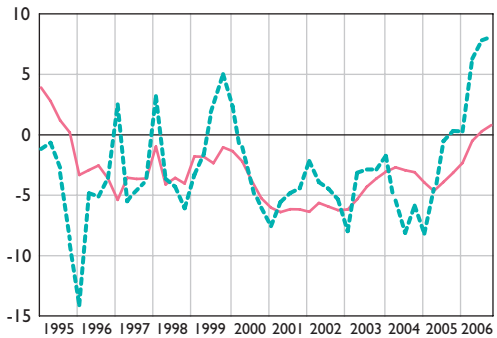
• The most negative contribution to productivity growth in Italy and Spain, however, stemmed from industry. This could be due to a particularly significant impact of deindustrialisation in these two countries, coupled with lagged adjustments in employment. More specifically, Chart 8C shows that in Italy, growth in value added began to diminish significantly as of 2000 and even became negative between 2001 and 2005. Although Spain is also experiencing a deceleration, growth in value added has nonetheless remained positive. The lagged adjustments in employment contributed further to the sectors' poor performance in terms of productivity. In contrast, Charts 8C and 8D show that since 2005, growth in industrial value added has accelerated significantly in Italy and Spain, which implies that the

9 "Décomposition de productivité et dynamiques sectorielles", *French-language article in* Bulletin de la Banque de France *No. 164, August 2007.*
10 ECFIN Country Focus (2007): "Upswing in Germany: how long will it last?", Vol. No. 4, issue 5, April.

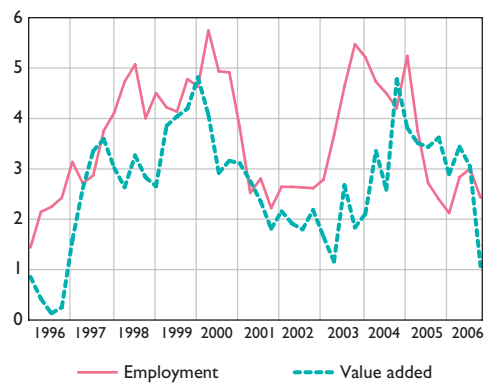
Chart 8 Negative sectoral contributions to productivity growth

(1995-2006, yoy)

A: Germany, construction sector



B: Spain, retail sector



industrial sectors have ceased to contribute negatively to the productivity growth of these two countries.

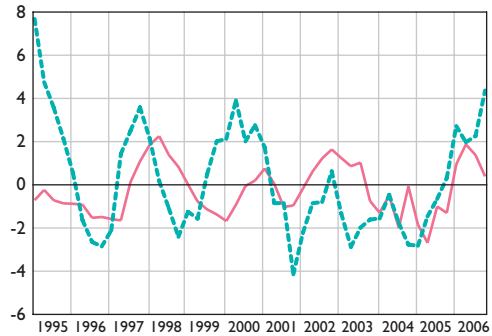
Productivity growth in the euro area has endured several phases of sectoral restructuring that were long-lasting but transitory. In particular, the contractions and restructuring in Germany's construction sector and in Italy's and Spain's industrial sectors appear to have come to an end. Since this cyclical phase is over, we can expect the productivity growth rate of Europe's largest economies to return to a structurally higher level. The acceleration in productivity growth observed since 2005 seems to support this hypothesis. In contrast, a further increase in employment rates, in line with the Lisbon agenda, could weigh on productivity trends in the euro area.

Conversely, the deceleration in productivity growth in the United States probably stems from both cyclical and structural factors. While employment growth has remained sustained for around two years, economic activity has decelerated simultaneously.

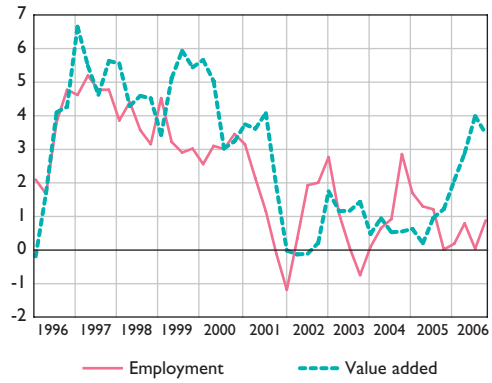
Chart 8 Negative sectoral contributions to productivity growth (count'd)

(1995-2006, yoy)

C: Italy, industrial sector



D: Spain, industrial sector



The analyses outlined in this paper suggest that the recent trends towards an acceleration in productivity growth in the United States and a deceleration in the euro area could be reversed again over the coming period: labour productivity could slow down in the United States as ICT contributes less to its momentum. At the same time, it could pick up in Europe thanks to less unfavourable sectoral structure effects in the short term and to faster ICT diffusion coupled with ongoing structural reforms in the long term. However, the continued increase in employment rates, in line with the Lisbon agenda, could weigh on productivity growth in the euro area. Since the developments examined in this paper are recent, further analysis is required to confirm such a scenario and recent revisions to US productivity figures demonstrate that real time analysis may prove difficult.

Bibliography

Aghion (P.), Askenazy (P.), Bourlès (R.), Cette (G.) and Dromel (N.) (2007)
"*Éducation supérieure, rigidités de marché et croissance*", forthcoming publication.

Aizcorbe (A.), Oliner (S. D.) and Sichel (D. E.) (2006)
"Shifting trends in semiconductor prices and the pace of technical progress", Working Paper, *Finance and Economics Discussion Series*, Federal Reserve Board, Washington DC, 2006-44, September.

Bloom (N.), Sadun (S.) and Van Reenen (J.) (2007)
"Americans do I.T. better: US multinationals and the productivity miracle", *CEPR discussion paper,* No. 6291.

Bourlès (R.) and Cette (G.) (2007)
"Trends in structural productivity levels in the major industrialised countries", *Economics Letters*, doi : 10.1016/j.econlet.2006.09.027.

Bowman (D.), Madigan (B.), de Michelis (A.), Oliner (S.), Reifschneider (D.) and Sichel (D.) (2004)
"Productivity growth, information technology and monetary policy", *Économie internationale*, No. 98, 2nd quarter.

Cette (G.), Lopez (J.) and Noual (P.-A.) (2005)
"Investment in information and communication technologies: an empirical analysis", *Applied Economics Letters*, vol. No. 12, No. 5, April.

Cette (G.) and Pfister (C.) (2004)
"Challenges of the new economy for monetary policy", *International Productivity Monitor*, No. 8, Spring.

De Santis (R. A.), Anderton (R.) and Hijzen (A.) (2004)
"On the determinants of the euro area FDI to the United States: the knowledge-capital-Tobin's Q framework", *ECB Working Paper*, No. 329.

European Commission (2006)
"Quarterly report on the Euro area", DG ECFIN, vol. No. 5, No. 4.

European Commission (2007)
"Upswing in Germany: how long will it last?", ECFIN Country Focus, DG ECFIN, vol. No. 4, issue 5, April.

Fosler (G. D.) and Van Ark (B.) (2007)
"Is ICT contribution to productivity growth peaking?", *The Conference Board Executive Action Reports*, No. A-0224-07-EA, January.

Gust (C.) and Marquez (J.) (2004)
"International comparisons of productivity growth: the role of information technology and regulatory practices", *Labour Economics*, vol. No. 11.

Issing (O.) (2004)
"New technologies, productivity and monetary policy", *Économie internationale*, No. 98, 2nd quarter.

Jorgenson (D. W.), Ho (M. S.) and Stiroh (K. J.) (2007)
"A retrospective look at the US productivity growth resurgence", *Federal Reserve Bank of New York Staff Reports*, No. 277, February.

Kahn (J.A.) and Rich (R.W.) (2006)
"Tracking productivity in real time", *Current issues in Economics and Finance*, vol. No. 12, No. 8, November.

Mc Morrow (K.) and Röger (W.) (2007)
"Analysis of EU growth trends, with a particular focus on Germany, France, Italy and the UK", *National Institute Economic Review*, n° 199, January.

OECD (2003)
"ICT and economic growth".

OECD (2007)
"OECD Economic Outlook", vol. No. 2007/1, No. 81, May.

Van Ark (B.) and Inklaar (R.) (2005)
"Catching up or getting stuck? Europe's trouble to exploit ICT's productivity potential", *Research Memorandum* GD-79, Publications of the Groningen Growth and Development Centre.

Productivity decomposition and sectoral dynamics

Pamfili Antipa
Macroeconomic Analysis and Forecasting Directorate
Business Conditions Analysis Division

In this article, we examine productivity growth in the five major euro area economies, the euro area as a whole and the United States. Using sectoral data, we calculate the different components of productivity growth in order to identify structural effects; these effects are positive at the national level when employment shifts towards the most productive sectors of the economy. Between 1995 and 2006, these structural effects contributed positively to productivity growth in the major euro area economies, but to a lesser extent in the United States. Furthermore, we find that the low productivity growth in Italy and Spain is mainly due to the negative contribution of their industrial sectors. The trade sector in Spain and the construction sector in Germany also contributed negatively to their respective national productivity growth rates. However, as the factors slowing down productivity growth appear to be temporary, we expect a structural acceleration of productivity growth in the main economies of the euro area and hence in the euro area as a whole.

Keywords: productivity growth, shift-share analysis, productivity decomposition, structural effects, sectoral productivity growth.

JEL codes: C10, E01, 047, 050

NB The author wishes to thank L. Frey for her very helpful advice regarding the treatment of US data and B. Pluyaud for his very valuable comments and help.

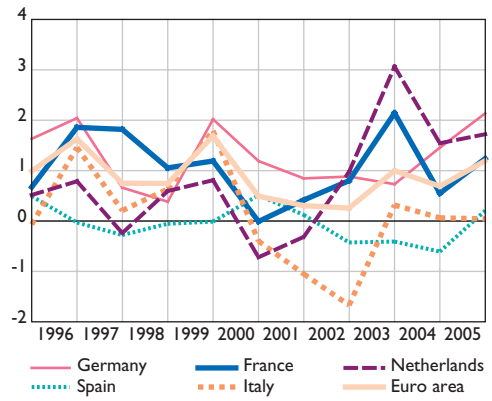
In this article, we examine productivity growth in the five major euro area economies, the euro area as a whole and the United States. We specifically focus on sectoral dynamics that could have influenced the slow down in productivity growth in the euro area.[1]

The productivity indicator used is value added over employment. Charts 1 and 2 show that, for the different euro area countries, growth rates of this indicator are close to those of GDP over employment (Chart 2), which is commonly used to measure productivity growth (the difference between value added and GDP corresponds to subsidies and taxes on products).

For euro area countries, quarterly national accounts data provided by Eurostat were used while, for the United States, data were provided by the Bureau of Labour Statistics and the Bureau of Economic Analysis. In the three following sections, productivity growth is decomposed, identifying the respective impacts of structural effects and the structurally stable growth rate. In the first part, the overall impact of inter-sectoral movements in employment at the national level is identified. In the second section, we determine the sectors contributing negatively to productivity growth, and we then analyse the components of productivity growth in these sectors in the third section. Section four offers some brief concluding remarks.

Chart 1 Total value added/total employment

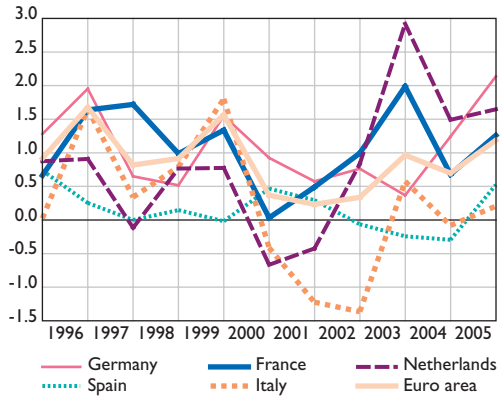
(year-on-year)



1 *See also Dew-Becker and Gordon (2006), Bourlès and Cette (2007) and Jimeno, Moral and Saiz (2006).*

Chart 2 GDP/total employment

(year-on-year)



1| The decomposition of productivity growth

For each country, productivity growth is decomposed into its components in order to isolate the effects of changes in the sectoral employment structure. To obtain the first component, (henceforth the structurally stable growth rate), we calculate a productivity growth rate holding sectoral employment shares constant; more precisely, this component is the sum of sectoral productivity growth rates weighted by the share of each sector in total value added in the previous period. The second component (henceforth the structural effect) corresponds to the impact of a change in the sectoral employment structure; it is calculated as the sum of variations in sectoral employment shares, weighted by the relative productivity rate of each sector in the previous period. Even in the absence of productivity gains in each sector of the economy, economy-wide productivity growth may increase if employment shares shift from the least productive sectors to the most productive sectors. The third and last component is a cross effect computed as the product of the latter two components (see Appendix for an in-depth presentation of the calculations). This effect is generally negligible in size.

The three components of productivity growth are obtained by computing the sum over six sectors: agriculture, industry, construction, trade, financial activities, and other services such as health care and education.[2] The results are displayed in Table 1.

In the United States, productivity growth is almost twice as high as in the euro area. Moreover, while productivity growth has been accelerating since 2000 in the United States, it has been slowing down in the euro area.

2 *For exact definitions see NACE rev.1.1.*

Table 1 Decomposition of annual productivity growth at the national level 1995-2006 (as a % and y.o.y.)

(Mean values over the sample period)

	Structurally stable growth rate	Structural effect	Cross effect	Total
Germany				
1995-2006	0.90	0.46	-0.03	1.33
1995-2000	0.80	0.67	-0.04	1.43
2000-2006	0.99	0.28	-0.02	1.25
Spain				
1996-2006	-0.27	0.25	-0.03	-0.05
1996-2000	-0.29	0.43	-0.04	0.10
2000-2006	-0.25	0.12	-0.02	-0.15
Italy				
1995-2006	-0.06	0.46	-0.04	0.36
1995-2000	0.55	0.67	-0.05	1.17
2000-2006	-0.58	0.28	-0.02	-0.32
Netherlands				
1995-2006	0.87	-0.05	-0.02	0.80
1995-2000	0.39	0.18	-0.02	0.55
2000-2006	1.20	-0.21	-0.02	0.97
France				
1995-2006	1,00	0,10	-0,02	1,08
1995-2000	1.13	0.24	-0.02	1.35
2000-2006	0.89	-0.02	-0.02	0.85
Euro area				
1995-2006	0.68	0.30	-0.02	0.96
1995-2000	0.80	0.50	-0.03	1.27
2000-2006	0.57	0.13	-0.01	0.69
United States				
1995-2006	1.72	0.07	-0.03	1.76
1995-2000	1.28	0.27	-0.04	1.51
2000-2006	2.16	-0.13	-0.03	2.01

These opposing trends are mainly due to the structurally stable productivity growth rate that is significantly higher in the United States and that even increased after 2000. It is important to stress that the acceleration in structurally stable productivity growth after 2000 came on top of the increase in productivity gains, frequently charted in economic literature, which had already started in the second half of 1990s.[3]

Conversely, the decline in the structurally stable productivity growth rate exacerbated the slowdown in productivity growth in the euro area, which had started in 1995.[4] EU KLEMS data[5] show this trend clearly: between 1980-1995 and 1996-2004, hourly euro area productivity growth[6] fell from 2.1% to 1.2%, while in the United States it rose from 1.2% to 2.4% over the same periods.

3 See, for example, Jorgenson Ho and Stiroh (2007).
4 Van Ark and Inklaar (2005) find that productivity growth for the EU15 declined from 2.2% (1987-1995) to 1.5% (1995-2004).
5 For further details, cf. http://www.euklems.net/
6 Overall productivity developments are discussed in greater depth in another article, Cette et al. (2007).

However, although structural effects declined in both areas, they are stronger and remained positive over both sub-periods in the euro area, implying that employment has shifted towards the more productive sectors. At the same time, structural effects have penalised US productivity growth since 2001, thus employment must have moved from more to less productive sectors.

Within the euro area, three groups of countries can be distinguished:

• Germany's productivity growth rate was much higher than the euro area average. This primarily reflects high structurally stable productivity gains. Moreover, the latter further increased during the second sub-period. Structural effects made also a significant positive contribution but decreased after 2000.

• Productivity growth rates in France and the Netherlands were relatively close to the euro area average. The structurally stable productivity gains were significant in both countries but, in the second sub-period, they increased in the Netherlands while slowing down in France. In both countries, structural effects were relatively weak and became negative after 2000.

• In Italy and Spain, productivity growth was significantly lower than the euro area average. In Italy, the structurally stable growth rate was already lower than the euro area average during the first sub-period, but remained positive. In combination with strongly positive structural effects, this was sufficient to obtain a productivity growth rate that was relatively close to the euro area average. During the second sub-period, the structurally stable growth rate became negative. In combination with positive but declining structural effects this resulted, overall, in a negative rate of productivity growth. In Spain, the structurally stable growth rate was negative over both sub-periods. While positive structural effects balanced these developments between 1995 and 2000, this was no longer the case after 2000.[7]

2| A sectoral approach

In this second section, using the same decomposition as in the first section, we will calculate each sector's contribution to overall productivity growth (see Appendix). This contribution can also be broken down into three parts. It corresponds for each sector to the sum of:

• the sector's productivity growth rate multiplied by its share in value added during the preceding period;

7 *For a summary, see Van Ark and McGuckin (2003).*

Table 2: Sectoral contributions to productivity growth

(in percentage points, mean values over the sample periods)

	Germany	Netherlands	France	Italy	Spain (a)	Euro area	United States (b)
Agriculture							
1995-2006	0.02	-0.02	-0.01	-0.01	-0.04	-0.01	0.01
1995-2000	0.03	-0.06	0.07	0.06	0.14	0.04	0.00
2000-2006	0.00	0.01	-0.08	-0.07	-0.17	-0.05	0.02
Construction							
1995-2006	-0.18	-0.05	-0.06	0.04	0.15	-0.03	0.00
1995-2000	-0.22	-0.03	-0.17	0.00	0.03	-0.09	0.01
2000-2006	-0.16	-0.06	0.04	0.08	0.23	0.01	0.00
Trade							
1995-2006	0.33	0.58	0.29	0.28	-0.22	0.28	0.73
1995-2000	0.33	0.72	0.33	0.50	-0.28	0.34	0.74
2000-2006	0.32	0.48	0.26	0.09	-0.17	0.22	0.73
Industry							
1995-2006	0.37	-0.09	0.37	-0.18	-0.13	0.22	0.24
1995-2000	0.15	-0.23	0.56	0.09	0.15	0.30	0.36
2000-2006	0.56	0.01	0.21	-0.40	-0.33	0.13	0.12
Finance							
1995-2006	0.61	0.40	0.45	0.19	0.26	0.45	0.74
1995-2000	0.84	0.59	0.58	0.42	0.25	0.62	0.63
2000-2006	0.42	0.27	0.34	0.00	0.26	0.30	0.84
Other services							
1995-2006	0.19	-0.03	0.03	0.04	-0.05	0.06	0.04
1995-2000	0.29	-0.45	-0.02	0.10	-0.20	0.07	-0.23
2000-2006	0.11	0.26	0.08	-0.02	0.05	0.07	0.30
Total (all sectors)							
1995-2006	1.33	0.80	1.08	0.36	-0.05	0.96	1.76
1995-2000	1.43	0.55	1.35	1.17	0.10	1.27	1.51
2000-2006	1.25	0.97	0.85	-0.32	-0.15	0.69	2.01

(a) The data for Spain starts in 1996.

(b) A revision of sectoral value added data for the US will take place after the publication of this article. Hence, the computations here are based on the latest available data.

• the change in the sector's employment share multiplied by the sector's relative productivity level during the preceding period;

• and a cross effect, which is the product of the latter two components.

This sectoral decomposition should make it possible to identify the sectors making a negative contribution at the national level. The results are displayed in Table 2.

The contributions of the respective agricultural sectors to national productivity growth rates were generally weak; in Italy, Spain and France they were the highest. This reflects mainly two factors: i) agriculture has a greater weight in terms of levels of employment in these countries; ii) employment in agriculture has, at the same time, strongly decreased. Other services also seem to have made a weak contribution, even though this was less so in the United States, Germany and the Netherlands. Likewise, the contribution of the construction sector to productivity growth was small, except in Germany and in Spain, where a real estate crisis and

boom were respectively observed over the sample period. Conversely, the largest contributions to productivity growth in the different countries were made by trade, finance and industry.

In the United States, the trade (as illustrated by the "Wal-mart model": major productivity gains are achieved in retail trade) and finance sectors contributed most positively to productivity growth. Furthermore, the contribution of other services to US productivity growth increased sharply and became significantly positive from 2000 onwards. Service sectors also made a strong contribution, even though it should be stressed that no sector made a negative contribution.

The contributions of the trade and finance sectors were positive in the euro area but less so than in the United States. Moreover, the contributions of these sectors decreased in the euro area, whereas they remained stable or even increased in the United States.

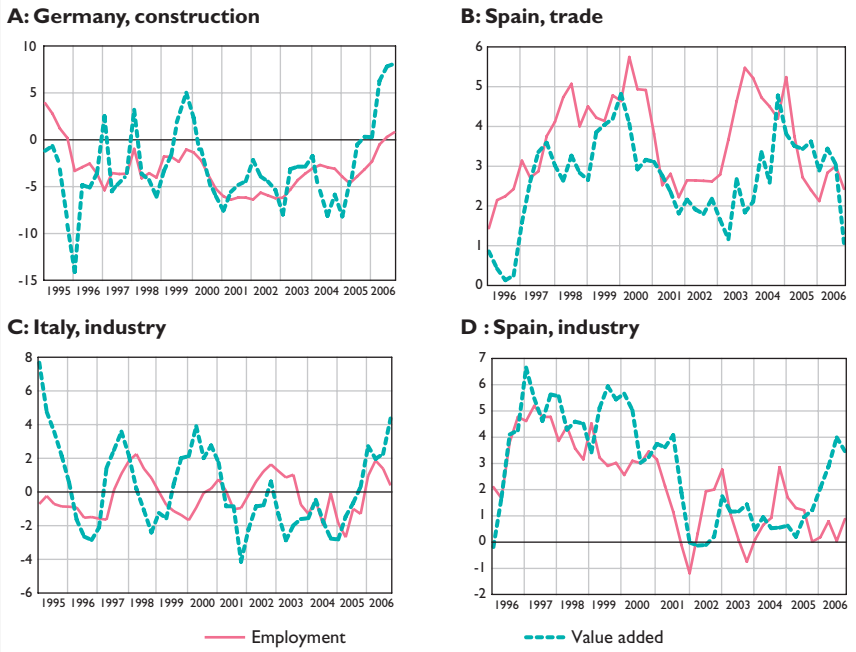
• Within the euro area, the sectoral distribution of productivity growth was particularly atypical in Germany. Above all, the industrial sector's contribution was greater than in the other sample countries except for France up to 2000. In addition, while the contribution of industry declined after 2000 in the majority of countries, it almost quadrupled in Germany. The financial sector's contribution fell sharply from one sub-period to the other, even though it remained high. Construction had a negative impact, which can be explained by the imbalances stemming from the German reunification (see Chart 3A). Indeed, after the reunification and thanks to substantial housing subsidies, the sector boomed until the mid-1990s. The subsequent adjustment took place over the past decade and reduced annual German GDP growth by approximately a quarter of a percentage point[9] (in terms of productivity, the contribution of the construction sector was of -0.2 percentage points between 1995 and 2006). In contrast, Chart 3A shows that as of 2005, growth in value added and employment picked up, indicating that the adjustment in the construction sector might be coming to an end.

• The sectoral structure in the Netherlands was relatively close to that of the United States since the contributions to productivity growth were mainly located in the trade and finance sectors, with the contribution of other services also rising. However, contrary to the United States, the contributions of the trade and finance sectors declined after 2000.

For its part, France was characterised by a sectoral distribution of productivity gains that was very similar to the patterns observed in the euro area and Germany (except for construction).

9 ECFIN Country Focus: "Upswing in Germany: how long will it last?"

Chart 3 – Employment and value added
Sectors making a significantly negative contribution to productivity growth
(1995-2006, year-on-year)



• In Italy and Spain, since 2000, industry has made the most negative contribution to productivity growth. This can be explained by a particularly high degree of deindustrialisation over the recent period. Chart 3C shows that in Italy the growth rate of value added declined appreciably after 2000 and even became negative between 2001 and 2005, while in Spain it slowed down but nevertheless remained positive (Chart 3D). In contrast, Charts 3C and 3D show that after 2005, growth in industrial value added picked up significantly in Italy and Spain, which indicates that the phase of industry's negative contribution to productivity growth might be over in these two countries.

Apart from industry, trade and finance also largely contributed to the deceleration of Italian productivity growth, which started to slow down after 2000.

In Spain, trade contributed negatively to productivity growth, mainly between 1996 and 2000 but also to a lesser extent after 2000. As shown in the Chart 3B, value added growth remained positive, but was on average less significant than employment growth. Lastly, the positive and substantial contribution of construction in Spain since 2000 – the strongest amongst the countries in the sample – can no doubt be attributed to the real estate boom experienced recently by this country.

3| Structural decomposition at the sectoral level

Based on an accounting decomposition, we will in this last section breakdown the sectoral effects presented in Table 2 into the structurally stable growth rate and structural effects. The cross effect, which is negligible, is voluntarily omitted to simplify the presentation of the results. Moreover, only countries in which a sector significantly penalises productivity growth are selected.

Structural effects (see Table 3) were very marked for certain sectors. They were negative in all the countries for agriculture and industry, which reflected the decline in these sectors' employment shares; this trend was common to all the sample countries with, for the euro area, an average annual fall in employment shares of 0.15 percentage points for agriculture and 0.33 percentage points for industry. On the contrary, the financial sector, whose weight in total employment increased for all countries (average annual rise of 0.31 percentage points for the euro area), displayed systematically positive structural effects. Finally, employment shares for the trade sector were very stable for all countries (average variation of 0.01 percentage point for the euro area), which induces negligible structural effects for this sector.

In addition, the positive contribution of structural effects in the financial sector was even stronger since the relative productivity of this sector was high for all countries (on average 1.91 times the economy-wide productivity

Table 3 Decomposition of productivity growth at the sectoral level

	Germany			Italy			Spain			Euro area		
	1995-2006	1995-2000	2000-2006	1995-2006	1995-2000	2000-2006	1996-2006	1996-2000	2000-2006	1995-2006	1995-2000	2000-2006
Agriculture												
Structurally stable growth rate	0.05	0.09	0.03	0.09	0.19	0.00	0.13	0.34	-0.02	0.06	0.13	0.01
Structural effects	-0.03	-0.05	-0.02	-0.10	-0.12	-0.07	-0.17	-0.19	-0.15	-0.07	-0.09	-0.06
Construction												
Structurally stable growth rate	0.00	-0.06	0.05	0.00	0.02	-0.10	-0.13	-0.26	-0.04	-0.04	-0.08	-0.02
Structural effects	-0.18	-0.15	-0.20	0.04	-0.02	0.09	0.28	0.31	0.27	0.00	-0.01	0.03
Trade												
Structurally stable growth rate	0.31	0.30	0.32	0.29	0.50	0.10	-0.24	-0.27	-0.21	0.27	0.34	0.21
Structural effects	0.01	0.03	0.00	0.00	0.00	-0.01	0.02	-0.02	0.04	0.00	0.00	0.01
Industry												
Structurally stable growth rate	0.82	0.70	0.93	0.11	0.34	-0.08	0.13	0.18	0.10	0.60	0.67	0.52
Structural effects	-0.43	-0.53	-0.35	-0.29	-0.25	-0.32	-0.26	-0.02	-0.43	-0.37	-0.35	-0.39
Finance												
Structurally stable growth rate	-0.29	-0.34	-0.25	-0.56	-0.57	-0.55	-0.20	-0.33	-0.11	-0.16	-0.23	-0.10
Structural effects	0.91	1.19	0.68	0.77	1.01	0.57	0.47	0.59	0.38	0.62	0.86	0.41
Other services												
Structurally stable growth rate	0.01	0.11	-0.08	0.01	0.06	-0.03	0.04	0.04	0.03	-0.04	-0.02	-0.06
Structural effects	0.18	0.18	0.19	0.03	0.04	0.02	-0.09	-0.24	0.02	0.11	0.09	0.13

The cross effects are marginal and have been omitted for clarity.

rate for the euro area). Conversely, the negative contributions of agriculture were limited by the fact that relative productivity in this sector is generally low (0.50 times the economy-wide productivity rate for the euro area). As regards industry, relative productivity was close to average (1.14 times the economy-wide productivity rate for the euro area).

In Germany, the structural effect in the construction sector was negative during the two sub-periods (0.15 percentage points and 0.20 percentage points) and had a predominant impact on the overall contribution of the sector. The sector's employment share dropped by 0.25 percentage points on average per annum between 1995 and 2006; at the same time, the sector's relative productivity remained fairly stable at around 0.74 times the economy-wide productivity rate. The effect of the decline in the sector's employment share was not offset by productivity gains within the sector (the contribution of the structurally stable growth rate was zero over the whole sample period). These developments reflect the crisis the German construction sector underwent: over the sample period, value added and employment growth became negative simultaneously and to about the same extent (see Chart 3A).

A similar situation was observed in the industrial sector in Italy over the whole sample period (see Chart 3C) and in Spain after 2000, where value added and employment growth remained positive but declined sharply. As mentioned above, the negative structural effects in industry, reflecting the reduction in the share of industry in total employment, were not unique to Italy and Spain but affected most industrialised countries. Yet, the concomitant decline in value added was specific to Italy and Spain. While in the euro area, and more specifically in Germany, the reorganisation of industry was accompanied by significant productivity gains, this was much less the case in Italy and Spain.

For Italy, we noted in the previous section that trade and finance also contributed strongly to the deceleration of productivity growth. Table 3 shows that there are two different phenomena to be interpreted: in the trade sector, structural effects were relatively neutral (this was also the case for the euro area as a whole), but structurally stable productivity growth fell sharply after 2000; in the financial sector, positive structural effects, which largely exceeded the negative effects from declining productivity growth up to 2000, dwindled after that date.

Lastly, in Spain, two sectors displayed particular trends. In construction, the boom mentioned above resulted in a strongly positive contribution of structural effects. The latter offset the decline in the structurally stable productivity growth rate, which decelerated after 2000. The employment share in construction increased by 0.36 percentage points per annum on average, while the sector's relative productivity was 0.79 times the

economy-wide productivity rate on average. In the trade sector, the structural effect's contribution was almost zero, but the structurally stable growth rate of productivity was negative.

Table 1 displayed strongly positive structural effects for the euro area and in particular for Germany, Italy and Spain. Table 3 highlighted the predominance of structural effects in the financial sector, particularly for Germany and Italy. Indeed, the increasing share of this very productive sector in total employment made a significant positive contribution to overall productivity. At the euro area level, this positive contribution largely offset the inverse structural effects related to the decline in industrial employment shares: the change in employment shares in these two sectors was of comparable size, but as the relative productivity growth was greater in finance than in industry, the developments in the financial sector influenced aggregate productivity growth to a greater extent.

Furthermore, the deceleration of structural effects after 2000 seems to be linked to the decline in the financial sector's contribution. The latter was due to the slower increase in the sector's employment shares after 2000 (which fell for the euro area from 0.42 percentage points to 0.22 percentage points per annum), and to a decline in the sector's relative productivity gains (which decreased from 2.02 to 1.82 times the economy-wide productivity rate between the two sub-periods). In Spain, the decline in structural effects also appeared to be related to the strong contraction in industrial employment shares after 2000, falling from -0.2 percentage points to -0.38 percentage points as an annual average.

At the national level, structural effects clearly contributed to the productivity growth of the euro area economies between 1995 and 2006. Over the same period, sectoral dynamics deeply influenced productivity growth in this area: in Italy, weak productivity growth seemed in particular due to the negative contribution of the industrial sector. In the latter, the structurally stable growth rate decreased after 2000 and thus no longer offset the negative structural effects. The same phenomenon was encountered in Spain's industrial sector, where the trade sector also penalised national productivity growth. In Germany, the construction sector contributed negatively to productivity growth, due to imbalances inherited from reunification.

Hence, euro area productivity growth suffered from a series of long but transitory sectoral adjustments. As these adjustments seem to be completed, a structural acceleration of productivity growth in the main euro area economies appears possible. The acceleration in productivity growth observed since 2006 seems to corroborate this assumption, but further studies will be necessary to corroborate this point.

Appendix

$$\dot{\pi}_t = \underbrace{\sum_i (q_{it-1}\dot{\pi}_{it})}_{\text{Structurally stable growth rate}} + \underbrace{\sum_i \left(\Delta n_{it}\frac{\pi_{it-1}}{\pi_{t-1}}\right)}_{\text{Structural effect}} + \underbrace{\sum_i q_{it-1}\left(\dot{n}_{it}\dot{\pi}_{it}\right)}_{\text{Cross effect}}$$

$$\pi_t = \frac{Q_t}{N_t} = \sum_i \frac{Q_{it}}{N_t} = \sum_i \frac{Q_{it}}{N_{it}} \times \frac{N_{it}}{N_t} = \sum_i n_{it}\pi_{it}$$

$$\pi_t = \sum_i \left[(1+\dot{n}_{it})n_{it-1} \times (1+\dot{\pi}_{it})\pi_{it-1}\right] = \sum_i \left[(n_{it-1}\times\pi_{it-1})(1+\dot{n}_{it}+\dot{\pi}_{it}+\dot{n}_{it}\dot{\pi}_{it})\right]$$

$$\underbrace{\pi_t - \sum_i (n_{it-1}\pi_{it-1})}_{\Delta\pi_t} = \sum_i \left[(n_{it-1}\pi_{it-1})(\dot{n}_{it}+\dot{\pi}_{it}+\dot{n}_{it}\dot{\pi}_{it})\right]$$

$$\frac{\Delta\pi_t}{\pi_{t-1}} = \sum_i \left[\frac{n_{it-1}\pi_{it-1}}{\pi_{t-1}}(\dot{n}_{it}+\dot{\pi}_{it}+\dot{n}_{it}\dot{\pi}_{it})\right]$$

$$\dot{\pi}_t = \sum_i \left[\frac{N_{it-1}/N_{t-1} \times Q_{it-1}/N_{it-1}}{Q_{t-1}/N_{t-1}}(\dot{n}_{it}+\dot{\pi}_{it}+\dot{n}_{it}\dot{\pi}_{it})\right]$$

$$\dot{\pi}_t = \sum_i (q_{it-1}\dot{\pi}_{it}) + \sum_i (q_{it-1}\dot{n}_{it}) + \sum_i q_{it-1}(\dot{n}_{it}\dot{\pi}_{it})$$

As

$$q_{it-1}\dot{n}_{it} = \frac{\Delta n_{it}}{n_{it-1}} \times \frac{Q_{it-1}}{Q_{t-1}} = \Delta n_{it} \times \frac{N_{t-1}}{N_{it-1}} \times \frac{Q_{it-1}}{Q_{t-1}} = \Delta n_{it} \times \frac{\pi_{it-1}}{\pi_{t-1}}$$

We obtain

$$\dot{\pi}_t = \underbrace{\sum_i (q_{it-1}\dot{\pi}_{it})}_{\text{Structurally stable growth rate}} + \underbrace{\sum_i \left(\Delta n_{it}\frac{\pi_{it-1}}{\pi_{t-1}}\right)}_{\text{Structural effect}} + \underbrace{\sum_i q_{it-1}\left(\dot{n}_{it}\dot{\pi}_{it}\right)}_{\text{Cross effect}}$$

A sector's contribution to productivity growth is given by:

$$cont_{it} = q_{it-1}\dot{\pi}_{it} + \Delta n_{it}\frac{\pi_{it-1}}{\pi_{t-1}} + q_{it-1}\dot{n}_{it}\dot{\pi}_{it}$$

Annotations:

π = Productivity

$\pi_i = \frac{Q_i}{N_i}$, productivity of sector i

Q = Value added (volume)

$q_i = \frac{Q_i}{Q}$, part of sector i in the total value added of the economy

N = Total employment

$n_i = \frac{N_i}{N}$, part of sector i in the total employment of the economy

i = Index of sector i

t = Index of year t

For any variable x: $\Delta x_t = x_t - x_{t-1}$ variation between t and t-1

$\dot{x}_t \Rightarrow \frac{x_t - x_{t-1}}{x_{t-1}}$, growth rate between t and t-1

Bibliography

Bourlès (R.) and Cette (G.) (2007)
"Trends in structural productivity levels in the major industrialised countries", *Economic Letters*, 10.1016/ j.econlet.2006.09.027.

Dew-Becker (I.) and Gordon (R.) (2006)
"The slowdown in European productivity growth: a tale of tigers, tortoises and textbook labour economics", Northwestern University, *mimeo*.

European Commission, DG ECFIN (2007)
"Upswing in Germany: how long will it last?", *ECFIN Country Focus*, Volume 4, Issue 5, 14 April.

Jimeno Moral (J.E.) and Saiz (L.) (2006)
"Structural breaks in labour productivity growth: the United States vs. the European Union", *Banco de España Working Papers*, No.0625.

Jorgenson (D.W.), Ho (M.S.) and Stiroh (K.J.) (2007)
"A retrospective look at the US productivity growth resurgence", *Federal Reserve Bank of New York Staff Reports*, No.277, February.

Van Ark (B.) (1995)
"Sectoral growth accounting and structural change in post-war Europe", *Research Memorandum GD-23*, Publications of the Groningen Growth and Development Centre.

Van Ark (B.) and McGuckin (R.) (2003)
"Productivity, employment and income in the world's economies", *Research Report*, *mimeo*, The Conference Board.

Van Ark (B.) and Inklaar (R.) (2005)
"Catching up or getting stuck? Europe's trouble to exploit ICT's productivity potential", *Research Memorandum GD-79*, Publications of the Groningen Growth and Development Centre.

Van Ark (B.) and McGuckin (R.) (2005)
"Productivity and participation: an international comparison", *Research Memorandum GD-78*, Publications of the Groningen Growth and Development Centre.

Ypma (G.) and Van Ark (B.) (2006)
"Employment and hours worked in national accounts: a producer's view on methods and a user's view on applicability", *EU KLEMS Working Paper Series,* No.10.

Quarterly Selection of Articles

Autumn 2005

– The single monetary policy and the interest rate channel in France and the euro area
– Fourth Economic Policy Forum: Productivity and monetary policy
– Measuring corporate profitability

Winter 2005/2006

– Some hypotheses regarding an inflation regime change in France
– Inflation dynamics in France
– Price-setting in the French and euro area manufacturing sectors: specific survey results

Spring 2006

– "Productivity, competitiveness and globalisation" – Banque de France international symposium – Concluding remarks
– Interaction between regional economic integration and institutional integration: the European experience
– The weaknesses of Chinese financial markets: reforms essential to diversifying the financing of the economy
– An analysis of business and credit cycles: The cases of Poland, Hungary, the Czech Republic and the euro area

Summer 2006

– Re-examining the money demand function for the euro area
– Target2: From concept to reality
– French households' financial investment: Comparison with Europe (1995-2004)

Autumn 2006

– Are we heading towards a heightening of global inflationary pressures?
– A national central bank within a federal system
– Progress towards the Single Euro Payments Area
– Are house prices in the USA and Europe sustainable?
– Banque de France scores: development, applications, and maintenance

Winter 2006/2007

– Monetary policy making in the Euro area and in the US
– Adjustment scenarios for the US current account balance: an assessment based on different NiGEM calibrations
– Risk contagion through defaults on trade bills

Spring 2007

– The credibility of monetary policy from a New Keynesian perspective
– Perspectives on productivity and potential output growth:
a summary of the joint Banque de France/Bank of Canada workshop, April 2006
– New borrowing post-debt relief: risks and challenges for developing countries

Summer 2007

– Debt retrenchment strategies and control of public spending
– Estimating the sacrifice ratio for the euro area
– The position of industrial firms in 2005

Autumn 2007

– National Financial Accounts in 2006
Further increase in private sector debt, central government debt on the decline
– The geographical breakdown of direct investment: a group-based approach
– DSGE models and their importance to central banks

Winter 2007

– Issues regarding euroisation in regions neighbouring the euro area
– France's balance of payments and international investment position in 2006
– The position of manufacturing firms in 2006
– Labour market flexibility: what does Banque de France research tell us?

Digest

From January 2004 to June 2005

– Disinflation and monetary policy strategies in acceding countries
(No. 121 – January 2004)

– Measuring the Balassa-Samuelson effect for the Countries of Central and Eastern Europe?
– The external accounts of the ten European Union new member countries
(No. 122 – February 2004)

– Labour productivity in the major industrialised countries: The end of the catch-up process with the United States?
– The breaks in *per capita* productivity trends in a number of industrialised countries
– Determinants of productivity per employee: An empirical estimation using panel data
– The impact of the diffusion of Information and Communication Technologies (ICT) on productivity per employee in France
– Hourly productivity and *per capita* GDP in the United States and France – Comparisons and Recommendations
(No. 123 – March 2004)

– The contribution of new generation models to economic analysis: The example of MARCOS
– The Mascotte forecasting model for the French economy: Main features and results from variants
(No. 124 – April 2004)

– Financial and accounting standards and corporate governance
– Non-resident holdings in French CAC 40 companies between 1997 and 2002
(No. 125 – May 2004)

– The concept of attractiveness in the context of Monetary Union
– The attractiveness of financial centres
(No. 126 – June 2004)

– Productivity gaps between Europe and the United States
– The valuation of unquoted shares: A European test exercice
(No. 127 – July 2004)

– Inflation persistence in France and the euro area
(No. 128 – August 2004)

– The euro five years on: Achievements and new challenges
– One-off budgetary measures
(No. 129 – September 2004)

– Is there a risk of a property bubble in France?
(No. 130 – October 2004)

– Debt financing of households between 1995 and 2002
(No. 131 – November 2004)

– The position of industrial firms – 2003 report
(No. 132 – December 2004)

– Offshoring
(No. 133 – January 2005)

– What role do financial factors play in house price dynamics?
(No. 134 – February 2005)

– Reforming the legal framework for securitisation in France
(No. 135 – March 2005)

– Tri-party repo transactions
(No. 136 – April 2005)

– US long-term yields and forex interventions by foreign central banks
– Transposition of the Directive on financial collateral arrangements
(No. 137 – May 2005)

– France's balance of payments in 2004
(No. 138 – June 2005)

OTHER PUBLICATIONS

Documents available in English

Financial Stability Review – Special issue on liquidity (February 2008)
Published by direction des Enquêtes et Publications économiques
Telephone: + 33 (0) 1 42 92 30 27

Selected French Banking and Financial Regulations 2006
Published by Comité de la réglementation bancaire et financière
Telephone: + 33 (0) 1 42 92 28 05
Price: EUR 76 (incl. VAT)

Banque de France – 2006 Annual Report
Published by direction des Enquêtes et Publications économiques
Telephone: + 33 (0) 1 42 92 29 54

CECEI 2006 Annual Report
Published by Comité des établissements de crédit et des entreprises d'investissement
Telephone: + 33 (0) 1 42 92 40 54
Price: EUR 38 (incl. VAT)

Commission bancaire 2006 Annual Report
Published by Secrétariat général de la Commission bancaire
Telephone: + 33 (0) 1 42 92 57 45
Price: EUR 38 (incl. VAT)

International symposium (2005): Productivity, competitivity and globalisation
Published by direction des Enquêtes et Publications économiques
Telephone: + 33 (0) 1 42 92 30 27

Means of payment and transfer systems oversight Report 2006
Published by direction des Systèmes de paiement et des infrastructures de marché
Telephone: + 33 (0) 1 42 92 95 84

These documents are available from:
Direction de la Communication
07-1050 Service Relations avec le public
48 rue Croix des Petits Champs
75049 Paris Cedex 01
Telephone: + 33 (0) 1 42 92 39 08
Fax: + 33 (0) 1 42 92 39 40

*Other documents can be freely downloaded from the Banque de France's website (*http://www.banque-france.fr*)*

STATISTICS

Contents

Economic developments

Money, investment and financing

Financial markets and interest rates

Other statistics

NB: Since 1 January 2008, the euro area has grown following the accession of Cyprus and Malta. The statistical data takes this enlargement into account as from that date.

The data in this section are those available in the Banque de France BSME database at the given dates.

Table 1
Industrial activity indicators – Monthly Business Survey – France

(seasonally-adjusted data)

	2007					2008	
	July	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
Changes in production from the previous month (a)							
Total	**1**	**11**	**9**	**4**	**-4**	**19**	**5**
Intermediate goods	3	7	7	4	-1	13	3
Capital goods	5	11	9	1	-8	24	14
Automotive industry	-17	8	17	-12	-9	40	-7
Consumer goods	10	17	13	3	-8	21	7
Agri-food industry	-4	14	11	4	15	4	5
Production forecasts (a)							
Total	**10**	**19**	**16**	**15**	**22**	**16**	**13**
Intermediate goods	13	18	16	12	20	15	11
Capital goods	13	24	21	11	33	22	18
Automotive industry	-9	34	19	38	24	18	10
Consumer goods	13	10	7	6	20	14	9
Agri-food industry	16	15	15	17	14	13	16
Changes in orders from the previous month (a)							
Total	**7**	**13**	**12**	**8**	**9**	**12**	**9**
Foreign	4	13	18	9	9	11	10
Order books (a)							
Total	**28**	**26**	**27**	**27**	**25**	**25**	**23**
Intermediate goods	23	21	20	18	17	16	15
Capital goods	64	65	64	63	65	68	65
Consumer goods	22	18	10	18	19	15	16
Agri-food industry	13	14	16	16	11	8	7
Inventories of finished goods (a)							
Total	**4**	**4**	**5**	**4**	**5**	**5**	**4**
Intermediate goods	-1	2	4	3	3	3	3
Capital goods	8	8	4	5	6	5	4
Automotive industry	5	5	-7	1	3	1	1
Consumer goods	10	7	12	9	12	11	4
Agri-food industry	0	3	1	4	4	5	8
Capacity utilisation rate (b)							
Total	**83.5**	**83.9**	**84.1**	**83.7**	**80.9**	**83.5**	**83.4**
Staff levels (a)							
Changes from the previous month	-1	0	-1	1	-1	3	0
Forecast for the coming month	-4	1	-2	-1	-1	-1	0
Business sentiment indicator (c)							
	106	**107**	**110**	**108**	**106**	**106**	**107**

(a) Data given as a balance of opinions.
(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.

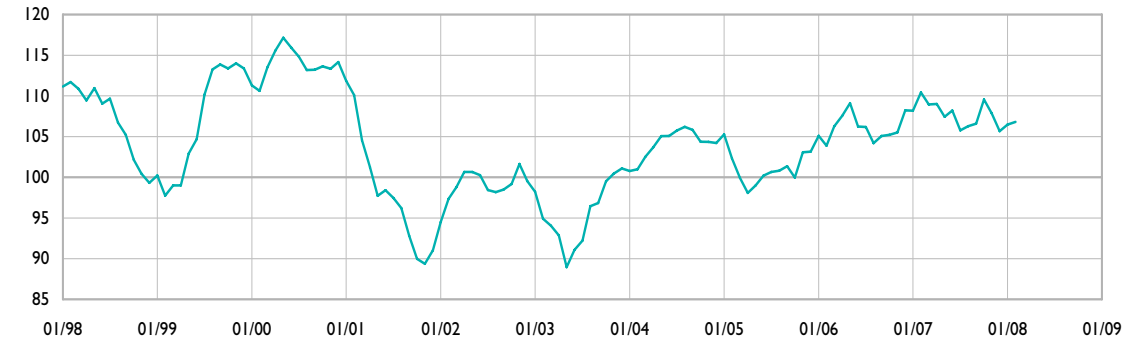
Source: Banque de France.

Produced 20 March 2008

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

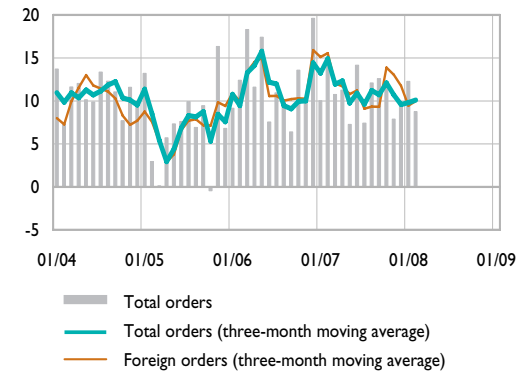
Business sentiment indicator

(100 = 1981-2006)



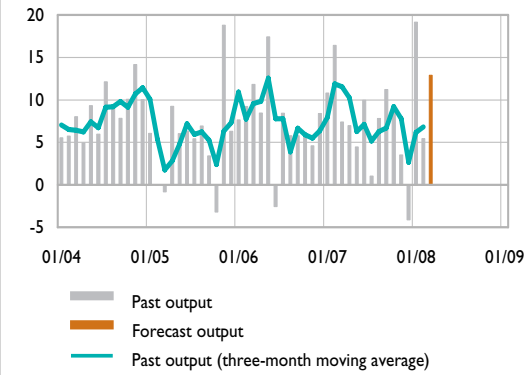
Orders (balance of opinions)

(monthly change)



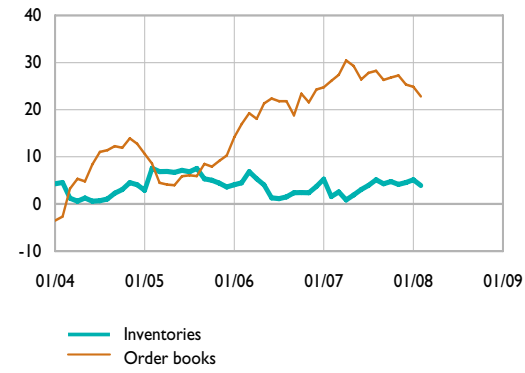
Output (balance of opinions)

(monthly change)



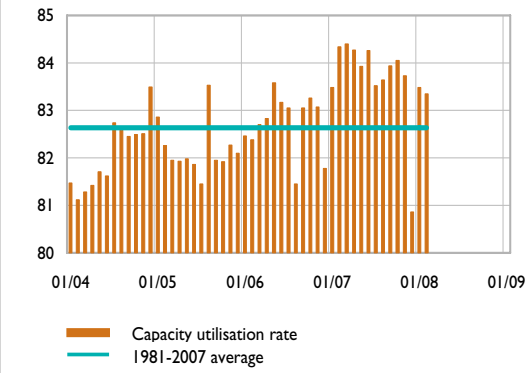
Inventories and order books (balance of opinions)

(compared to levels deemed normal)



Capacity utilisation rate

(%)



Source: Banque de France.

Produced 20 March 2008

Table 3
Consumer price index

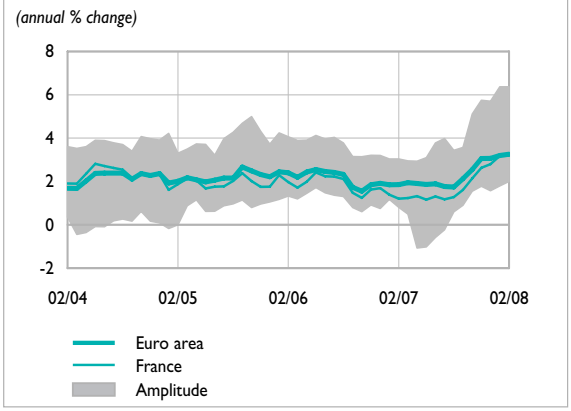
(annual % change)

	2007							2008	
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
France	1.3	1.2	1.3	1.6	2.1	2.6	2.8	3.2	3.2
Germany	2.0	2.0	2.0	2.7	2.7	3.3	3.1	2.9	2.9
Italy	1.9	1.7	1.7	1.7	2.3	2.6	2.8	3.1	3.1
Euro area	1.9	1.8	1.7	2.1	2.6	3.1	3.1	3.2	3.3
United Kingdom	2.4	1.9	1.8	1.8	2.1	2.1	2.1	2.2	2.5
European Union	2.2	2.0	1.9	2.3	2.7	3.1	3.2	3.4	3.4
United States	2.7	2.4	2.0	2.8	3.5	4.3	4.1	4.3	4.0
Japan	-0.2	0.0	-0.2	-0.2	0.3	0.6	0.7	0.7	na

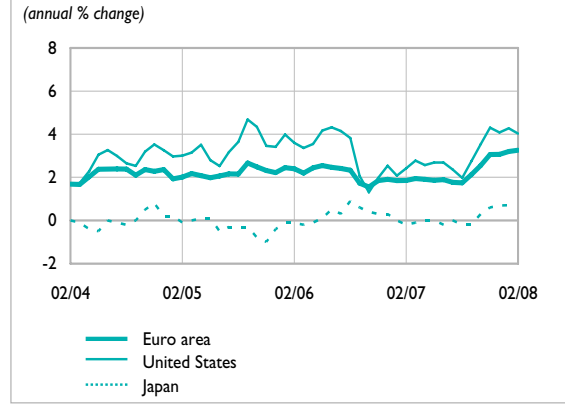
(annual average) *(seasonally-adjusted monthly % change)*

	2005	2006	2007	2007				2008	
				Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
France	1.9	1.9	1.6	0.2	0.3	0.6	0.3	0.3	0.1
Germany	1.9	1.8	2.3	0.5	0.2	1.0	-0.1	0.2	0.2
Italy	2.2	2.2	2.0	0.3	0.5	0.4	0.3	0.4	0.3
Euro area	2.2	2.2	2.1	0.2	0.4	0.6	0.1	0.3	0.2
United Kingdom	2.0	2.3	2.3	0.1	0.5	0.4	0.3	0.2	na
European Union	2.3	2.3	2.4	na	na	na	na	na	na
United States	3.4	3.2	2.9	0.4	0.3	0.9	0.4	0.4	0.0
Japan	-0.3	0.2	0.1	-0.1	0.2	0.3	0.1	0.0	na

France and the euro area



International comparisons



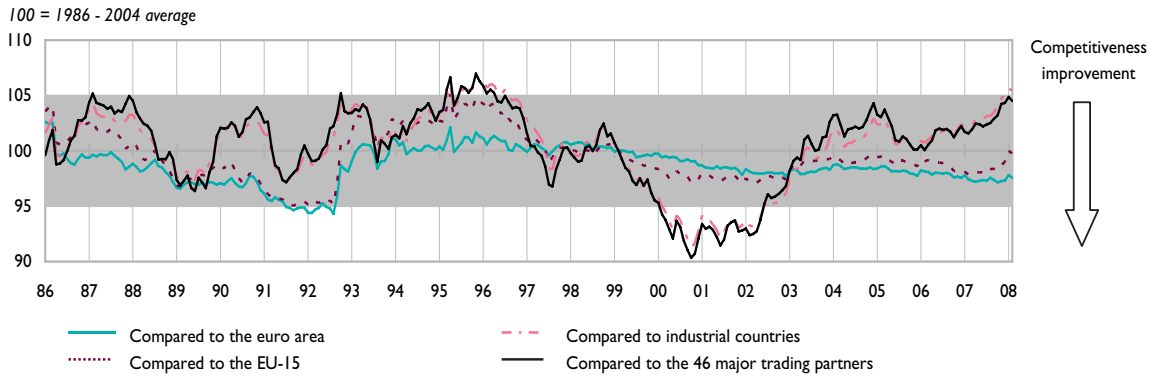
Harmonised indices except for the United States and Japan.
Amplitude = extreme values of the indices of harmonised prices observed in the euro area.

Sources: National data, Eurostat.

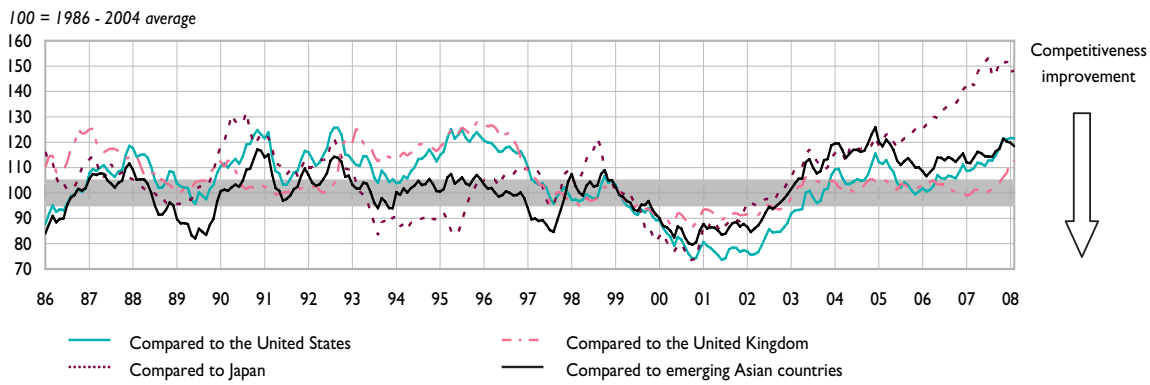
Produced 20 March 2008

Table 4
The competitiveness of France's economy

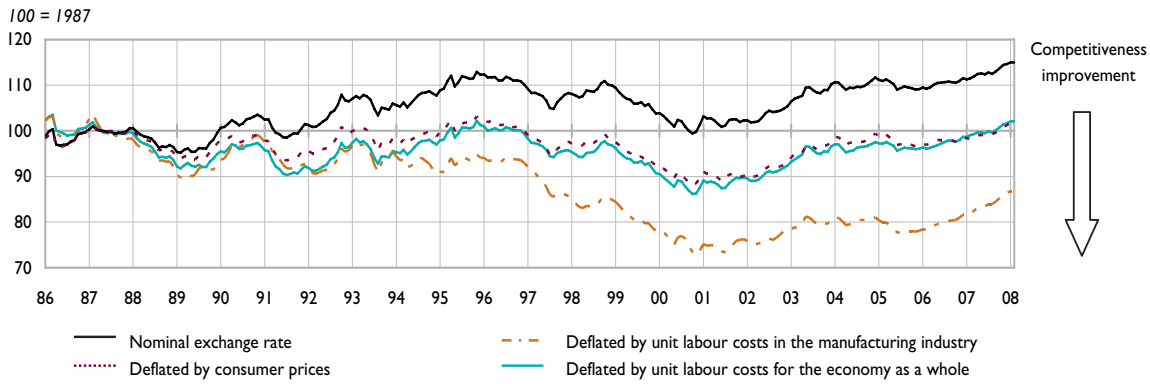
Indicators deflated by consumer prices



Indicators deflated by consumer prices



Indicators of competitiveness compared to 22 OECD countries



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

Sources: National data, Banque de France, ECB, IMF, INSEE, OECD, Thomson Financial Datatstream
Calculations: Banque de France.

Produced 20 March 2008

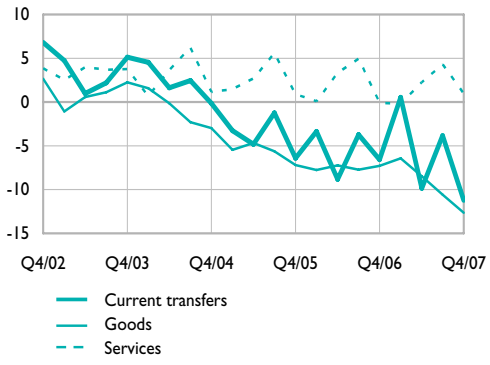
Table 5
Balance of payments – Main components (quarterly data) – France

(unadjusted data, EUR millions)

	2006	2007	2006	2007			
			Q4	Q1	Q2	Q3	Q4
	(a)	(a)	(a)	(a)	(a)	(a)	(b)
Current account	**-22,452**	**-24,358**	**-6,571**	**526**	**-9,856**	**-3,818**	**-11,210**
Goods	-30,029	-38,114	-7,298	-6,419	-8,468	-10,580	-12,647
Services	8,271	7,295	-89	-213	2,249	4,300	959
Income	21,040	28,454	7,828	8,365	2,956	9,780	7,353
Current transfers	-21,734	-21,993	-7,012	-1,207	-6,593	-7,318	-6,875
Capital account	**-188**	**1,880**	**75**	**330**	**1,138**	**126**	**286**
Financial account	**63,912**	**37,735**	**-27,363**	**27,389**	**12,758**	**33,967**	**-36,379**
Direct investment	-27,071	-52,130	-13,300	-7,471	-11,539	-21,029	-12,091
French direct investment abroad	*-91,700*	*-160,005*	*-33,524*	*-27,918*	*-39,269*	*-45,263*	*-47,555*
Foreign direct investment in France	*64,629*	*107,875*	*20,224*	*20,447*	*27,730*	*24,234*	*35,464*
Portfolio investment	-59,522	-20,690	11,100	12,630	444	-16,022	-17,742
Assets	*-270,546*	*-141,226*	*-68,291*	*-45,849*	*-48,403*	*-12,864*	*-34,110*
Liabilities	*211,024*	*120,536*	*79,391*	*58,479*	*48,847*	*-3,158*	*16,368*
Financial derivatives	3,337	-2,128	-1,749	-1,778	-1,513	-474	1,637
Other investment	155,946	113,158	-20,469	24,408	24,766	75,326	-11,342
Reserve assets	-8,775	-478	-2,944	-402	600	-3,835	3,159
Net errors and omissions	**-41,274**	**-15,259**	**33,858**	**-28,244**	**-4,042**	**-30,276**	**47,303**

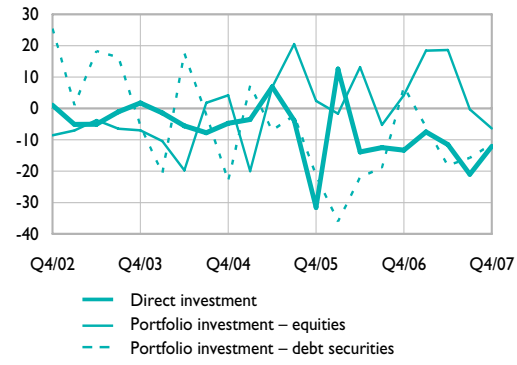
Current account balance

(unadjusted data, EUR billions)



Financial account balance

(unadjusted data, EUR billions)



(a) Semi-final figures.
(b) Provisional figures.

Source: Banque de France.

Produced 20 March 2008

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

(unadjusted data, EUR millions)

	2006	2007	2006	2007			
			Q4	Q1	Q2	Q3	Q4
	(a)	(a)	(a)	(a)	(a)	(a)	(b)
Current account	**-22,452**	**-24,358**	**-6,571**	**526**	**-9,856**	**-3,818**	**-11,210**
Goods	**-30,029**	**-38,114**	**-7,298**	**-6,419**	**-8,468**	**-10,580**	**-12,647**
Exports	*384,873*	*400,492*	*99,741*	*100,307*	*101,465*	*95,060*	*103,660*
Imports	*414,902*	*438,606*	*107,039*	*106,726*	*109,933*	*105,640*	*116,307*
General merchandise	-27,868	-35,696	-6,751	-5,835	-7,739	-10,125	-11,997
Goods procured in ports by carriers	-1,524	-1,305	-400	-278	-254	-375	-398
Goods for processing and repairs on goods	-637	-1,113	-147	-306	-475	-80	-252
Services	**8,271**	**7,295**	**-89**	**-213**	**2,249**	**4,300**	**959**
Exports	*94,226*	*95,807*	*21,237*	*20,765*	*25,137*	*27,686*	*22,219*
Imports	*85,955*	*88,512*	*21,326*	*20,978*	*22,888*	*23,386*	*21,260*
Transportation	-2,573	-883	-307	-203	-280	-18	-382
Travel	12,066	12,001	1,130	1,724	3,361	5,786	1,130
Communications services	1,301	1,027	367	276	219	296	236
Construction services	1,904	2,357	598	566	578	519	694
Insurance services	-1,216	-839	-232	-363	-133	-105	-238
Financial services	-1,890	-1,393	-525	-286	-576	-334	-197
Computer and information services	-21	-155	-69	65	96	-131	-185
Royalties and license fees	2,334	3,089	477	715	1,099	600	675
Other business services	-2,746	-7,006	-1,184	-2,543	-1,949	-2,041	-473
Personal, cultural and recreational services	-758	-762	-251	-183	-140	-223	-216
Government services	-130	-141	-93	19	-26	-49	-85
Income	**21,040**	**28,454**	**7,828**	**8,365**	**2,956**	**9,780**	**7,353**
Compensation of employees	8,564	8,712	2,147	2,171	2,212	2,166	2,163
Investment income	12,476	19,742	5,681	6,194	744	7,614	5,190
Direct investment	*18,969*	*24,570*	*6,477*	*5,895*	*6,352*	*6,996*	*5,327*
Portfolio investment	*-1,392*	*3,190*	*372*	*2,161*	*-3,150*	*2,532*	*1,647*
Other investment	*-5,101*	*-8,018*	*-1,168*	*-1,862*	*-2,458*	*-1,914*	*-1,784*
Current transfers	**-21,734**	**-21,993**	**-7,012**	**-1,207**	**-6,593**	**-7,318**	**-6,875**
General government	-13,663	-13,808	-5,009	797	-4,656	-5,030	-4,919
Other sectors	-8,071	-8,185	-2,003	-2,004	-1,937	-2,288	-1,956
of which workers' remittances	*-2,063*	*-1,977*	*-467*	*-527*	*-442*	*-555*	*-453*
Capital account	**-188**	**1,880**	**75**	**330**	**1,138**	**126**	**286**

(a) Semi-final figures.
(b) Provisional figures.

Source: Banque de France.

Produced 20 March 2008

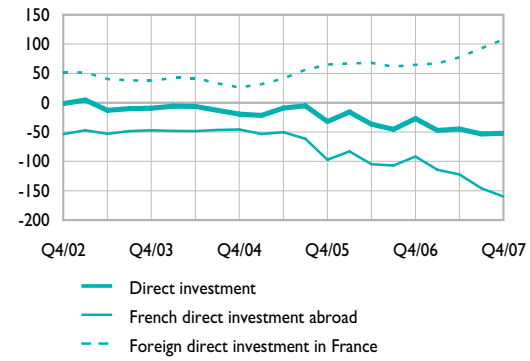
Table 7
Balance of payments – Financial flows (quarterly data) – France

(unadjusted data, EUR millions)

	2006	2007	2006	2007			
			Q4	Q1	Q2	Q3	Q4
	(a)	(a)	(a)	(a)	(a)	(a)	(b)
Financial account	**63,912**	**37,735**	**-27,363**	**27,389**	**12,758**	**33,967**	**-36,379**
Direct investment	-27,071	-52,130	-13,300	-7,471	-11,539	-21,029	-12,091
French direct investment abroad	-91,700	-160,005	-33,524	-27,918	-39,269	-45,263	-47,555
of which equity capital and reinvested earnings	*-61,329*	*-91,832*	*-22,986*	*-18,043*	*-21,238*	*-31,728*	*-20,823*
Foreign direct investment in France	64,629	107,875	20,224	20,447	27,730	24,234	35,464
of which equity capital and reinvested earnings	*29,641*	*34,073*	*10,243*	*5,568*	*10,557*	*7,284*	*10,664*
Portfolio investment	-59,522	-20,690	11,100	12,630	444	-16,022	-17,742
Assets	-270,546	-141,226	-68,291	-45,849	-48,403	-12,864	-34,110
Equity securities	*-48,290*	*467*	*-19,811*	*7,299*	*15,036*	*-7,123*	*-14,745*
Bonds and notes	*-225,189*	*-159,471*	*-49,994*	*-40,348*	*-79,544*	*-14,503*	*-25,076*
Money market instruments	*2,933*	*17,778*	*1,514*	*-12,800*	*16,105*	*8,762*	*5,711*
Liabilities	211,024	120,536	79,391	58,479	48,847	-3,158	16,368
Equity securities	*58,841*	*30,064*	*24,074*	*11,173*	*3,640*	*6,854*	*8,397*
Bonds and notes	*165,424*	*72,366*	*62,019*	*36,173*	*28,808*	*-1,052*	*8,437*
Money market instruments	*-13,241*	*18,106*	*-6,702*	*11,133*	*16,399*	*-8,960*	*-466*
Financial derivatives	3,337	-2,128	-1,749	-1,778	-1,513	-474	1,637
Other investment	155,946	113,158	-20,469	24,408	24,766	75,326	-11,342
of which MFIs excl. Banque de France (net flows)	*135,629*	*96,738*	*-32,474*	*33,028*	*25,913*	*52,777*	*-14,980*
Reserve assets	-8,775	-478	-2,944	-402	600	-3,835	3,159
Net errors and omissions	**-41,274**	**-15,259**	**33,858**	**-28,244**	**-4,042**	**-30,276**	**47,303**

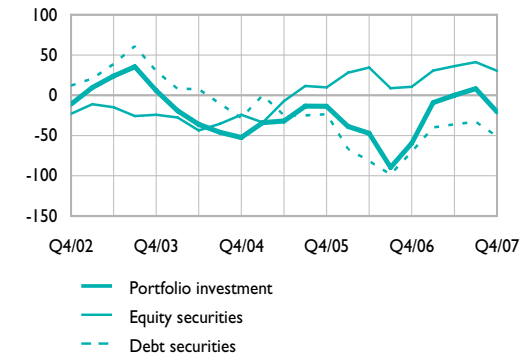
Direct investment account

(cumulated flows over 4 quarters)



Portfolio investment account

(cumulated flows over 4 quarters)



(a) Semi-final figures.
(b) Provisional figures.

Source: Banque de France.

Produced 20 March 2008

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

(unadjusted data, EUR millions)

	3rd quarter 2007					
	EMU (a)	EU-27 excl. EMU (b)	USA	Japan	Switzerland	China
Current account	**na**	**na**	**na**	**na**	**na**	**na**
Receipts	*79,883*	*30,116*	*14,060*	*2,675*	*5,772*	*3,375*
Expenditure	*na*	*na*	*na*	*na*	*na*	*na*
Goods	-13,752	3,104	1,226	132	-5	-2,358
Receipts	*46,229*	*14,686*	*6,537*	*1,386*	*2,423*	*2,517*
Expenditure	*59,981*	*11,583*	*5,311*	*1,254*	*2,427*	*4,875*
Services	878	2,201	339	-21	161	321
Receipts	*10,090*	*5,610*	*2,672*	*322*	*1,355*	*760*
Expenditure	*9,212*	*3,411*	*2,333*	*344*	*1,193*	*439*
Income	na	na	na	na	na	na
Receipts	*22,674*	*8,031*	*4,662*	*959*	*1,732*	*92*
Expenditure	*na*	*na*	*na*	*na*	*na*	*na*
Current Transfers	-1,883	-3,332	-60	-10	-417	-27
Financial account	**na**	**na**	**na**	**na**	**na**	**na**
Direct investment	-17,217	293	167	-375	-719	-235
French direct investment abroad	*-30,775*	*-5,067*	*-2,823*	*-585*	*-1,427*	*-240*
Foreign direct investment in France	*13,558*	*5,359*	*2,990*	*211*	*708*	*5*
Portfolio investment (c)	na	na	na	na	na	na
Assets	-27,551	8,098	9,873	4,671	448	-405
Equity securities	*-10,242*	*3,407*	*273*	*2,974*	*1,089*	*-342*
Bonds and notes	*-16,046*	*763*	*5,304*	*1,008*	*-45*	*-49*
Money market instruments	*-1,263*	*3,928*	*4,295*	*689*	*-596*	*-15*
Other investment	15,651	55,372	12,134	-1,762	744	6,021
of which MFIs excluding Banque de France (net flows)	*-977*	*52,996*	*7,542*	*-1,028*	*-3,410*	*6,252*

(a) 13 Member States (including Slovenia as of 1 January 2007).
(b) Denmark, United Kingdom, Sweden, European Institutions and New Member States (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Bulgaria, Romania).
(c) The geographical breakdown is not available for liabilities.

Source: Banque de France.

Produced 20 March 2008

Table 9
Balance of payments (monthly data) – France

(unadjusted data, EUR millions)

	2007	2007		2008	12-month total	
					2007	2008
	Jan. (a)	Nov. (b)	Dec. (b)	Jan. (b)	Jan. (a)	Jan. (b)
Current account	**418**	**-5,607**	**-2,507**	**-5,542**	**-18,621**	**-30,318**
Goods	-3,334	-5,439	-4,035	-5,155	-29,231	-39,935
Services	65	-33	998	358	8,051	7,588
Income	2,059	1,723	3,179	1,830	21,543	28,225
Current transfers	1,628	-1,858	-2,649	-2,575	-18,984	-26,196
Capital account	**320**	**153**	**54**	**233**	**27**	**1,793**
Financial account	**26,700**	**9,128**	**-13,558**	**-14,110**	**75,823**	**-3,075**
Direct investment	22	-6,600	-2,928	-3,386	-35,676	-55,538
French direct investment abroad	*-5,642*	*-19,205*	*-17,769*	*-8,657*	*-101,510*	*-163,020*
Equity capital	*-2,462*	*-12,210*	*1,016*	*-2,937*	*-42,187*	*-68,043*
Reinvested earnings	*-2,022*	*-2,022*	*-2,022*	*-2,022*	*-20,876*	*-24,264*
Other capital	*-1,158*	*-4,973*	*-16,763*	*-3,698*	*-38,447*	*-70,713*
Foreign direct investment in France	*5,664*	*12,605*	*14,841*	*5,271*	*65,834*	*107,482*
Equity capital	*-311*	*3,142*	*3,074*	*845*	*16,368*	*21,549*
Reinvested earnings	*1,140*	*1,140*	*1,140*	*1,140*	*11,733*	*13,680*
Other capital	*4,835*	*8,323*	*10,627*	*3,286*	*37,733*	*72,253*
Portfolio investment	13,673	-26,202	9,346	-14,293	-16,477	-48,656
Assets	*-4,752*	*-35,839*	*14,055*	*-26,445*	*-230,166*	*-162,919*
Equity securities	*221*	*-19,226*	*2,247*	*-2,995*	*-41,183*	*-2,749*
Bonds and notes	*-3,375*	*-19,455*	*2,186*	*-10,782*	*-193,520*	*-166,878*
Money market instruments	*-1,598*	*2,842*	*9,622*	*-12,668*	*4,537*	*6,708*
Liabilities	*18,425*	*9,637*	*-4,709*	*12,152*	*213,689*	*114,263*
Equity securities	*6,567*	*2,783*	*2,663*	*3,723*	*61,481*	*27,220*
Bonds and notes	*3,174*	*7,392*	*-4,511*	*3,098*	*164,350*	*72,290*
Money market instruments	*8,684*	*-538*	*-2,861*	*5,331*	*-12,142*	*14,753*
Financial derivatives	-2,186	-974	1,611	-7,941	602	-7,883
Other investment	14,698	42,155	-25,052	15,366	134,869	113,826
of which MFIs excl. Banque de France (net flows)	*17,340*	*27,722*	*-8,831*	*-32,256*	*121,313*	*47,142*
Reserve assets	493	749	3,465	-3,856	-7,492	-4,827
Net errors and omissions	**-27,438**	**-3,674**	**16,011**	**19,419**	**-57,231**	**31,598**

(a) Semi-final figures.
(b) Provisional figures.

Source: Banque de France.

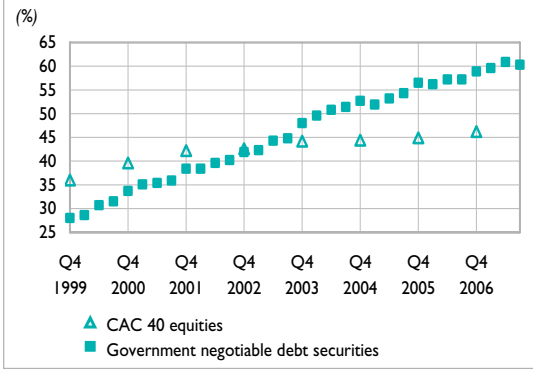
Produced 20 March 2008

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

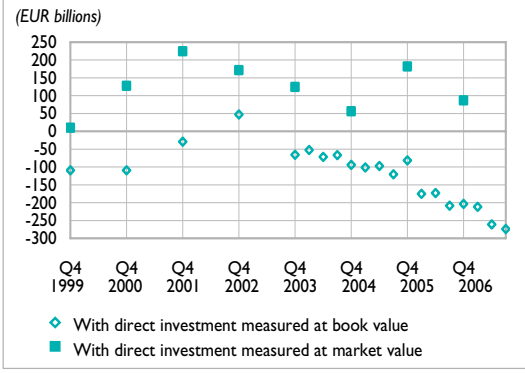
(EUR billions)

	2002	2003	2004	2005	2006	2007
	Dec.	Dec.	Dec.	Dec.	Dec.	Q3
Assets	**2,362.1**	**2,529.0**	**2,867.1**	**3,638.7**	**4,188.5**	**4,648.6**
French direct investment abroad	559.1	573.6	620.7	747.9	820.2	916.7
Equity capital and reinvested earnings	*390.2*	*380.1*	*418.1*	*492.7*	*538.1*	*597.5*
Other capital	*168.9*	*193.5*	*202.6*	*255.2*	*282.1*	*319.2*
Portfolio investment	888.6	1,084.4	1,285.1	1,581.9	1,844.4	1,941.5
(foreign securities held by residents)						
MFIs (resident security-holding sector)	*390.5*	*480.3*	*562.3*	*661.6*	*749.1*	*814.1*
Non–MFIs (resident security-holding sector)	*498.1*	*604.1*	*722.8*	*920.3*	*1,095.3*	*1,127.4*
Financial derivatives	103.1	93.1	99.7	178.4	279.7	447.3
Other investment	752.5	721.9	804.8	1,067.5	1,169.5	1,264.1
MFIs	*516.4*	*492.0*	*578.9*	*840.7*	*945.6*	*1,040.5*
Non–MFIs	*236.1*	*229.9*	*225.9*	*226.8*	*224.0*	*223.6*
Reserve assets	58.8	56.0	56.8	63.0	74.6	79.1
Liabilities	**-2,315.0**	**-2,594.8**	**-2,961.3**	**-3,720.3**	**-4,392.2**	**-4,922.6**
Foreign direct investment in France	-367.3	-417.8	-471.2	-532.3	-594.4	-663.1
Equity capital and reinvested earnings	*-232.3*	*-267.4*	*-295.2*	*-321.1*	*-350.7*	*-374.1*
Other capital	*-135.1*	*-150.4*	*-176.0*	*-211.2*	*-243.7*	*-289.0*
Portfolio investment	-1,054.5	-1,287.8	-1,459.8	-1,766.8	-2,018.8	-2,108.0
(French securities held by non-residents)						
MFIs (resident security-issuing sector)	*-242.9*	*-287.6*	*-325.5*	*-414.7*	*-513.8*	*-534.4*
Non–MFIs (resident security-issuing sector)	*-811.5*	*-1,000.2*	*-1,134.3*	*-1,352.1*	*-1,505.0*	*-1,573.6*
Financial derivatives	-107.1	-117.0	-136.6	-226.6	-337.5	-508.2
Other investment	-786.1	-772.2	-893.7	-1,194.7	-1,441.5	-1,643.3
MFIs	*-632.1*	*-624.2*	*-740.4*	*-1,016.1*	*-1,245.0*	*-1,434.1*
Non–MFIs	*-154.0*	*-148.1*	*-153.3*	*-178.5*	*-196.5*	*-209.3*
Net position	**47.2**	**-65.8**	**-94.2**	**-81.6**	**-203.7**	**-274.0**

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



France's international investment position



Source: Banque de France.

Produced 20 March 2008

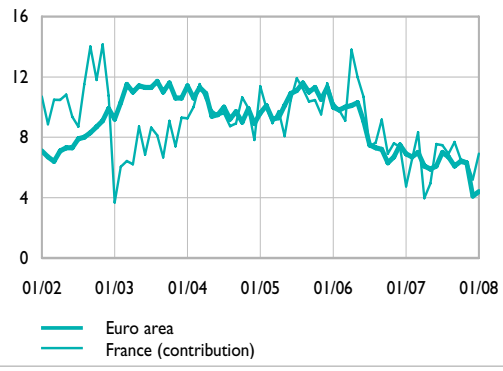
Table 11
Main monetary and financial aggregates – France and the euro area

(annual percentage growth rate)

	2005	2006	2007	2007	2007						2008
	Dec.	Dec.	Dec.	Jan.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
M1											
Euro area (a)	11.3	7.5	4.1	6.9	7.0	6.7	6.1	6.4	6.3	4.1	4.4
France (contribution)	11.6	7.4	5.2	4.7	7.5	6.9	7.7	6.5	6.4	5.2	6.9
M2											
Euro area (a)	8.5	9.3	10.2	9.1	10.5	10.5	10.2	11.2	11.0	10.2	10.5
France (contribution)	8.1	8.4	13.5	7.4	12.1	11.6	12.2	13.1	14.0	13.5	14.6
M3											
Euro area (a)	7.3	9.9	11.6	10.1	11.7	11.5	11.3	12.3	12.4	11.6	11.5
France (contribution)	8.5	10.7	15.3	11.0	13.2	12.0	13.3	13.9	15.6	15.3	14.8
Loans to the private sector											
Euro area (a)	9.2	10.8	11.2	10.7	11.0	11.2	11.0	11.3	11.1	11.2	11.1
France (b)	9.3	12.7	14.6	12.5	14.8	14.9	15.6	14.4	14.8	14.6	14.3

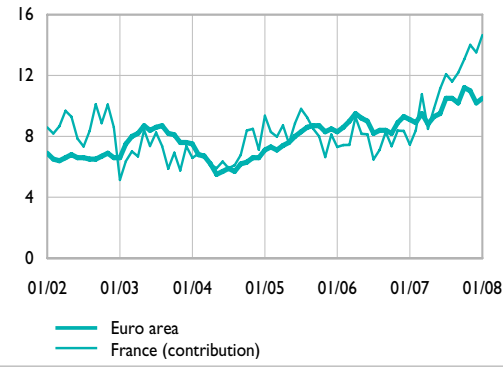
M1

(annual percentage growth rate)



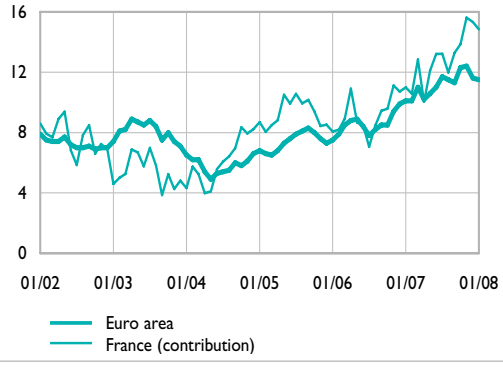
M2

(annual percentage growth rate)



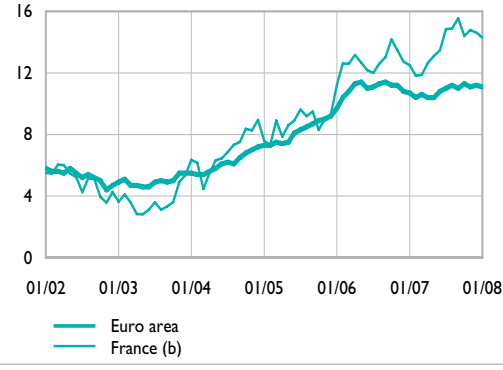
M3

(annual percentage growth rate)



Loans to the private sector

(annual percentage growth rate)



(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 March 2008

Table 12
Balance sheet of the Banque de France

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

	2005	2006	2007	2007	2007			2008
	Dec.	Dec.	Dec.	Jan.	Oct.	Nov.	Dec.	Jan.
Assets								
National territory	34.2	31.7	101.6	31.7	72.0	76.2	101.6	94.9
Loans	27.4	23.6	87.3	21.8	57.4	61.0	87.3	79.8
MFIs	*27.1*	*23.3*	*87.1*	*21.5*	*57.2*	*60.8*	*87.1*	*79.6*
Central government	*0.1*	*0.1*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*
Private sector	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
Securities other than shares	6.8	8.1	14.3	9.9	14.6	15.3	14.3	15.1
MFIs	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Central government	*6.8*	*8.1*	*14.3*	*9.9*	*14.6*	*15.3*	*14.3*	*15.1*
Private sector	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Money market instruments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shares and other equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other euro area countries	20.4	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Rest of the world	22.8	37.7	35.5	33.1	42.5	40.3	35.5	39.2
Gold	39.5	42.2	47.6	44.0	46.2	44.5	47.6	51.5
Not broken down by geographical area (a)	93.1	114.2	170.1	109.9	142.8	154.9	170.1	174.1
Total	**210.0**	**234.9**	**363.8**	**227.7**	**312.5**	**325.1**	**363.8**	**368.9**
Liabilities								
National territory – Deposits	29.6	30.5	53.4	31.7	45.4	41.9	53.4	43.3
MFIs	28.6	29.8	52.4	30.9	44.3	41.2	52.4	42.6
Central government	0.3	0.0	0.3	0.1	0.3	0.3	0.3	0.3
Other sectors (overnight deposits)	0.8	0.8	0.7	0.7	0.8	0.4	0.7	0.3
Other euro area countries – Deposits	0.0	0.0	11.9	0.0	19.1	26.1	11.9	53.3
MFIs	0.0	0.0	11.9	0.0	19.1	26.1	11.9	53.3
Other sectors	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of the world – Deposits	8.2	16.1	20.3	14.4	25.3	25.5	20.3	21.7
Not broken down by geographical area	172.2	188.2	278.2	181.6	222.7	231.6	278.2	250.7
Currency in circulation (b)	110.2	122.3	131.1	116.8	124.4	125.2	131.1	125.8
Debt securities issued	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Money market instruments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital and reserves	45.7	48.0	55.2	48.9	51.6	51.6	55.2	53.5
Other	16.3	17.9	91.9	15.9	46.7	54.8	91.9	71.4
Total	**210.0**	**234.9**	**363.8**	**227.7**	**312.5**	**325.1**	**363.8**	**368.9**

(a) Including adjustments for the new accounting method for banknotes on the liability side of the Banque de France balance sheet since January 2002.
(b) Since January 2002, banknotes in circulation have been treated according to specific euro area accounting conventions. 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.

Source: Banque de France.

Produced 20 March 2008

Table 13
Balance sheet of monetary financial institutions (MFIs) excluding the Banque de France

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

	2005	2006	2007	2007	2007			2008
	Dec.	Dec.	Dec.	Jan.	Oct.	Nov.	Dec.	Jan.
Assets								
National territory	3,291.8	3,593.1	4,110.5	3,648.9	4,070.3	4,096.1	4,110.5	4,162.8
Loans	2,523.4	2,745.1	3,196.0	2,792.1	3,143.0	3,160.1	3,196.0	3,221.3
MFIs	*996.3*	*1,062.0*	*1,298.4*	*1,091.1*	*1,273.2*	*1,274.1*	*1,298.4*	*1,296.4*
General government	*150.8*	*155.7*	*168.7*	*153.1*	*167.1*	*165.5*	*168.7*	*173.6*
Private sector	*1,376.4*	*1,527.4*	*1,728.9*	*1,547.8*	*1,702.7*	*1,720.5*	*1,728.9*	*1,751.3*
Securities other than shares	455.6	481.2	536.0	489.2	528.2	541.4	536.0	557.3
MFIs ≤ 2 years	*140.0*	*172.4*	*206.1*	*175.7*	*201.1*	*208.5*	*206.1*	*223.6*
MFIs > 2 years	*57.4*	*65.7*	*75.7*	*67.8*	*70.2*	*73.5*	*75.7*	*75.2*
General government	*168.6*	*152.7*	*150.4*	*154.9*	*155.1*	*155.2*	*150.4*	*151.5*
Private sector	*89.6*	*90.3*	*103.8*	*90.8*	*101.9*	*104.2*	*103.8*	*107.0*
Money market fund shares/units	78.1	77.3	81.5	78.6	86.6	87.4	81.5	85.4
Shares and other equity	234.6	289.5	297.0	289.0	312.5	307.2	297.0	298.8
Other euro area countries	727.0	848.9	1,012.3	899.2	994.3	1,020.2	1,012.3	1,064.8
Rest of the world	850.2	963.4	1,005.7	1,026.6	1,068.3	1,091.4	1,005.7	1,095.3
Not broken down by geographical area	602.9	766.8	920.9	805.1	982.7	1,004.9	920.9	1,065.9
Total	**5,471.9**	**6,172.3**	**7,049.3**	**6,379.9**	**7,115.6**	**7,212.6**	**7,049.3**	**7,388.8**
Liabilities								
National territory – Deposits	2,242.3	2,302.6	2,641.2	2,328.0	2,586.8	2,594.1	2,641.2	2,660.7
MFIs	1,011.3	1,055.4	1,299.7	1,085.8	1,275.7	1,287.8	1,299.7	1,328.3
Central government	45.2	16.0	17.7	16.6	16.5	20.5	17.7	13.5
Other sectors	1,185.8	1,231.2	1,323.8	1,225.6	1,294.6	1,285.9	1,323.8	1,319.0
Overnight deposits	*395.3*	*419.1*	*441.0*	*399.2*	*420.7*	*415.3*	*441.0*	*422.4*
Deposits with agreed maturity ≤ 2 years	*53.4*	*64.2*	*127.7*	*68.3*	*118.2*	*122.6*	*127.7*	*131.8*
Deposits with agreed maturity > 2 years	*307.1*	*297.3*	*277.5*	*294.5*	*277.2*	*274.2*	*277.5*	*275.4*
Deposits redeemable at notice ≤ 3 months	*392.6*	*416.7*	*437.7*	*423.9*	*429.5*	*427.5*	*437.7*	*444.6*
Repos	*37.4*	*33.9*	*39.9*	*39.8*	*49.0*	*46.2*	*39.9*	*44.8*
Other euro area countries – Deposits	271.1	327.5	398.7	340.3	372.4	414.7	398.7	455.1
MFIs	226.4	265.8	299.1	282.0	279.1	301.4	299.1	349.6
Other sectors	44.7	61.7	99.6	58.3	93.3	113.2	99.6	105.5
Rest of the world – Deposits	757.2	933.3	1,084.7	1,030.4	1,128.3	1,151.6	1,084.7	1,137.4
Not broken down by geographical area	2,201.3	2,608.9	2,924.8	2,681.2	3,028.1	3,052.2	2,924.8	3,135.5
Debt securities issued ≤ 2 years	*271.3*	*335.6*	*447.3*	*351.1*	*423.9*	*433.9*	*447.3*	*460.2*
Debt securities issued > 2 years	*458.6*	*531.2*	*602.7*	*535.4*	*603.3*	*602.2*	*602.7*	*605.6*
Money market fund shares/units	387.8	429.6	428.5	445.6	452.2	460.7	428.5	458.2
Capital and reserves	318.7	367.9	391.9	367.5	391.6	389.9	391.9	390.3
Other	765.0	944.6	1,054.5	981.5	1,156.9	1,165.5	1,054.5	1,221.2
Total	**5,471.9**	**6,172.3**	**7,049.3**	**6,379.9**	**7,115.6**	**7,212.6**	**7,049.3**	**7,388.8**

NB: Since July 2003, financial transactions carried out by La Poste have been accounted for in the balance sheet of monetary financial institutions. This has resulted in an increase in the item "Shares and other equity" in Assets, and in "Overnight deposits" and "Capital and reserves" in Liabilities.

Source: Banque de France.

Produced 20 March 2008

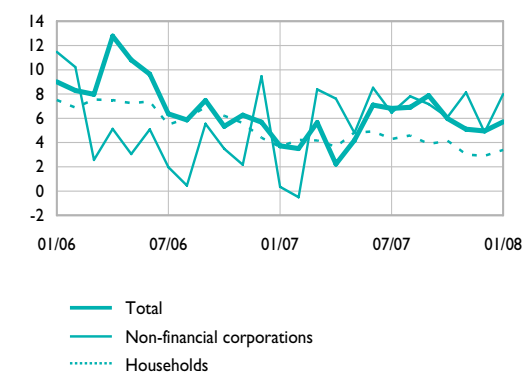
Table 14
Deposits – France

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

	2005	2006	2007	2007	2007			2008
	Dec.	Dec.	Dec.	Jan.	Oct.	Nov.	Dec.	Jan.
Overnight deposits								
Total non-financial sectors (excluding central government)	425.6	448.0	462.2	421.0	434.2	429.4	462.2	439.9
Households and similar	*230.1*	*240.0*	*246.8*	*233.8*	*243.5*	*235.9*	*246.8*	*241.6*
Non-financial corporations	*139.9*	*151.9*	*158.4*	*133.2*	*140.7*	*144.3*	*158.4*	*142.9*
General government (excl. central government)	*55.6*	*56.1*	*57.0*	*54.0*	*50.0*	*49.3*	*57.0*	*55.5*
Other sectors	22.6	25.4	33.5	29.3	33.1	32.4	33.5	34.6
Total – Outstanding amounts	**448.1**	**473.4**	**495.7**	**450.2**	**467.3**	**461.8**	**495.7**	**474.5**
Total – Growth rate	**10.9**	**5.7**	**5.0**	**3.7**	**6.0**	**5.1**	**5.0**	**5.7**
Passbook savings accounts								
"A" passbooks	112.1	115.4	120.4	116.1	116.7	116.5	120.4	122.4
"Blue" passbooks	16.9	18.3	20.3	18.6	19.6	19.6	20.3	20.9
Housing savings accounts	39.1	38.4	38.1	38.6	37.6	37.4	38.1	38.4
Sustainable development passbook accounts	47.0	51.1	63.0	54.4	61.2	61.2	63.0	64.7
People's savings passbooks	56.8	58.2	60.6	57.9	59.3	59.3	60.6	60.3
Youth passbooks	6.4	6.7	7.1	6.7	7.1	7.1	7.1	7.1
Taxable passbooks	114.2	128.6	128.1	131.6	128.1	126.4	128.1	130.9
Total – Outstanding amounts	**392.6**	**416.7**	**437.7**	**423.9**	**429.5**	**427.5**	**437.7**	**444.6**
Total – Growth rate	**4.0**	**6.2**	**5.0**	**6.3**	**5.0**	**4.7**	**5.0**	**4.9**

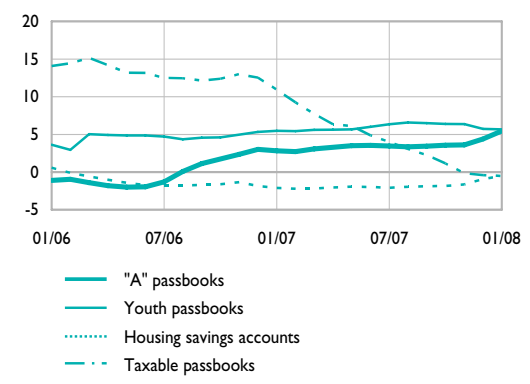
Overnight deposits

(annual growth rate)



Passbook savings accounts

(annual growth rate)



Source: Banque de France.

Produced 20 March 2008

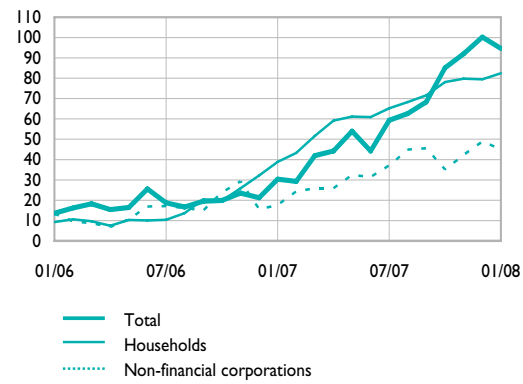
Table 15
Time deposits – France

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

	2005	2006	2007	2007	2007			2008
	Dec.	Dec.	Dec.	Jan.	Oct.	Nov.	Dec.	Jan.
Deposits with agreed maturity up to two years								
Total non-financial sectors (excl. central government)	47.6	58.0	93.9	60.9	88.5	92.3	93.9	98.0
Households and similar	*20.8*	*27.2*	*48.3*	*28.6*	*45.4*	*46.9*	*48.3*	*51.7*
Non-financial corporations	*26.5*	*30.4*	*44.8*	*31.7*	*42.4*	*44.6*	*44.8*	*45.6*
General government (excl. central government)	*0.3*	*0.5*	*0.7*	*0.6*	*0.7*	*0.7*	*0.7*	*0.7*
Other sectors	5.8	6.3	33.9	7.4	29.6	30.4	33.9	33.7
Total – Outstanding amounts	**53.4**	**64.2**	**127.7**	**68.3**	**118.2**	**122.6**	**127.7**	**131.8**
Total – Growth rate	**16.1**	**21.3**	**100.2**	**30.4**	**85.1**	**92.0**	**100.2**	**94.6**
Deposits with agreed maturity of over two years								
Total non-financial sectors (excl. central government)	294.9	273.6	254.4	271.6	255.3	252.4	254.4	253.7
Households and similar	*281.4*	*260.1*	*244.9*	*258.0*	*243.2*	*241.6*	*244.9*	*244.1*
PEL	*225.6*	*206.1*	*190.1*	*204.0*	*188.4*	*186.7*	*190.1*	*188.6*
PEP	*39.0*	*35.0*	*32.4*	*34.8*	*32.1*	*31.9*	*32.4*	*32.4*
Other	*16.8*	*19.1*	*22.4*	*19.2*	*22.7*	*22.9*	*22.4*	*23.1*
Non-financial corporations	*13.5*	*13.4*	*9.4*	*13.5*	*12.0*	*10.7*	*9.4*	*9.6*
General government (excl. central government)	*0.0*	*0.0*	*0.1*	*0.0*	*0.1*	*0.1*	*0.1*	*0.0*
Other sectors	12.1	23.7	23.0	22.9	21.9	21.9	23.0	21.6
Total – Outstanding amounts	**307.1**	**297.3**	**277.5**	**294.5**	**277.2**	**274.2**	**277.5**	**275.4**
Total – Growth rate	**0.2**	**-4.7**	**-6.7**	**-4.8**	**-5.4**	**-5.9**	**-6.7**	**-6.5**

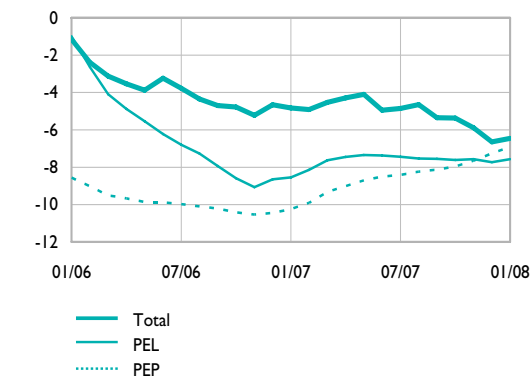
Deposits up to 2 years

(annual percentage growth rate)



Deposits over 2 years

(annual percentage growth rate)



Sources: Banque de France, European Central Bank.

Produced 20 March 2008

Table 16
Loans extended by credit institutions established in France to French residents – France

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

	2005	2006	2007	2007	2007				2008
	Dec.	Dec.	Dec.	Jan.	Sept.	Oct.	Nov.	Dec.	Jan.
Loans from monetary financial institutions									
Private sector	1,376.6	1,527.6	1,729.1	1,548.0	1,696.8	1,702.9	1,720.7	1,729.1	1,751.5
General government	150.9	155.8	168.7	153.2	168.6	167.1	165.5	168.7	173.7
Total – Outstanding amounts	**1,527.5**	**1,683.4**	**1,897.8**	**1,701.2**	**1,865.4**	**1,870.0**	**1,886.2**	**1,897.8**	**1,925.1**
Private sector	8.9	11.7	13.8	11.3	14.2	13.4	14.1	13.8	13.7
General government	7.8	3.3	8.4	7.3	9.6	10.9	10.0	8.4	13.4
Total – Growth rate	**8.8**	**10.9**	**13.3**	**10.9**	**13.8**	**13.2**	**13.7**	**13.3**	**13.7**
Loans from credit institutions to non-financial corporations									
Fixed investment	229.9	250.7	279.0	253.3	269.7	273.1	274.9	279.0	281.4
Inventories and working capital	156.7	171.4	199.3	175.0	189.7	193.9	197.1	199.3	205.4
Other lending	193.0	208.4	234.0	206.7	226.5	226.0	230.8	234.0	234.6
Total – Outstanding amounts	**579.6**	**630.5**	**712.3**	**635.0**	**685.9**	**693.0**	**702.8**	**712.3**	**721.5**
Total – Growth rate	**7.2**	**10.0**	**13.6**	**10.1**	**12.8**	**12.4**	**13.2**	**13.6**	**14.2**
Loans from credit institutions to households									
Loans for house purchase	503.6	578.6	651.9	583.5	634.3	639.6	645.2	651.9	656.9
Consumer loans	128.0	134.7	141.5	132.8	137.3	138.5	139.5	141.5	140.4
Other lending	81.4	79.4	83.2	81.0	83.1	83.9	83.2	83.2	83.4
Total – Outstanding amounts	**712.9**	**792.7**	**876.6**	**797.4**	**854.6**	**862.0**	**868.0**	**876.6**	**880.7**
Total – Growth rate	**11.9**	**11.6**	**10.9**	**11.2**	**11.0**	**11.2**	**11.1**	**10.9**	**10.8**

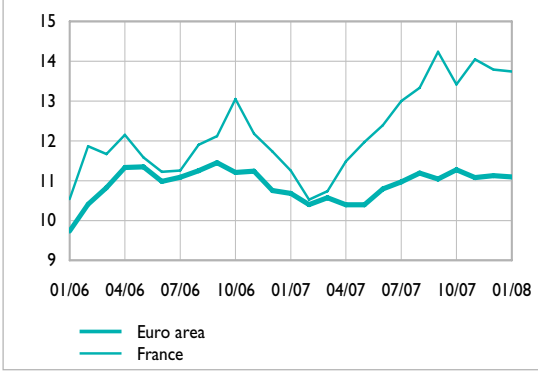
Source: Banque de France.

Produced 20 March 2008

Table 17
Loans from credit institutions broken down by counterpart and by financing purpose – France (a) and euro area

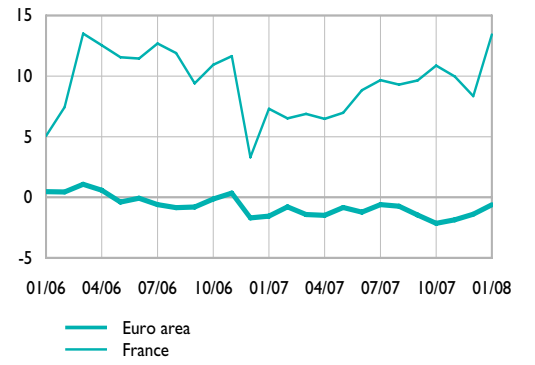
Loans to the private sector

(annual growth rate)



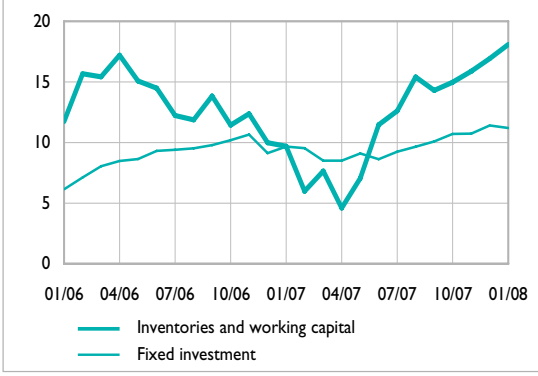
Loans to the public sector

(annual growth rate)



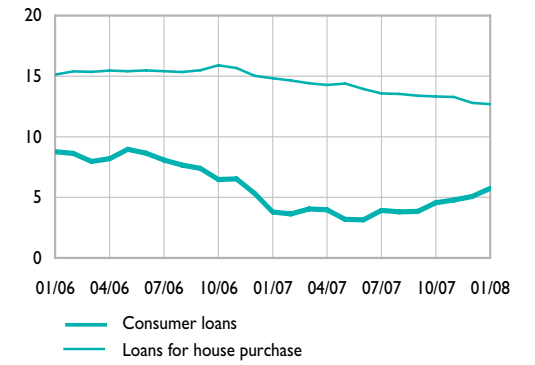
Loans to non-financial corporations – France

(annual growth rate)



Loans to households – France

(annual growth rate)



(a) Loans extended by credit institutions established in France to French residents.

Sources: Banque de France, European Central Bank.

Produced 20 March 2008

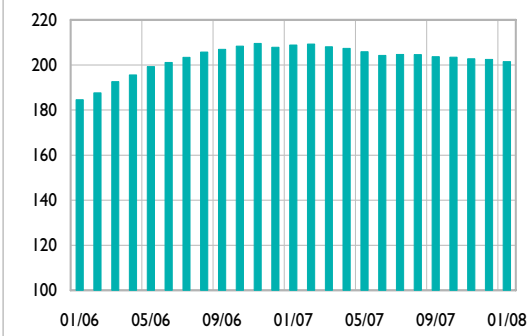
Table 18
New loans to residents – France

(excl. overdrafts, cumulative amounts over 12 months in EUR billions)

	2006		2007	2007		2008
	Nov.	Dec.	Jan.	Nov.	Dec.	Jan.
Total – new loans	**521.3**	**521.4**	**521.8**	**512.6**	**502.4**	**504.1**
Loans to households	**209.6**	**207.8**	**208.8**	**202.7**	**202.5**	**201.4**
Consumer loans (excl. overdrafts)	53.0	53.2	53.8	56.1	56.3	56.5
Loans for house purchase with an IRFP ≤ 1 year (a)	37.3	35.5	34.4	24.6	23.8	23.1
Loans for house purchase with an IRFP > 1 year (a)	119.3	119.1	120.7	122.1	122.3	121.8
Loans to non-financial corporations	**311.8**	**313.6**	**313.0**	**309.8**	**299.9**	**302.7**
Loans with an IRFP ≤ 1 year (excl. overdrafts) (a)	218.9	220.0	216.9	202.0	190.9	192.9
Loans with an IRFP > 1 year (a)	92.8	93.5	96.1	107.9	109.0	109.8

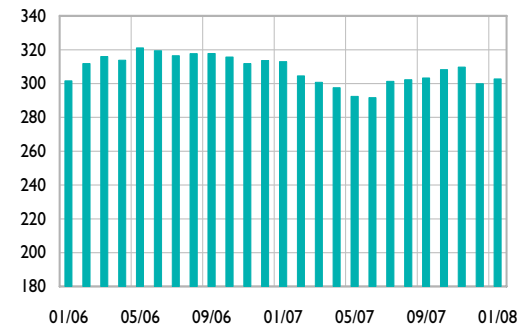
Loans to households

(EUR billions)



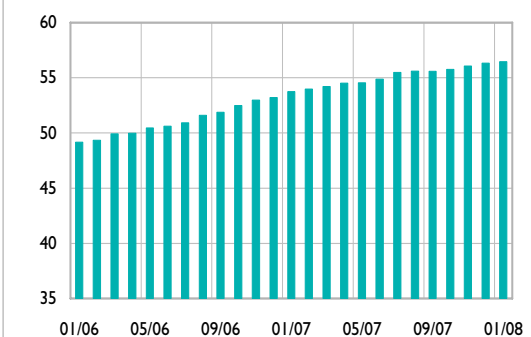
Loans to non-financial corporations

(EUR billions)



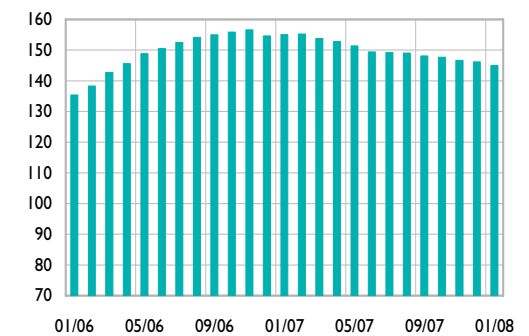
Consumer loans to households (excl. overdrafts)

(EUR billions)



Loans for house purchase

(EUR billions)



Data revised over the entire period.

(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.

Sources: Banque de France, European Central Bank. *Produced 20 March 2008*

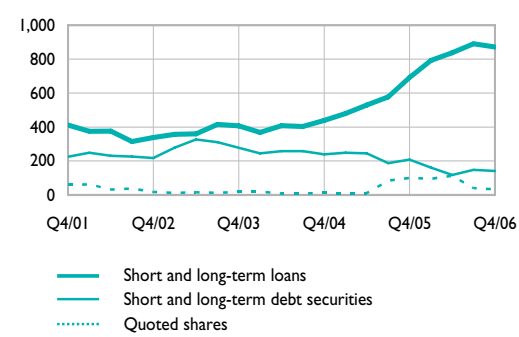
Table 19
Financing and investment – Non-financial sectors – Euro area

(EUR billions)

	Cumulated transaction flows over 4 quarters					Flows	Outstanding amounts
	2005	2006				2006	2006
	Q4	Q1	Q2	Q3	Q4	Q4	Dec.
Financing							
Debt	**924.6**	**989.4**	**977.2**	**1,056.5**	**1,025.1**	**227.4**	**16,371.6**
Short-term loans	91.7	118.3	124.2	158.8	148.8	34.4	1,801.6
Long-term loans	600.4	673.7	713.8	731.5	722.8	222.4	8,647.2
Short-term debt securities	-0.9	-7.3	-17.8	-8.7	4.0	-22.6	824.8
Long-term debt securities	209.6	168.1	136.2	156.4	137.7	-15.4	4,771.3
Deposits received by general government (a)	23.9	36.6	20.8	18.5	11.7	8.6	326.7
Issuance of shares and pension funds							
Quoted shares	101.6	95.9	113.5	40.5	33.0	12.4	4,448.0
Reserves for non-financial corporations' pension funds	12.6	12.8	12.3	12.2	12.3	3.3	326.1
Investment							
Short-term securities and deposits							
Banknotes and coins	53.3	49.8	47.1	46.9	47.8	26.5	513.3
Overnight deposits	230.2	182.3	174.6	164.2	163.8	118.8	2,721.1
Deposits redeemable at notice	45.3	47.1	32.0	23.0	12.7	3.8	1,500.5
Deposits with agreed maturity up to 2 years	26.2	70.1	108.0	152.1	202.4	85.2	1,795.6
Central government deposits	10.9	5.4	-3.4	21.4	-16.2	-46.4	156.9
Deposits with non-financial monetary institutions	21.9	31.7	23.7	19.9	14.5	12.2	373.8
Short-term debt securities	-15.2	19.8	20.5	31.8	47.3	-6.1	163.4
Money market fund shares/units	-1.2	-3.0	-4.5	1.8	2.4	-9.1	350.7
Security repos with MFIs	-8.2	2.1	7.1	16.1	17.7	4.0	97.9
Medium and long-term investment							
Deposits with agreed maturity over 2 years	112.2	126.7	129.6	135.8	138.6	50.5	1,663.6
Medium and long-term debt securities	44.0	52.9	62.8	92.4	110.8	32.6	1,848.1
Quoted shares	30.9	-15.0	15.7	32.0	0.9	-27.9	3,373.3
Life insurance and pension funds	324.1	329.7	314.5	303.9	282.8	71.5	5,050.1
Non money market mutual fund shares/units	91.4	68.8	47.1	-6.3	-25.8	-6.6	1,848.8

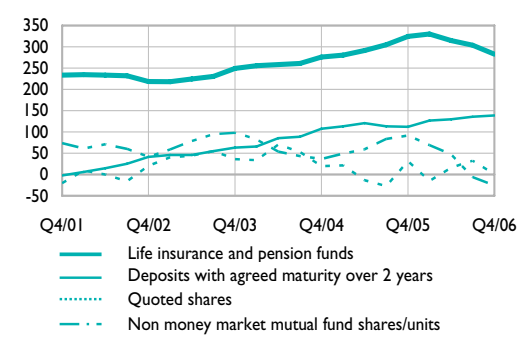
Financing

(EUR billions, cumulated flows over 4 quarters)



Medium and long-term investment

(EUR billions, cumulated flows over 4 quarters)



(a) The series previously available "Deposits received by central government" is replaced by a broader series "Deposits received by general government".

Sources: Banque de France, European Central Bank. *Produced 20 March 2008*

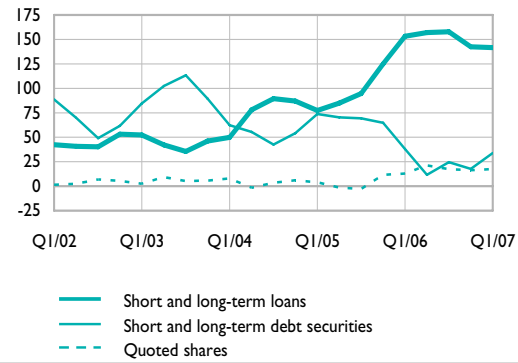
Table 20
Financing and investment – Non-financial sectors – France

(EUR billions)

	Cumulated transaction flows over 4 quarters					Flows	Outstanding amounts
	2006				2007	2007	2007
	Q1	Q2	Q3	Q4	Q1	Q1	March
Financing (a)							
Debt financing according to national accounts	**238.8**	**226.6**	**229.6**	**215.0**	**231.9**	**83.1**	**3,056.7**
Short-term loans	21.8	19.8	21.4	7.8	14.2	9.8	235.3
Long-term loans	131.4	137.3	136.3	134.7	127.5	21.0	1,427.1
Loans to non-residents	47.7	57.9	47.2	54.8	56.4	16.5	377.4
Short-term debt securities	-20.3	-26.3	-24.0	-28.4	-7.8	12.5	120.3
Long-term debt securities	58.3	37.8	48.6	46.1	41.6	23.4	1,224.0
Issuance of shares and other equity	**78.9**	**93.6**	**88.2**	**99.4**	**107.7**	**30.1**	**4,660.2**
Quoted shares	12.9	21.3	17.4	16.4	17.6	1.8	1,434.7
Other types of shares	66.0	72.3	70.8	83.0	90.1	28.3	3,225.6
Investment							
Short-term securities and deposits	**110.2**	**65.0**	**80.4**	**70.5**	**75.2**	**38.9**	**1,371.7**
Banknotes and coins	3.1	4.5	4.2	4.4	5.1	-1.0	43.4
Overnight deposits	24.6	28.3	25.0	23.7	22.6	-23.5	424.4
Overnight investments	17.2	14.9	19.3	24.0	23.5	7.9	419.0
Deposits with agreed maturity up to 2 years	4.2	6.4	8.2	10.9	17.9	8.1	66.0
Central government deposits	13.7	-5.9	-7.8	-28.5	-28.7	6.2	22.2
Other deposits (abroad, etc.)	12.6	-10.4	-10.0	2.0	1.2	15.2	118.7
Short-term debt securities issued by MFIs	17.1	13.1	13.6	12.8	2.8	1.3	28.8
Money market fund shares/units	12.9	8.7	17.7	13.1	26.5	22.6	241.6
Security repos with MFIs	-1.6	-0.6	-0.3	0.0	-0.1	-0.2	0.8
Other short-term securities	6.4	6.0	10.6	8.2	4.4	2.3	6.8
Medium and long-term investment	**137.4**	**142.9**	**136.1**	**141.7**	**154.0**	**36.6**	**5,808.9**
Deposits with agreed maturity over 2 years	-12.6	-16.5	-19.1	-21.4	-16.8	-6.9	266.7
Bond-type investments	16.0	13.3	1.3	5.7	6.1	3.1	173.1
"Shares and other equity" type investments	53.4	55.6	62.2	62.1	79.0	18.8	3,978.1
Life insurance and pension funds	87.7	91.0	90.3	88.8	84.2	26.1	1,152.2
Other non money market mutual fund shares/units (b)	-7.0	-0.5	1.4	6.5	1.5	-4.5	238.7

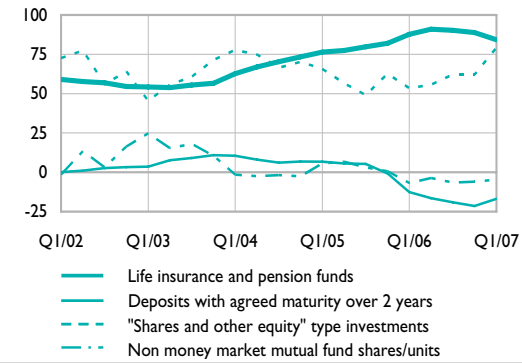
Financing

(EUR billions, cumulated flows over 4 quarters)



Medium and long-term investment

(EUR billions, cumulated flows over 4 quarters)



(a) Given its very weak weight, the item "Monetary financing of the Treasury" is no longer presented and its components are included in the loan items.

(b) Shares/units in the following types of mutual funds: mixed funds, funds of alternative funds, guaranteed-performance mutual funds, structured funds ("fonds à formule").

Source: Banque de France.

Produced 20 March 2008

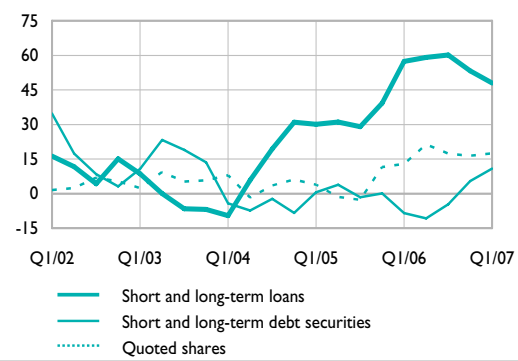
Table 21
Financing and investment – Non-financial corporations – France

(EUR billions)

	Cumulated transaction flows over 4 quarters					Flows	Outstanding amounts
	2006				2007	2007	2007
	Q1	Q2	Q3	Q4	Q1	Q1	March
Financing							
Debt financing according to national accounts	**96.6**	**106.2**	**102.7**	**113.5**	**115.3**	**29.2**	**964.2**
Short-term loans	10.9	10.3	13.2	8.6	9.1	1.6	163.8
Long-term loans	46.5	48.7	47.0	44.7	38.9	10.8	509.1
Loans to non-residents	47.7	57.9	47.2	54.8	56.4	16.5	377.4
Short-term debt securities	-3.8	-5.6	-1.9	2.2	3.9	3.9	34.2
Long-term debt securities	-4.7	-5.1	-2.8	3.3	7.0	-3.6	261.5
Issuance of shares and other equity	**78.9**	**93.6**	**88.2**	**99.4**	**107.7**	**30.1**	**4,660.2**
Quoted shares	12.9	21.3	17.4	16.4	17.6	1.8	1,434.7
Other types of shares	66.0	72.3	70.8	83.0	90.1	28.3	3,225.6
Investment							
Short-term securities and deposits	**32.0**	**29.9**	**42.7**	**42.8**	**43.8**	**7.6**	**383.5**
Banknotes and coins	0.6	0.7	0.6	0.7	0.6	-0.2	6.7
Overnight deposits	3.1	6.5	7.1	13.1	10.8	-13.0	138.9
Overnight investment	-1.0	-1.9	-1.4	-1.3	-1.3	-0.5	2.5
Deposits with agreed maturity up to 2 years	2.2	4.1	3.8	4.1	7.0	3.5	33.9
Other deposits (abroad, etc.)	-0.3	-0.5	-0.5	-0.3	0.0	0.1	0.9
Short-term debt securities issued by MFIs	16.3	12.2	12.3	11.6	2.2	1.1	21.9
Money market fund shares/units	11.7	8.7	15.8	11.1	21.7	17.0	176.0
Security repos with MFIs	-1.6	-0.6	-0.3	0.0	-0.1	-0.2	0.8
Other short-term securities	0.9	0.6	5.3	3.9	2.7	-0.3	2.0
Medium and long-term investment	**48.2**	**54.3**	**52.5**	**65.0**	**67.0**	**12.7**	**2,963.6**
Deposits with agreed maturity over 2 years	-0.5	0.9	1.1	0.1	0.6	0.2	13.7
Bond-type investments	7.6	2.7	-3.7	0.8	3.5	1.0	56.9
"Shares and other equity" type investments	46.8	54.4	60.2	68.1	68.5	13.2	2,859.3
Other non money market mutual fund shares/units (a)	-5.8	-3.7	-5.1	-4.0	-5.7	-1.8	33.8

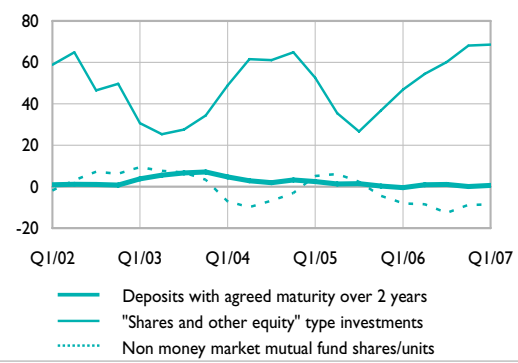
Financing

(EUR billions, cumulated flows over 4 quarters)



Medium and long-term investment

(EUR billions, cumulated flows over 4 quarters)



(a) Shares/units in the following types of mutual funds: mixed funds, funds of alternative funds, guaranteed-performance mutual funds, structured funds ("fonds à formule").

Source: Banque de France.

Produced 20 March 2008

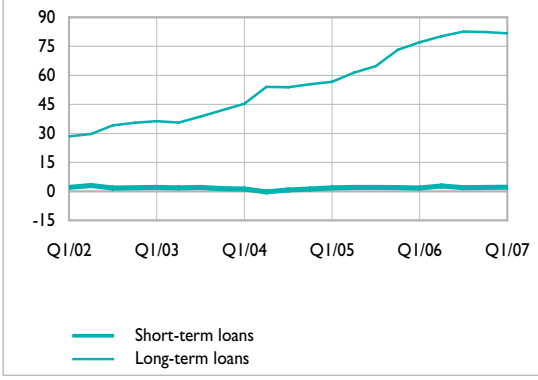
Table 22
Financing and investment – Households – France

(EUR billions)

	Cumulated transaction flows over 4 quarters					Flows	Outstanding amounts
	2006				2007	2007	2007
	Q1	Q2	Q3	Q4	Q1	Q1	March
Financing							
Debt financing according to national accounts	**78.9**	**83.0**	**84.5**	**84.4**	**83.8**	**16.4**	**830.8**
Short-term loans	1.8	2.8	1.9	2.1	2.1	-0.1	41.2
Long-term loans	77.1	80.2	82.6	82.4	81.7	16.5	789.7
Investment							
Short-term securities and deposits	**51.3**	**27.8**	**35.7**	**50.3**	**54.8**	**26.4**	**891.9**
Banknotes and coins	2.5	3.8	3.6	3.7	4.5	-0.8	36.7
Overnight deposits	15.8	16.0	15.2	10.1	9.4	-6.2	233.7
Overnight investment	18.1	16.9	20.7	25.4	24.9	8.5	416.4
Deposits with agreed maturity up to 2 years	1.9	2.0	4.2	6.6	10.8	4.4	31.5
Other deposits (abroad, etc.)	12.8	-9.9	-9.5	2.3	1.2	15.1	117.8
Short-term debt securities issued by MFIs	0.8	0.6	0.9	0.8	0.1	0.0	4.6
Money-market fund shares/units	-0.5	-1.7	0.7	1.2	4.0	5.4	51.2
Other short-term securities	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Medium and long-term investment	**94.5**	**92.4**	**86.2**	**80.2**	**81.1**	**23.5**	**2,447.1**
Deposits with agreed maturity over 2 years	-12.1	-17.3	-20.2	-21.5	-17.5	-7.1	253.0
Bond-type investment	-3.0	-3.2	-3.6	-2.6	-2.6	-1.0	67.9
"Shares and other equity" type investments	22.3	18.7	13.7	9.2	10.6	5.3	791.6
Life insurance and pension funds	87.7	91.0	90.3	88.8	84.2	26.1	1,152.2
Other non money market mutual fund shares/units (a)	-0.3	3.3	6.2	6.4	6.4	0.1	182.4

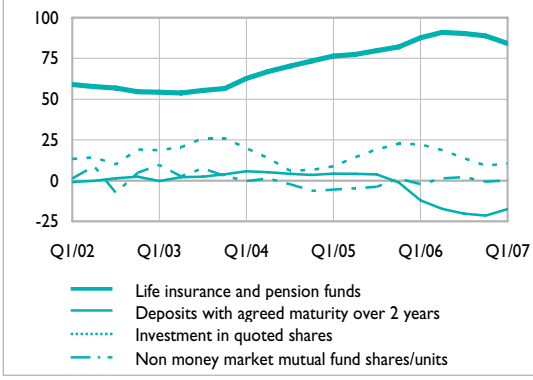
Financing

(EUR billions, cumulated flows over 4 quarters)



Medium and long-term investment

(EUR billions, cumulated flows over 4 quarters)



(a) Shares/units in the following types of mutual funds: mixed funds, funds of alternative funds, guaranteed-performance mutual funds, structured funds ("fonds à formule").

Source: Banque de France.

Produced 20 March 2008

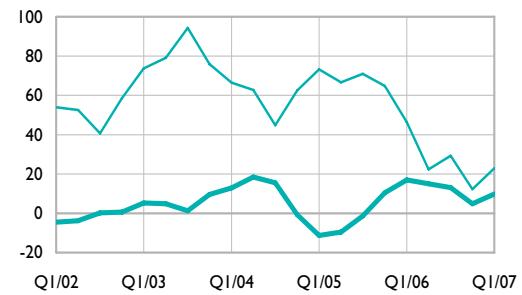
Table 23
Financing and investment – General government – France

(EUR billions)

	Cumulated transaction flows over 4 quarters					Flows	Outstanding amounts
	2006				2007	2007	2007
	Q1	Q2	Q3	Q4	Q1	Q1	March
Financing (a)							
Debt financing according to national accounts	**63.4**	**37.3**	**42.4**	**17.1**	**32.8**	**37.6**	**1,261.6**
Short-term loans	9.2	6.7	6.4	-2.8	2.9	8.3	30.4
Long-term loans	7.8	8.3	6.7	7.7	6.9	-6.3	128.3
Short-term debt securities	-16.5	-20.6	-22.1	-30.6	-11.7	8.6	86.1
Long-term debt securities	62.9	43.0	51.4	42.8	34.6	27.0	962.5
Investment							
Short-term securities and deposits	**26.9**	**7.2**	**2.0**	**-22.5**	**-23.3**	**4.8**	**96.2**
Banknotes and coins	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight deposits	5.8	5.7	2.7	0.5	2.5	-4.3	51.8
Overnight investment	0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0.2
Deposits with agreed maturity up to 2 years	0.1	0.2	0.2	0.2	0.2	0.1	0.6
Central government deposits	13.7	-5.9	-7.8	-28.5	-28.7	6.2	22.2
Other deposits (abroad, etc.)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Short-term debt securities issued by MFIs	0.0	0.3	0.3	0.3	0.5	0.2	2.2
Money market fund shares/units	1.7	1.6	1.2	0.8	0.8	0.1	14.4
Other short-term securities	5.5	5.4	5.4	4.4	1.7	2.6	4.8
Medium and long-term investment	**-5.2**	**-3.8**	**-2.5**	**-3.5**	**5.9**	**0.4**	**398.2**
Deposits with agreed maturity over 2 years	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bond-type investments	11.4	13.8	8.7	7.4	5.3	3.1	48.4
"Shares and other equity" type investments	-15.7	-17.5	-11.6	-15.1	-0.1	0.2	327.2
Other non money market mutual fund shares/units (b)	-0.9	-0.1	0.4	4.2	0.8	-2.9	22.5

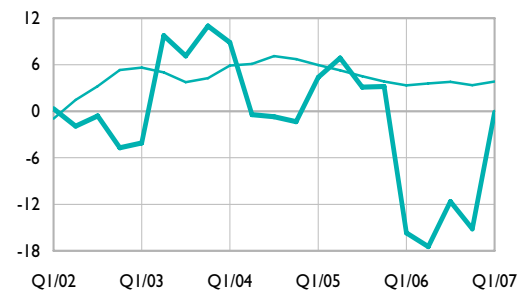
Financing

(EUR billions, cumulated flows over 4 quarters)



Medium and long-term investment

(EUR billions, cumulated flows over 4 quarters)



(a) Given its very weak weight, the item "Monetary financing of the Treasury" is no longer presented and its components are included in the loan items.
(b) Shares/units in the following types of mutual funds: mixed funds, funds of alternative funds, guaranteed-performance mutual funds, structured funds ("fonds à formule").

Source: Banque de France.

Produced 20 March 2008

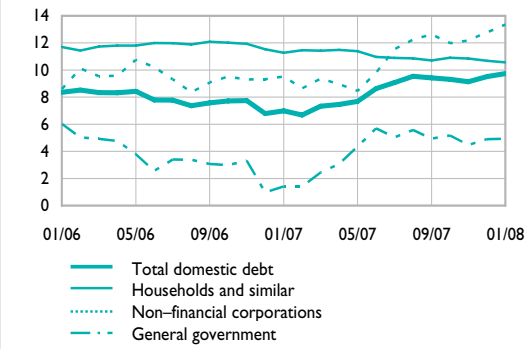
Table 24
Total domestic debt (TDD), breakdown by instrument – France

(growth rate in percentage and outstanding amounts at the end of the period in EUR billions)

	Annual growth rate						Outstanding amounts
	2004	2005	2006	2007		2008	2008
	Dec.	Dec.	Dec.	Nov.	Dec.	Jan.	Jan.
Total domestic debt	**6.7**	**8.3**	**6.8**	**9.1**	**9.5**	**9.7**	**3,588.9**
Households and similar (a)	9.4	11.4	11.5	10.9	10.7	10.6	903.3
≤ 1 year	*3.5*	*5.3*	*5.2*	*0.6*	*-1.3*	*-1.9*	*40.4*
> 1 year	*9.8*	*11.8*	*11.9*	*11.4*	*11.3*	*11.2*	*862.9*
Non-financial corporations	4.7	8.1	9.3	12.2	12.8	13.4	1,495.5
≤ 1 year	*8.7*	*11.9*	*11.8*	*15.4*	*16.7*	*16.8*	*601.0*
> 1 year	*2.5*	*5.8*	*7.8*	*10.2*	*10.3*	*11.2*	*894.5*
General government	7.1	6.5	1.0	4.5	4.9	4.9	1,190.1
≤ 1 year	*1.2*	*-3.4*	*-21.5*	*22.7*	*33.8*	*31.7*	*148.6*
> 1 year	*8.2*	*8.1*	*4.2*	*2.2*	*1.8*	*2.0*	*1,041.5*
Loans from resident financial institutions (b)	**6.8**	**9.1**	**9.7**	**11.4**	**11.3**	**12.0**	**1,827.9**
Households and similar (a)	9.4	11.4	11.5	10.9	10.7	10.6	903.3
≤ 1 year	*3.5*	*5.3*	*5.2*	*0.6*	*-1.3*	*-1.9*	*40.4*
> 1 year	*9.8*	*11.8*	*11.9*	*11.4*	*11.3*	*11.2*	*862.9*
Non-financial corporations	5.7	6.9	9.2	12.6	12.8	13.5	750.4
≤ 1 year	*4.5*	*5.0*	*8.2*	*11.7*	*10.1*	*10.6*	*178.4*
> 1 year	*6.1*	*7.5*	*9.5*	*12.8*	*13.7*	*14.4*	*572.0*
General government	-0.5	7.4	3.3	9.5	8.0	13.1	174.2
≤ 1 year	*-9.6*	*10.0*	*-11.4*	*65.5*	*96.0*	*79.1*	*44.1*
> 1 year	*1.4*	*6.9*	*6.1*	*-1.9*	*-6.4*	*0.5*	*130.1*
Loans from non-residents (c)	**10.1**	**17.0**	**16.3**	**19.4**	**21.5**	**22.0**	**470.9**
Market financing	**5.7**	**5.1**	**0.7**	**3.2**	**3.6**	**3.0**	**1,290.1**
Non-financial corporations	-2.7	0.8	2.0	1.3	0.5	1.5	286.7
≤ 1 year	*1.0*	*14.3*	*7.7*	*-13.1*	*-12.5*	*-7.6*	*29.5*
> 1 year	*-3.1*	*-0.4*	*1.3*	*3.3*	*2.1*	*2.6*	*257.2*
General government	8.7	6.4	0.3	3.8	4.5	3.5	1,003.4
≤ 1 year	*4.7*	*-6.7*	*-28.3*	*13.3*	*21.0*	*18.6*	*91.9*
> 1 year	*9.3*	*8.3*	*4.0*	*2.8*	*3.0*	*2.2*	*911.5*

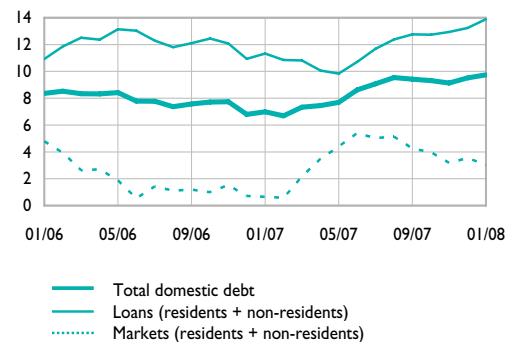
TDD – Sectoral breakdown

(annual growth rate)



TDD – Breakdown by type of financing

(annual growth rate)



(a) Households + Non-profit institutions serving households.
(b) Financial Institutions: monetary financial institutions + other financial intermediaries.
(c) Loans between units of different companies + loans obtained through direct investments + commercial loans + deposits of non-residents held with the French Treasury.

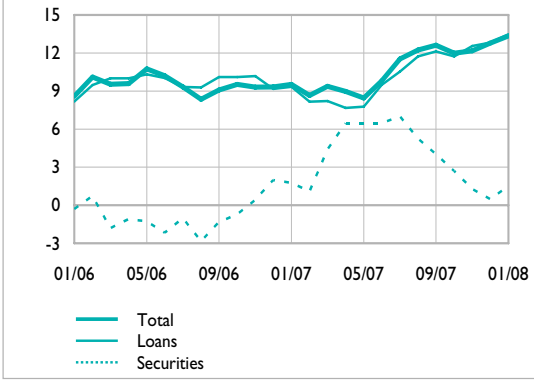
Source: Banque de France.

Produced 20 March 2008

Table 25
Total domestic debt (TDD) – France

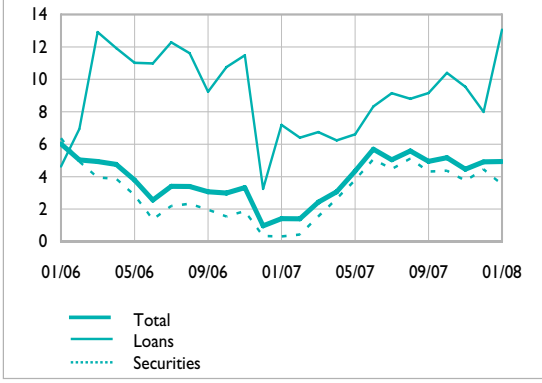
Debt – non-financial corporations

(annual growth rates)



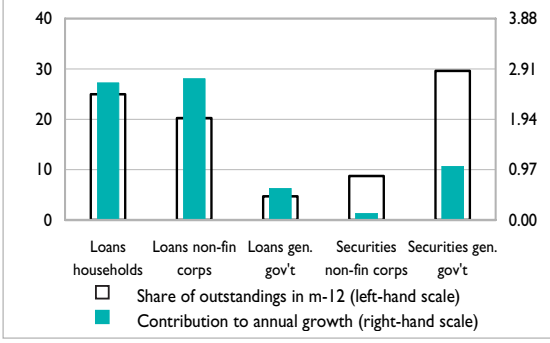
Debt – general government

(annual growth rates)



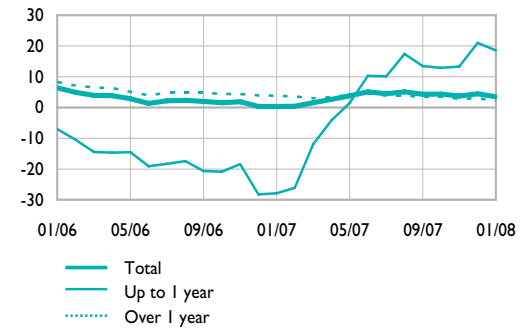
Contributions to the annual growth of total domestic debt – Loans and securities (a)

(unadjusted data, as a %, January 2008)



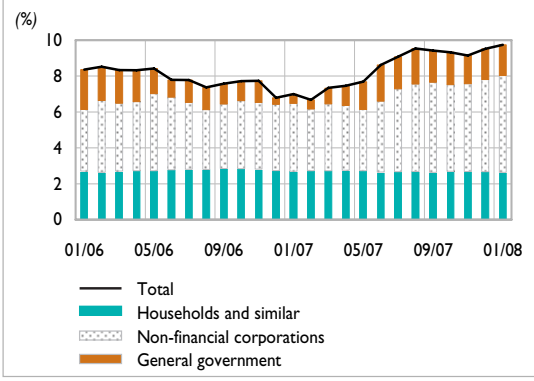
General government market debt

(annual growth rates)



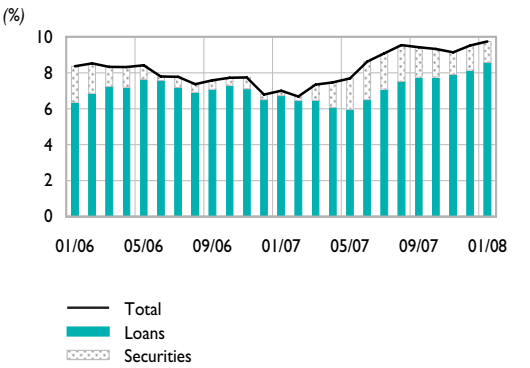
Contributions to the annual growth rates of outstanding amounts – Sectoral breakdown

(%)



Contributions to the annual growth rates of outstanding amounts – Breakdown by type of financing

(%)



(a) Excluding loans granted by non-residents.

Source: Banque de France.

Produced 20 March 2008

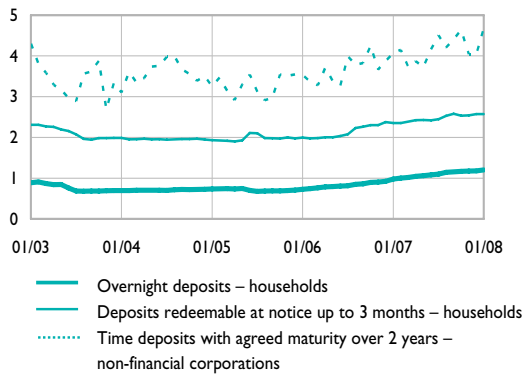
Table 26
Interest rates on deposits – France and the euro area

(average monthly rates – %)

	2006	2007	2007	2007				2008
	Dec.	Dec.	Jan.	Sept.	Oct.	Nov.	Dec.	Jan.
Euro area								
Overnight deposits – households	0.92	1.18	0.98	1.16	1.17	1.18	1.18	1.21
Deposits redeemable at notice up to 3 months – households	2.38	2.57	2.35	2.58	2.53	2.54	2.57	2.57
Time deposits with agreed maturity over 2 years – non-financial corporations	3.87	4.03	4.07	4.41	4.63	4.04	4.03	4.68
France								
"A" passbooks (end of period)	2.75	3.00	2.75	3.00	3.00	3.00	3.00	3.00
Regulated savings deposits	2.82	3.07	2.82	3.07	3.07	3.07	3.07	3.07
Market rate savings deposits	2.70	2.94	2.75	2.99	2.93	2.96	2.94	2.98
Deposits with agreed maturity up to 2 years	3.38	4.11	3.46	3.81	4.08	4.03	4.11	4.06
Deposits with agreed maturity over 2 years	3.52	3.54	3.57	3.58	3.60	3.56	3.54	3.51

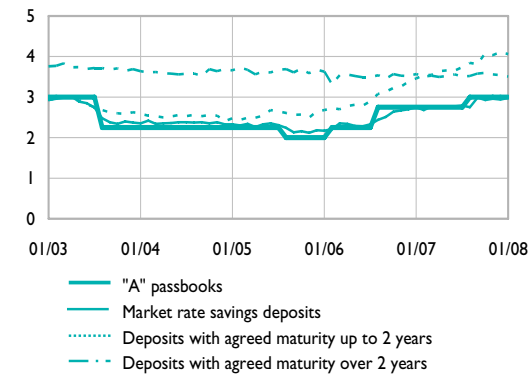
Euro area

(monthly average rates – %)



France

(monthly average rates – %)



Sources: Banque de France, European Central Bank.

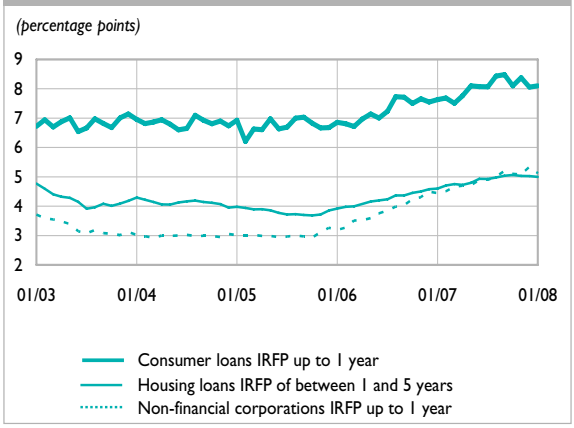
Produced 20 March 2008

Table 27
Cost of credit – France and the euro area

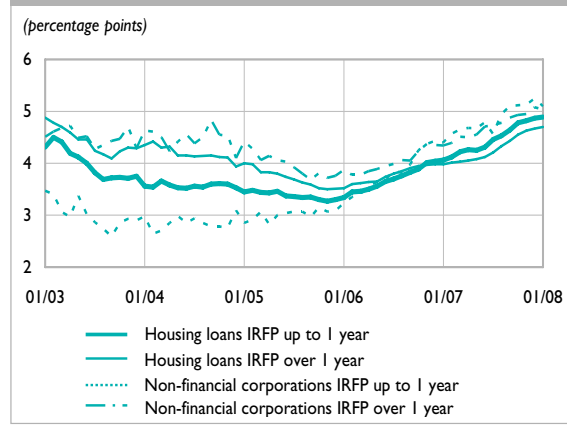
(average monthly rate – %)

	2007											2008
	Feb.	**March**	**April**	**May**	**June**	**July**	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**	**Jan.**
Euro area												
Consumer loans												
Floating rate and IRFP of up to 1 year (a)	7.69	7.51	7.77	8.10	8.07	8.06	8.43	8.48	8.10	8.38	8.05	8.10
Loans for house purchase												
Floating rate and IRFP of between 1 and 5 years	4.71	4.76	4.73	4.80	4.93	4.93	4.98	5.04	5.07	5.03	5.03	5.00
Non financial corporations of over EUR 1 million												
IRFP of up to 1 year (a)	4.51	4.66	4.70	4.72	4.89	4.90	5.01	5.20	5.11	5.08	5.35	5.12
France												
Consumer loans	**6.57**	**6.55**	**6.49**	**6.53**	**6.55**	**6.62**	**6.90**	**6.93**	**6.95**	**7.03**	**6.98**	**7.15**
Loans for house purchase												
IRFP of up to 1 year (a)	4.12	4.22	4.26	4.25	4.31	4.46	4.53	4.64	4.78	4.82	4.87	4.89
IRFP of over 1 year (a)	4.01	4.03	4.05	4.08	4.12	4.21	4.33	4.43	4.55	4.63	4.67	4.70
Non-financial corporations												
IRFP of up to 1 year (a)	4.57	4.65	4.68	4.67	4.79	4.56	4.95	5.10	5.12	5.13	5.25	5.10
IRFP of over 1 year (a)	4.39	4.51	4.50	4.55	4.71	4.74	4.78	4.88	4.93	4.95	5.08	5.04

Euro area



France



(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.

Sources: Banque de France, European Central Bank.

Produced 20 March 2008

Table 28
Cost of credit – France

(%)

	2006	2007			
	Q4	Q1	Q2	Q3	Q4
Households – Average overall effective interest rate					
Consumer loans					
Overdrafts, revolving loans and instalment plans of over EUR 1,524	14.30	14.44	14.89	14.85	15.12
Personal loans over EUR 1,524	6.33	6.54	6.70	6.78	7.04
Loans for house purchase					
Fixed-rate loans	4.79	4.70	4.81	4.97	5.34
Floating-rate loans	4.59	4.68	4.90	5.04	5.29

Usury ceilings in effect from the 1st day of the mentioned period	2007				2008
	Jan.	April	July	Oct.	Jan.
Households – Usury rate					
Consumer loans					
Overdrafts, revolving loans and instalment plans of over EUR 1,524	19.07	19.25	19.85	19.80	20.16
Personal loans over EUR 1,524	8.44	8.72	8.93	9.04	9.39
Loans for house purchase					
Fixed-rate loans	6.39	6.27	6.41	6.63	7.12
Floating-rate loans	6.12	6.24	6.53	6.72	7.05

	2006	2007			
	Q4	Q1	Q2	Q3	Q4
Business credit, loans to enterprises					
Discount					
up to 15,245 EUR	5.07	5.39	5.85	6.03	5.88
EUR 15,245 to EUR 45,735	5.49	5.93	6.20	6.57	6.54
EUR 45,735 to EUR 76,225	5.35	5.63	5.88	6.31	6.40
EUR 76,225 to EUR 304,898	4.94	5.20	5.43	5.71	5.85
EUR 304,898 to EUR 1,524,490	4.46	4.72	4.97	5.14	5.42
over EUR 1,524,490	3.82	4.18	4.63	4.85	4.79
Overdrafts					
up to 15,245 EUR	10.12	10.15	9.29	9.53	9.90
EUR 15,245 to EUR 45,735	7.81	7.98	7.63	7.85	8.24
EUR 45,735 to EUR 76,225	6.25	6.58	6.52	7.04	7.19
EUR 76,225 to EUR 304,898	5.49	5.75	5.73	5.93	6.23
EUR 304,898 to EUR 1,524,490	4.71	5.15	5.09	5.31	5.56
over EUR 1,524,490	4.36	4.42	4.96	5.10	5.03
Other short-term loans					
up to 15,245 EUR	4.86	4.97	5.11	5.38	5.70
EUR 15,245 to EUR 45,735	4.94	5.13	5.20	5.53	5.92
EUR 45,735 to EUR 76,225	5.08	5.12	5.38	5.96	6.11
EUR 76,225 to EUR 304,898	4.80	5.07	5.30	5.58	5.81
EUR 304,898 to EUR 1,524,490	4.48	4.79	4.95	5.29	5.52
over EUR 1,524,490	4.03	4.36	4.60	4.84	5.07
Medium and long-term loans					
up to 15,245 EUR	4.43	4.47	4.65	4.89	5.03
EUR 15,245 to EUR 45,735	4.32	4.40	4.56	4.77	5.00
EUR 45,735 to EUR 76,225	4.20	4.29	4.43	4.64	4.90
EUR 76,225 to EUR 304,898	4.14	4.23	4.35	4.55	4.78
EUR 304,898 to EUR 1,524,490	4.15	4.26	4.37	4.61	4.80
over EUR 1,524,490	4.33	4.55	4.73	5.00	5.13

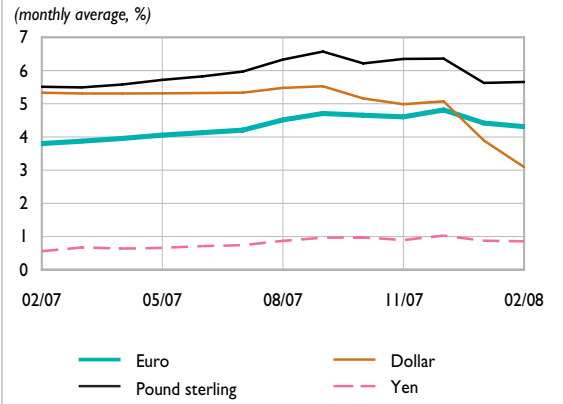
Source: Banque de France. *Produced 20 March 2008*

Table 29
Interest rates

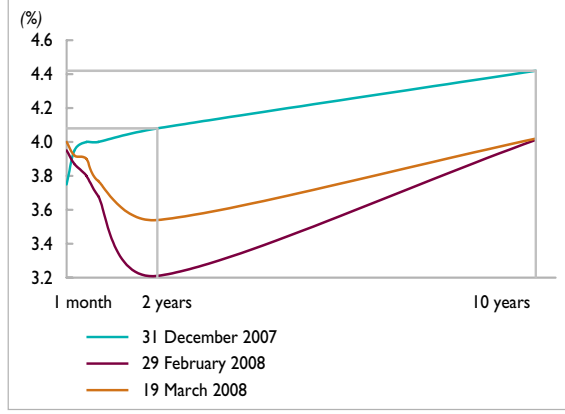
(%)

	Monthly average (a)										Key interest rates at 19/03/08
	2007								2008		
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	
Short-term interbank interest rates											
Euro											**4.00**
Overnight	3.79	3.95	4.06	4.04	4.00	3.95	4.01	3.84	3.98	4.01	
3-month	4.06	4.13	4.21	4.51	4.71	4.65	4.61	4.81	4.42	4.31	
1-year	4.36	4.49	4.55	4.63	4.68	4.61	4.55	4.74	4.43	4.29	
Pound sterling											**5.25**
Overnight	5.49	5.60	5.87	5.97	5.88	5.80	5.81	5.62	5.53	5.36	
3-month	5.72	5.82	5.97	6.33	6.57	6.21	6.35	6.36	5.63	5.66	
1-year	6.02	6.20	6.29	6.42	6.40	6.10	5.97	5.91	5.41	5.43	
Dollar											**2.25**
Overnight	5.26	5.28	5.30	5.35	5.14	4.83	4.64	4.45	4.01	3.10	
3-month	5.31	5.33	5.33	5.48	5.53	5.16	4.99	5.07	3.89	3.09	
1-year	5.30	5.41	5.36	5.19	5.06	4.91	4.54	4.47	3.50	3.00	
Yen											**0.75**
Overnight	0.50	0.54	0.55	0.55	0.65	0.62	0.62	0.58	0.56	0.51	
3-month	0.66	0.71	0.74	0.87	0.97	0.97	0.89	1.03	0.88	0.86	
1-year	0.86	0.96	0.98	1.07	1.14	1.12	1.04	1.08	0.98	1.08	
10-year benchmark government bond yields											
France	4.34	4.62	4.58	4.39	4.36	4.40	4.23	4.35	4.15	4.08	
Germany	4.29	4.58	4.51	4.31	4.24	4.30	4.11	4.26	4.04	3.96	
Euro area	4.37	4.66	4.63	4.43	4.37	4.40	4.25	4.38	4.23	4.14	
United Kingdom	5.14	5.42	5.41	5.14	4.99	5.00	4.74	4.71	4.50	4.62	
United States	4.81	5.17	5.07	4.73	4.57	4.58	4.21	4.13	3.76	3.76	
Japan	1.68	1.89	1.89	1.65	1.61	1.66	1.51	1.53	1.43	1.45	

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

Sources: Banque de France, European Central Bank.

Produced 20 March 2008

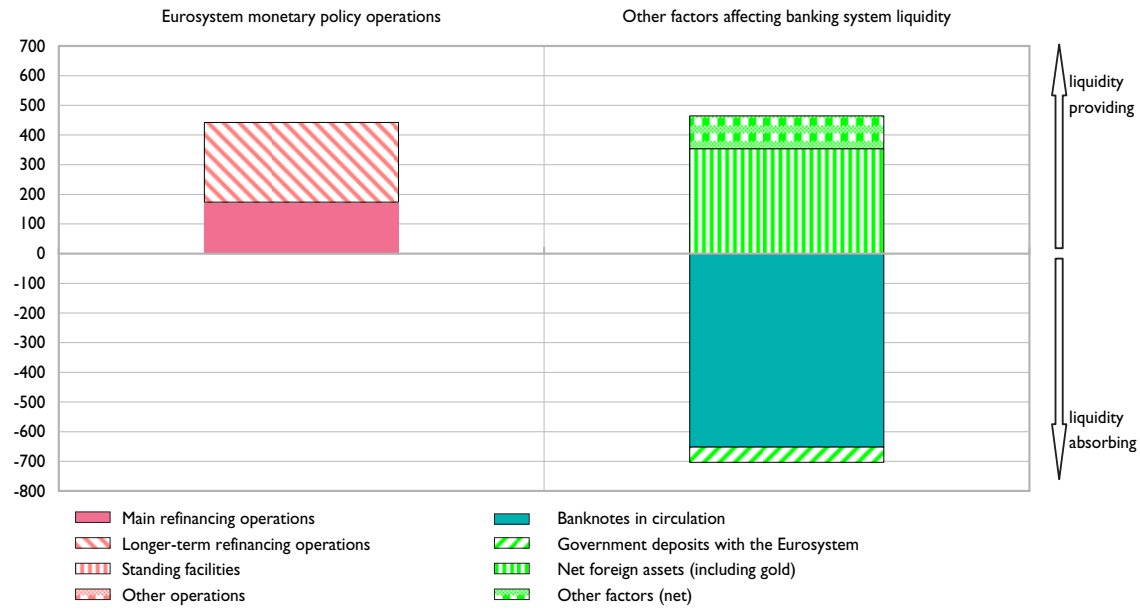
Table 30
Banking system liquidity and refinancing operations – Euro area

(daily average for the reserve maintenance period from 15/01/2008 to 12/02/2008)

	Liquidity providing	Liquidity absorbing	Net contribution
Contribution to banking system liquidity			
(a) Eurosystem monetary policy operations	**442.5**	**1.0**	**441.5**
Main refinancing operations	173.8		173.8
Longer-term refinancing operations	268.5		268.5
Standing facilities	0.2	0.4	-0.2
Other	0.0	0.6	-0.6
(b) Other factors affecting banking system liquidity	**464.3**	**703.4**	**-239.1**
Banknotes in circulation		651.7	-651.7
Government deposits with the Eurosystem		51.7	-51.7
Net foreign assets (including gold)	353.6		353.6
Other factors (net)	110.7		110.7
(c) Reserves maintained by credit institutions (a) + (b)			**202.4**
including reserve requirements			*201.6*

Net contribution to banking system liquidity

(daily average for the reserve maintenance period from 15/01/2008 to 12/02/2008)



Sources: Banque de France, European Central Bank.

Produced 20 March 2008

Table 31
Eurosystem key rates; minimum reserves

(%)

Key rates for the Eurosystem (latest changes)

Main refinancing operations			Standing facilities			
Date of		Minimum bid rate	Date of		Deposit	Marginal lending
decision	settlement		decision	settlement		
07/12/06	13/12/06	3.50	07/12/06	13/12/06	2.50	4.50
08/03/07	14/03/07	3.75	08/03/07	14/03/07	2.75	4.75
06/06/07	13/06/07	4.00	06/06/07	13/06/07	3.00	5.00

(%)

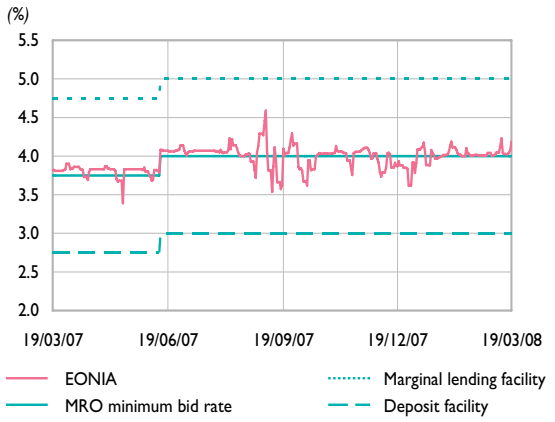
Main refinancing operations				Longer-term refinancing operations		
		Marginal rate	Weighted average rate			Marginal rate
2008	6 February	4.17	4.20	2007	12 December	4.81
	13 February	4.10	4.18		20 December	4.00
	20 February	4.10	4.15	2008	31 January	4.21
	27 February	4.10	4.15		21 February	4.15
	5 March	4.11	4.14		28 February	4.16
	12 March	4.12	4.16		13 March	4.25

(EUR billions – rates as a %)

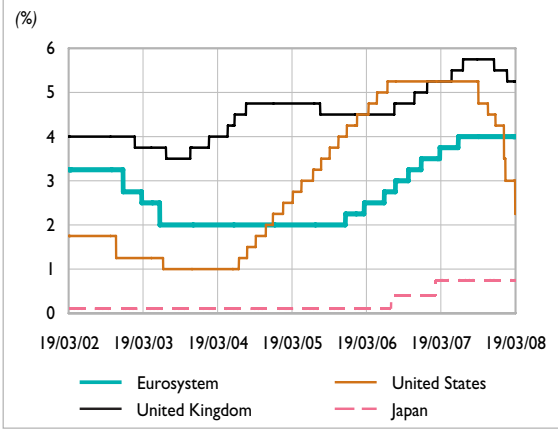
Minimum reserves (daily averages)

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	
2007	9 October	192.50	36.83	193.38	36.94	0.88	0.12	4.18
	13 November	193.66	36.06	194.37	36.16	0.71	0.10	4.12
	11 December	195.87	36.33	196.84	36.47	0.97	0.14	4.17
2008	15 January	199.78	37.67	200.85	37.83	1.07	0.16	4.20
	12 February	201.63	38.09	202.38	38.25	0.75	0.16	4.17
	11 March	204.57	38.81	205.31	38.92	0.74	0.11	4.10

Eurosystem key rates and EONIA



Key interest rates



Sources: European Central Bank, ESCB.

Produced 20 March 2008

Table 32
Negotiable debt securities – France

Certificates of deposit

	EUR billions (a)		Number of issuers
	Issues	Stocks	
15/12/07 to 21/12/07	172.44	384.61	210
22/12/07 to 28/12/07	114.83	387.51	210
29/12/07 to 04/01/08	132.07	369.95	208
05/01/08 to 11/01/08	175.41	380.17	206
12/01/08 to 18/01/08	178.20	388.14	207
19/01/08 to 25/01/08	181.66	391.66	208
26/01/08 to 01/02/08	148.31	395.62	207
02/02/08 to 08/02/08	151.48	391.62	207
09/02/08 to 15/02/08	134.51	387.34	205
16/02/08 to 22/02/08	149.29	399.61	204
23/02/08 to 29/02/08	149.83	397.53	204
01/03/08 to 07/03/08	146.19	400.24	204
08/03/08 to 14/03/08	151.63	396.87	204

Commercial paper

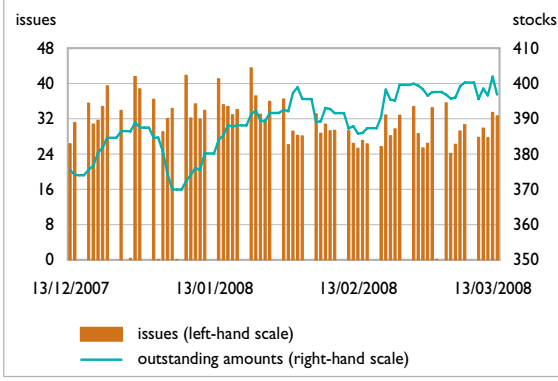
	EUR billions (a)		Number of issuers
	Issues	Stocks	
15/12/07 to 21/12/07	24.15	82.37	79
22/12/07 to 28/12/07	13.71	84.31	78
29/12/07 to 04/01/08	10.63	83.38	77
05/01/08 to 11/01/08	17.06	74.85	80
12/01/08 to 18/01/08	17.51	75.82	77
19/01/08 to 25/01/08	16.66	78.18	81
26/01/08 to 01/02/08	22.78	90.53	81
02/02/08 to 08/02/08	13.54	92.04	82
09/02/08 to 15/02/08	16.81	92.64	82
16/02/08 to 22/02/08	18.47	91.73	83
23/02/08 to 29/02/08	13.37	91.12	83
01/03/08 to 07/03/08	14.30	92.26	82
08/03/08 to 14/03/08	14.99	92.30	80

Negotiable medium-term notes

	EUR billions (a)		Number of issuers
	Issues	Stocks	
15/12/07 to 21/12/07	0.33	71.42	135
22/12/07 to 28/12/07	0.34	71.56	135
29/12/07 to 04/01/08	0.03	71.43	133
05/01/08 to 11/01/08	0.12	71.39	133
12/01/08 to 18/01/08	0.17	71.36	133
19/01/08 to 25/01/08	0.18	71.30	133
26/01/08 to 01/02/08	0.13	70.68	133
02/02/08 to 08/02/08	0.09	70.60	133
09/02/08 to 15/02/08	0.12	70.64	132
16/02/08 to 22/02/08	0.12	70.70	132
23/02/08 to 29/02/08	0.27	70.81	131
01/03/08 to 07/03/08	0.12	70.58	131
08/03/08 to 14/03/08	0.06	70.54	131

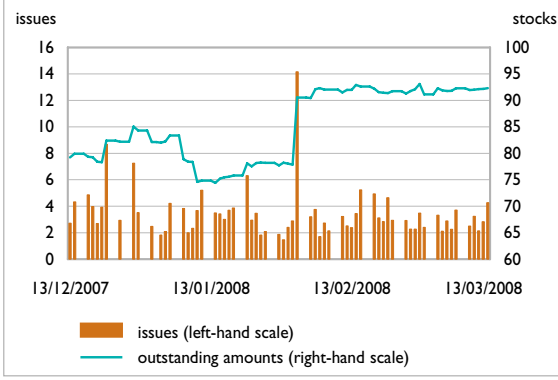
Certificates of deposit

(unadjusted data, EUR billions)



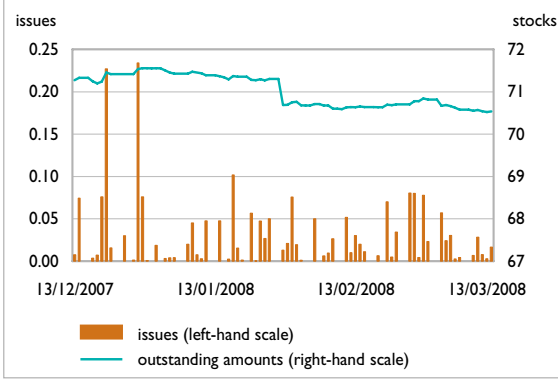
Commercial paper

(unadjusted data, EUR billions)



Negotiable medium-term notes

(unadjusted data, EUR billions)



(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).

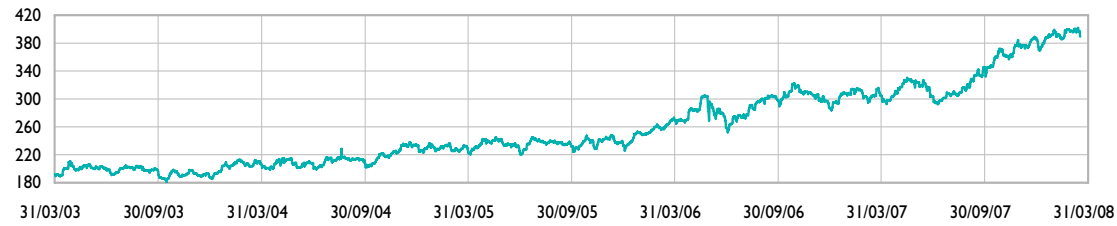
Source: Banque de France.

Produced 20 March 2008

Table 33
Negotiable debt securities – France

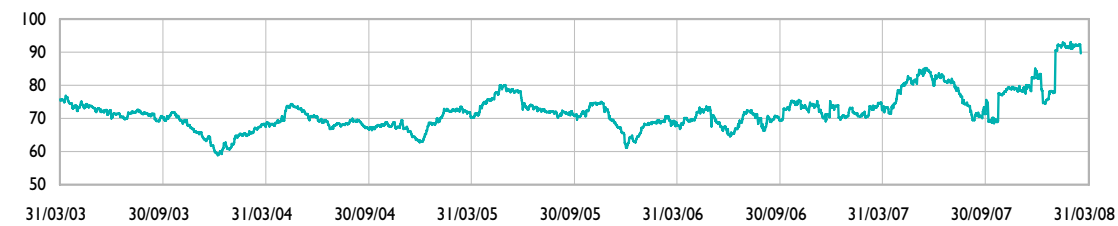
Certificates of deposit

(daily outstanding amounts in EUR billions)



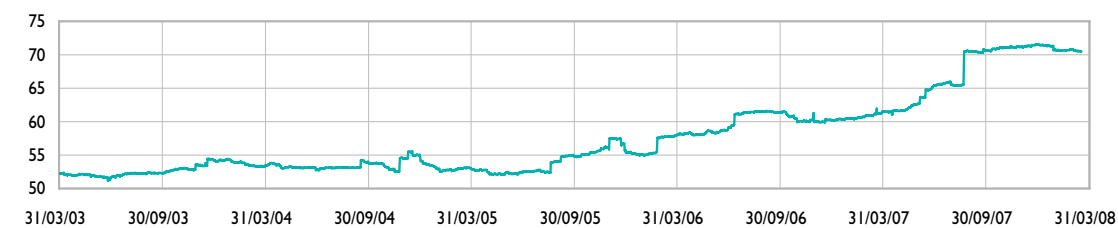
Commercial paper

(daily outstanding amounts in EUR billions)



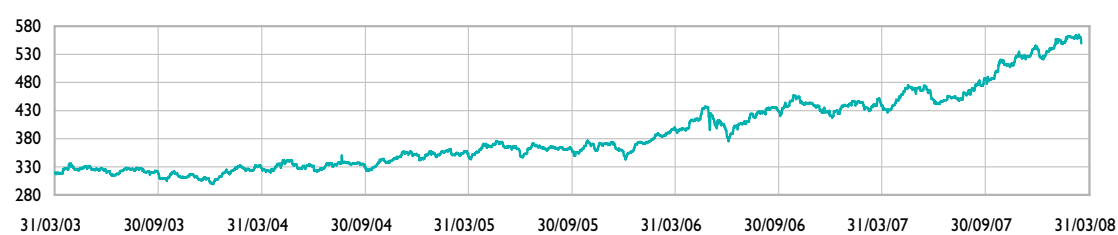
Negotiable medium-term notes

(daily outstanding amounts in EUR billions)



Negotiable debt securities, cumulated outstandings

(daily outstanding amounts in EUR billions)



Source: Banque de France.

Produced 20 March 2008

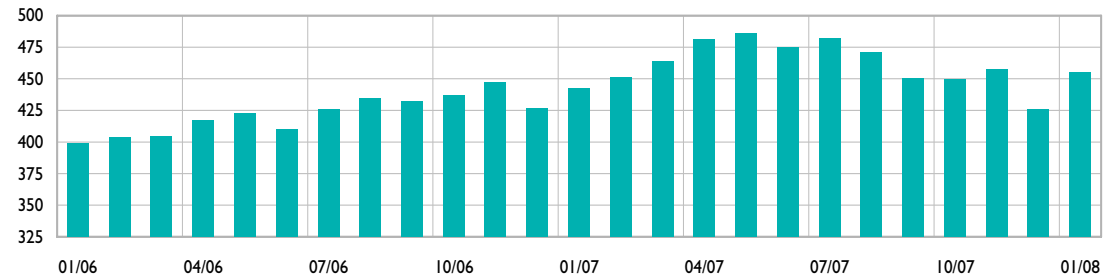
Table 34
Mutual fund shares/units – France

(EUR billions)

	2007			2008
	March	June	Sept.	Jan.
Net assets of mutual fund shares/units by category				
Money-market funds	463.78	474.81	450.43	455.36
Bond mutual funds	196.94	200.51	185.78	
Equity mutual funds	345.82	363.71	349.77	
Mixed funds	310.73	325.03	307.84	
Funds of alternative funds	32.20	36.93	37.67	
Guaranteed-performance mutual funds	0.04	0.04	0.04	
Structured funds ("fonds à formule")	71.88	75.39	75.14	

Net assets of money-market funds

(EUR billions)



Source: Banque de France.

Produced 20 March 2008

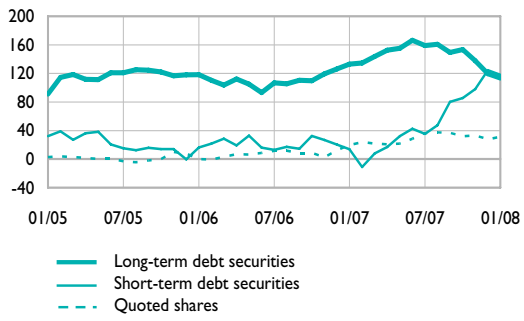
Table 35
Debt securities and equity financing of French residents (domestic and international markets)

(EUR billions)

	Outstanding amounts (a)			Net issues		12-month percentage changes (b)	
	2006	2007	2008	12-month	2008	2007	2008
	Dec.	Dec.	Jan.	total	Jan.	Dec.	Jan.
Debt securities issued by French residents							
Total	**2,142.5**	**2,370.3**	**2,377.8**	**231.6**	**8.0**	**11.4**	**10.7**
Long-term debt securities	1,755.7	1,858.8	1,857.7	113.6	-0.4	6.8	6.5
General government	*891.4*	*916.7*	*911.5*	*19.5*	*-5.2*	*3.0*	*2.2*
Monetary financial institutions (MFIs)	*559.7*	*630.3*	*634.5*	*81.8*	*4.4*	*14.7*	*14.6*
Non-MFI corporations	*304.6*	*311.7*	*311.8*	*12.3*	*0.3*	*3.7*	*4.0*
Short-term debt securities	386.9	511.5	520.0	118.1	8.5	32.2	29.4
General government	*77.5*	*93.6*	*91.9*	*14.4*	*-1.6*	*20.9*	*18.5*
Monetary financial institutions (MFIs)	*268.0*	*366.7*	*372.9*	*89.7*	*6.1*	*36.7*	*31.7*
Non-MFI corporations	*41.3*	*51.2*	*55.2*	*14.0*	*4.0*	*24.0*	*34.1*
French quoted shares							
All sectors	**1,702.9**	**1,745.8**	**1,515.9**	**31.1**	**1.8**	**1.5**	**1.7**

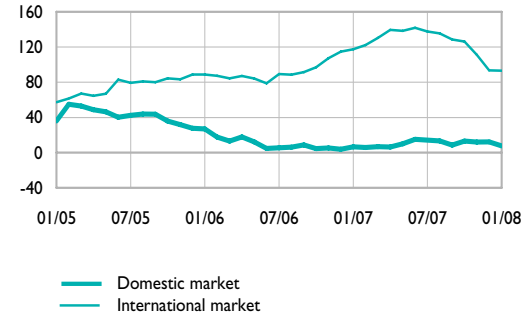
Net issues of securities by French residents

(by type of security, 12-month total, EUR billions)



Net issues of long-term debt securities by French residents

(by type of market, 12-month total, EUR billions)



(a) Nominal value for debt securities, market value for quoted securities.
(b) Excluding the impact of exchange rate variations and any other changes which do not arise from issues or redemptions.

Source: Banque de France.

Produced 20 March 2008

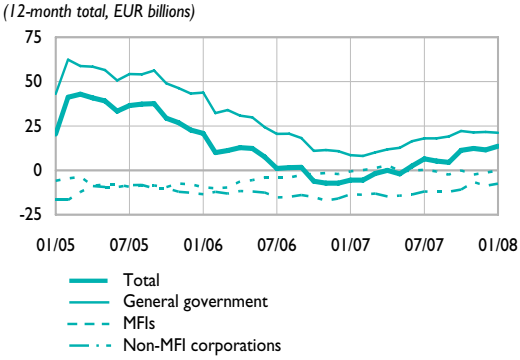
Table 36
Quoted shares and bonds issued by French residents

(EUR billions)

	Outstanding amounts (a)			Net issues		Gross issues	
	2006	2007	2008	12-month	2008	12-month	2008
	Dec.	Dec.	Jan.	total	Jan.	total	Jan.
Bonds issued by residents at the Paris financial centre							
Total	**843.4**	**857.1**	**864.2**	**13.6**	**6.7**	**76.3**	**8.1**
General government	639.4	662.7	669.4	21.1	6.4	60.1	6.4
Monetary financial institutions (MFIs)	118.4	117.2	118.4	0.0	1.2	12.9	1.6
Non–MFI corporations	85.6	77.2	76.4	-7.6	-0.9	3.3	0.2
French quoted shares							
Total	**1,702.9**	**1,745.8**	**1,515.9**	**31.1**	**1.8**	**42.6**	**1.9**
Monetary financial institutions (MFIs)	227.3	183.0	159.6	3.2	0.0	5.8	0.0
Non–MFI corporations	1,475.7	1,562.8	1,356.3	27.8	1.8	36.8	1.9

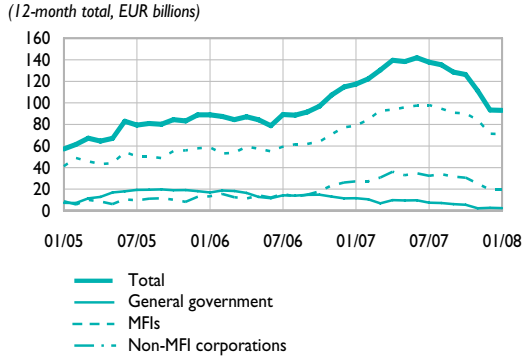
Net issues of bonds
Domestic market

(12-month total, EUR billions)



Net issues of bonds
International market

(12-month total, EUR billions)



(a) Nominal value for bonds, market value for quoted shares.

Source: Banque de France.

Produced 20 March 2008

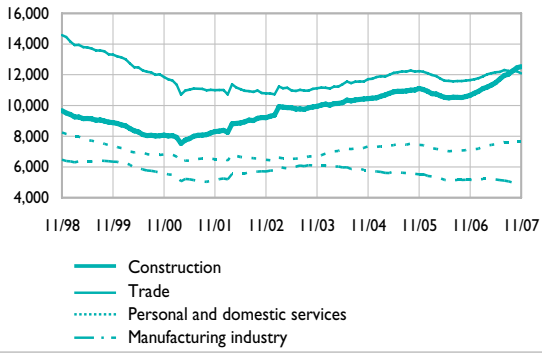
Table 37
Company failures by economic sector – France

(NES 16 Classification, number of companies, non-seasonally adjusted data, 12-month total)

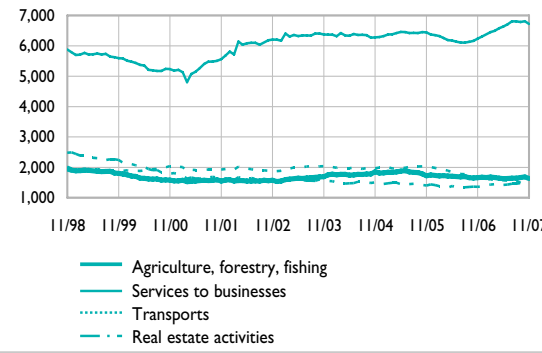
	2006	2007										
	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Agriculture, forestry, fishing	1,675	1,664	1,683	1,667	1,643	1,626	1,633	1,645	1,646	1,663	1,684	1,635
Manufacturing industry	5,151	5,166	5,218	5,216	5,212	5,187	5,144	5,113	5,062	4,977	4,956	4,909
Food products, bev. and tob.	*1,184*	*1,218*	*1,249*	*1,270*	*1,299*	*1,297*	*1,299*	*1,308*	*1,309*	*1,316*	*1,328*	*1,331*
Consumer goods	*1,576*	*1,585*	*1,620*	*1,612*	*1,600*	*1,591*	*1,562*	*1,546*	*1,523*	*1,472*	*1,491*	*1,461*
Motor vehicles	*66*	*65*	*69*	*69*	*67*	*63*	*55*	*55*	*56*	*51*	*48*	*37*
Capital goods	*1,008*	*989*	*968*	*965*	*960*	*963*	*955*	*948*	*940*	*913*	*888*	*868*
Intermediate goods	*1,317*	*1,309*	*1,312*	*1,300*	*1,286*	*1,273*	*1,273*	*1,256*	*1,234*	*1,225*	*1,201*	*1,212*
Construction	10,799	10,933	11,104	11,195	11,339	11,489	11,734	11,961	12,030	12,240	12,457	12,523
Trade	11,707	11,787	11,897	12,026	12,101	12,158	12,177	12,306	12,248	12,221	12,220	12,087
Transports	1,645	1,622	1,604	1,589	1,594	1,574	1,567	1,563	1,553	1,487	1,490	1,479
Real estate activities	1,369	1,404	1,431	1,443	1,441	1,424	1,432	1,460	1,461	1,488	1,519	1,530
Services to businesses	6,304	6,376	6,451	6,492	6,577	6,634	6,708	6,805	6,804	6,783	6,811	6,721
Personal and domestic services	7,149	7,182	7,309	7,394	7,431	7,474	7,551	7,617	7,625	7,561	7,643	7,638
Other sectors (a)	1,551	1,653	1,744	1,802	1,839	1,871	1,886	1,889	1,889	1,907	1,887	1,802
Total	**47,350**	**47,787**	**48,441**	**48,824**	**49,177**	**49,437**	**49,832**	**50,359**	**50,318**	**50,327**	**50,667**	**50,324**

Company failures – 12-month total

(NES 16 Classification, number of companies, non-seasonally adjusted)

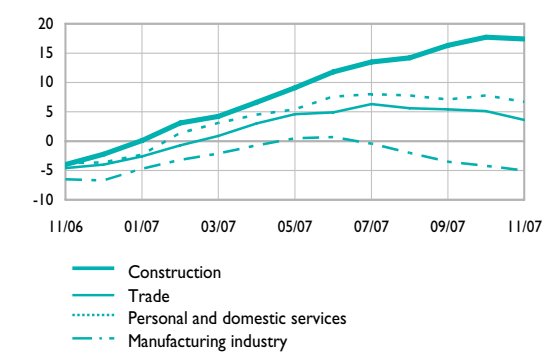


(NES 16 Classification, number of companies, non-seasonally adjusted)

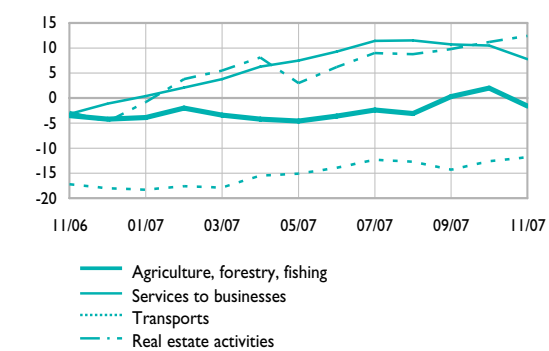


Company failures – year-on-year change

(NES 16 Classification, % change, non-seasonally adjusted)



(NES 16 Classification, % change, non-seasonally adjusted)



(a) Other sectors include energy, financial activities, education and general government.

Source: Banque de France.

Produced 20 March 2008

Table 38
Retail payment systems – France

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

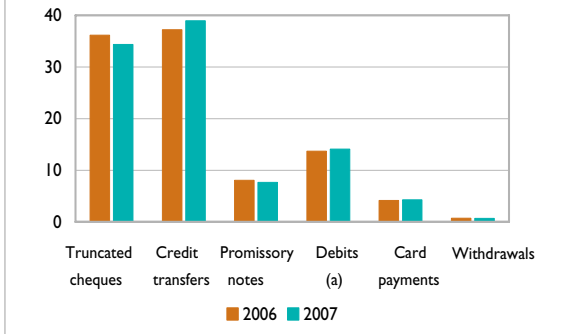
	2004	2005	2006	2007	2007		2008	2008
					Nov.	Dec.	Jan.	Share
Truncated cheques	6,836	7,084	7,132	6,974	6,226	7,841	7,111	34.6
Credit transfers	6,124	6,753	7,342	7,904	7,507	9,948	7,966	38.8
Promissory notes	1,652	1,620	1,593	1,555	1,605	1,587	1,584	7.7
Direct debits	1,495	1,599	1,705	1,739	1,724	2,044	1,808	8.8
Interbank payment orders	164	159	155	150	225	181	110	0.5
Electronic payment orders	527	670	842	975	823	1,622	978	4.8
Card payments	705	772	819	864	833	1,184	856	4.2
ATM withdrawals	133	136	139	140	129	165	124	0.6
Total	**17,634**	**18,793**	**19,727**	**20,300**	**19,071**	**24,573**	**20,536**	**100.0**

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

	2004	2005	2006	2007	2007		2008	2008
					Nov.	Dec.	Jan.	Share
Truncated cheques	13,013	12,784	12,159	11,561	11,129	13,548	11,705	24.5
Credit transfers	6,695	7,038	7,239	7,344	6,973	8,542	7,325	15.3
Promissory notes	408	401	390	370	385	379	354	0.7
Direct debits	6,560	7,179	7,628	7,863	7,124	8,176	7,957	16.6
Interbank payment orders	554	511	491	458	545	509	423	0.9
Electronic payment orders	10	17	27	38	52	45	44	0.1
Card payments	15,159	16,504	17,339	18,146	17,390	23,345	17,797	37.2
ATM withdrawals	2,446	2,476	2,497	2,467	2,301	2,746	2,189	4.6
Total	**44,845**	**46,910**	**47,771**	**48,248**	**45,899**	**57,290**	**47,795**	**100.0**

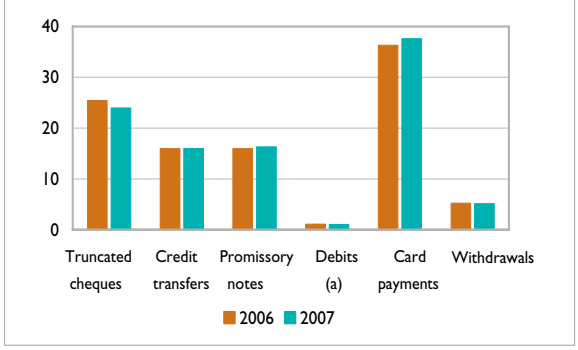
Market share developments for main non-cash means of payment

(% 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.

Source: GSIT (French Interbank Teleclearing Consortium).

Produced 20 March 2008

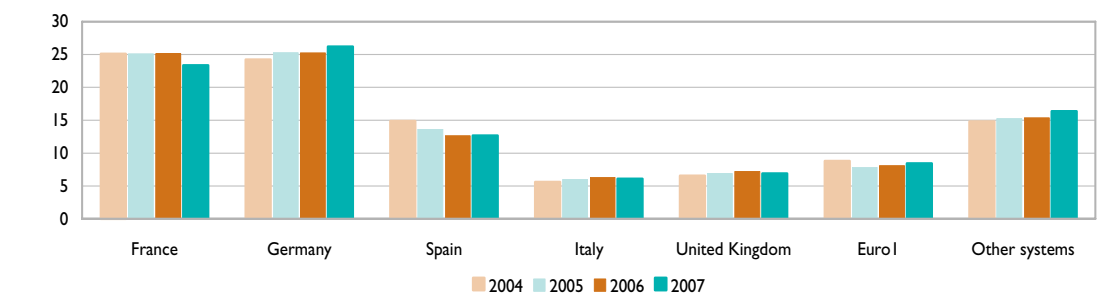
Table 39
Large-value payment systems – EU-15

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

	2004	2005	2006	2007	2007			2007
					Oct.	Nov.	Dec.	Share
France	486	544	588	633	634	627	593	19.9
Cross border TARGET	*81*	*95*	*107*	*122*	*125*	*120*	*127*	*4.3*
Domestic TARGET (TBF)	*338*	*386*	*423*	*448*	*442*	*450*	*435*	*14.6*
Net system (PNS)	*67*	*62*	*58*	*64*	*66*	*57*	*30*	*1.0*
Germany (a)	488	547	591	711	745	811	970	32.5
Cross border TARGET	*143*	*163*	*183*	*215*	*235*	*232*	*244*	*8.2*
Domestic TARGET	*345*	*384*	*408*	*496*	*510*	*579*	*726*	*24.4*
Spain	288	296	296	344	370	347	332	11.2
Cross border TARGET	*23*	*23*	*27*	*36*	*50*	*38*	*34*	*1.1*
Domestic TARGET (SLBE)	*265*	*273*	*269*	*308*	*320*	*309*	*299*	*10.0*
Net system (SEPI) (b)	*1*	-	-	-	-	-	-	-
Italy (c)	108	130	148	165	163	166	180	6.0
Cross border TARGET	*32*	*41*	*47*	*57*	*59*	*59*	*57*	*1.9*
Domestic TARGET (BI-REL)	*76*	*89*	*101*	*108*	*104*	*107*	*123*	*4.1*
United Kingdom	127	149	169	187	200	160	129	4.3
Cross border TARGET	*101*	*114*	*126*	*148*	*162*	*130*	*114*	*3.8*
Domestic TARGET (Chaps Euro)	*26*	*35*	*42*	*39*	*38*	*30*	*15*	*0.5*
Other systems	457	500	549	672	729	702	776	26.1
Total EU-15	**1,955**	**2,166**	**2,342**	**2,712**	**2,841**	**2,812**	**2,979**	**100.0**
of which TARGET	1,714	1,932	2,092	2,418	2,531	2,518	2,683	90.1
Cross border TARGET	*564*	*651*	*725*	*868*	*961*	*888*	*900*	*30.2*
Domestic TARGET	*1,150*	*1,281*	*1,368*	*1,550*	*1,569*	*1,630*	*1,783*	*59.8*
of which Euro1 (EBA)(d)	170	170	189	228	242	235	264	8.9
of which other net systems (PNS(FR), POPS(FI))	70	64	60	66	68	59	32	1.1

Market share developments for each financial centre

(% of turnover)



(a) Germany, Austria and Luxembourg migrated to Target 2 on 19 November 2007.
(b) SEPI: Servicio español de pagos interbancarios (closed on 15 December 2004).
(c) Data include traffic from Polish participants (since March 2005) and Estonian participants (since November 2006) connected to BI-REL.
(d) Euro1 (EBA): clearing system of the Euro Banking Association. Euro1 data include retail payments recorded in STEP1.
NB: The data concern euro transactions only. They are derived from the various payment systems, whose specific modes of operation they reflect.

Sources: Banque de France, European Central Bank. *Produced 20 March 2008*

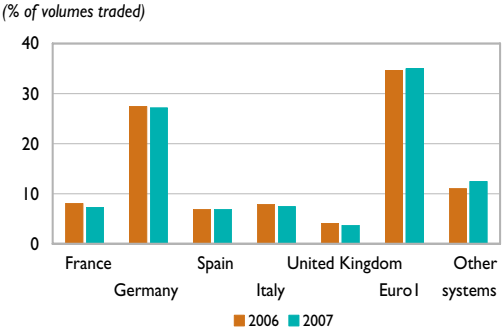
Table 40
Large-value payment systems – EU-15

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

	2004	2005	2006	2007	2007			2007
					Oct.	Nov.	Dec.	Share
France	42,509	44,107	43,890	44,405	45,785	41,593	36,824	5.3
Cross border TARGET	*7,384*	*8,500*	*9,631*	*10,794*	*10,203*	*9,548*	*10,962*	*1.6*
Domestic TARGET	*8,071*	*8,589*	*8,321*	*8,398*	*8,271*	*7,453*	*10,842*	*1.6*
Net system (PNS)	*27,054*	*27,018*	*25,937*	*25,213*	*27,311*	*24,592*	*15,020*	*2.2*
Germany (a)	131,503	141,396	148,613	164,187	164,408	171,508	194,532	27.9
Cross border TARGET	*19,231*	*19,847*	*20,186*	*22,232*	*20,865*	*28,215*	*36,310*	*5.2*
Domestic TARGET	*112,272*	*121,548*	*128,427*	*141,955*	*143,543*	*143,293*	*158,222*	*22.7*
Spain	18,464	26,723	37,439	41,792	43,463	41,158	47,860	6.9
Cross border TARGET	*2,760*	*3,408*	*4,046*	*4,819*	*5,082*	*5,022*	*5,215*	*0.7*
Domestic TARGET (SLBE)	*11,618*	*23,315*	*33,393*	*36,973*	*38,381*	*36,136*	*42,645*	*6.1*
Net system (SEPI) (b)	*4,086*	-	-	-	-	-	-	-
Italy (c)	35,060	41,045	42,934	45,111	44,342	44,382	56,860	8.2
Cross border TARGET	*7,269*	*7,799*	*8,151*	*8,452*	*7,965*	*7,637*	*8,212*	*1.2*
Domestic TARGET (BI-REL)	*27,791*	*33,246*	*34,782*	*36,659*	*36,378*	*36,745*	*48,648*	*7.0*
United Kingdom	18,119	20,089	21,871	22,397	23,660	18,698	12,586	1.8
Cross border TARGET (Chaps Euro)	*12,799*	*14,223*	*16,144*	*16,690*	*17,901*	*13,776*	*8,665*	*1.2*
Domestic TARGET	*5,320*	*5,866*	*5,728*	*5,708*	*5,759*	*4,922*	*3,920*	*0.6*
Other systems	215,991	240,452	246,850	286,631	304,159	303,792	347,757	49.9
Total EU-15	**461,647**	**513,812**	**541,597**	**604,524**	**625,818**	**621,131**	**696,718**	**100.0**
of which TARGET	267,234	300,991	326,196	365,737	373,392	375,068	421,282	60.5
Cross border TARGET	65,040	69,894	74,580	81,725	81,006	86,120	91,774	13.2
Domestic TARGET	202,193	231,097	251,617	284,012	292,386	288,948	329,508	47.3
of which Euro1 (EBA) (d)	161,097	183,450	187,163	211,217	222,895	219,368	258,074	37.0
of which other net systems (PNS(FR), POPS(FI))	33,316	29,371	28,237	27,570	29,531	26,696	17,362	2.5

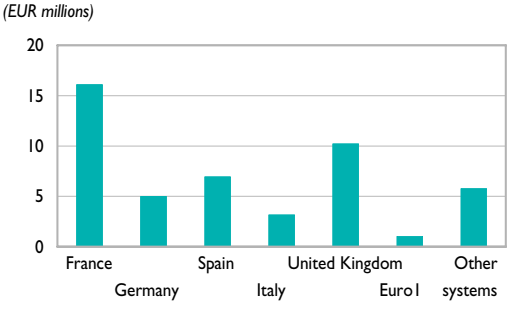
Market share developments for each financial centre

(% of volumes traded)



Average transaction amount in the EUR systems of the European Union (15) in December 2007

(EUR millions)



(a) Germany, Austria and Luxembourg migrated to Target 2 on 19 November 2007.
(b) SEPI: Servicio español de pagos interbancarios (closed on 15 December 2004).
(c) Data include traffic from Polish participants (since March 2005) and Estonian participants (since November 2006) connected to BI-REL.
(d) Euro1 (EBA): clearing system of the Euro Banking Association. Euro1 data include retail payments recorded in STEP1.
NB: The data concern euro transactions only. They are derived from the various payment systems, whose specific modes of operation they reflect.
Sources: Banque de France, European Central Bank. *Produced 20 March 2008*

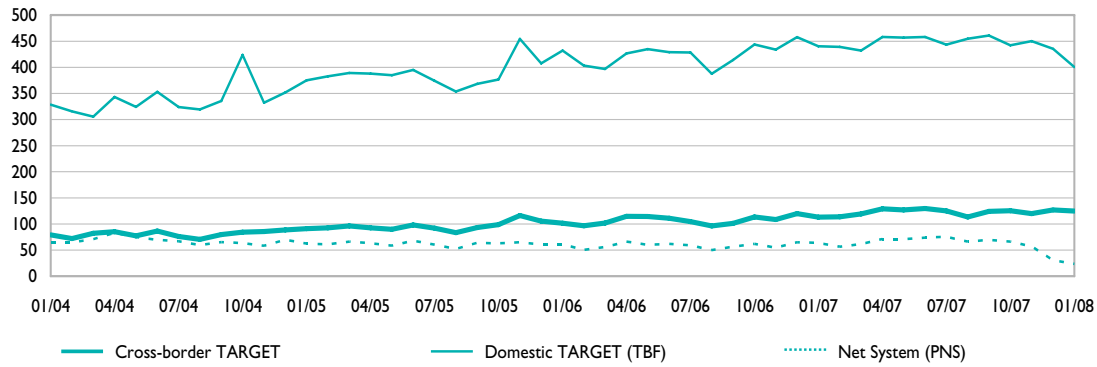
Table 41
Large-value payment systems – France

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

	2004	2005	2006	2007	2007		2008	2008
					Nov.	Dec.	Jan.	Share
Collateral used for intraday credit in domestic TARGET (TBF)								
French negotiable securities	12.3	14.6	14.2	11.5	13.4	18.3	18.4	33.3
French private claims	6.4	6.3	7.4	18.6	20.6	16.9	20.1	36.3
Securities collateralised through CCBM	7.4	7.4	7.2	7.2	6.6	9.9	12.3	22.2
Other foreign securities (a)	4.6	5.6	8.4	8.8	7.2	5.7	4.5	8.1
Total	**30.7**	**33.9**	**37.2**	**46.1**	**47.8**	**50.8**	**55.3**	**100.0**

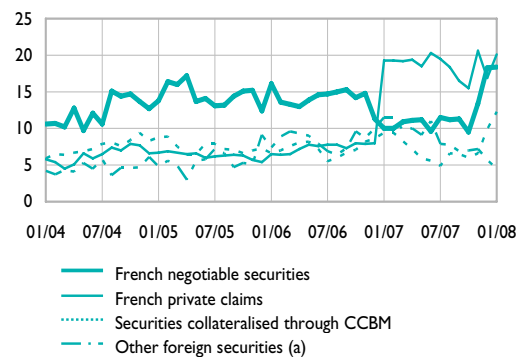
Monthly change in amounts exchanged in French payment systems

(EUR billions, daily average)

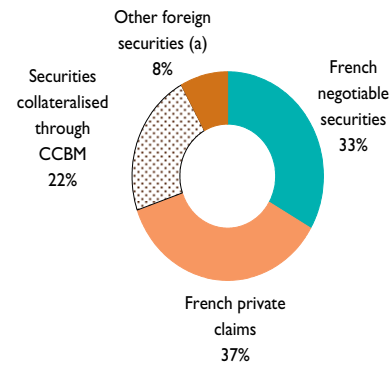


Monthly change in collateral

(EUR billions, daily average)



Collateral used for intraday credit in domestic TARGET in January 2008



(a) Other foreign securities mobilised via links between securities settlement systems.

Source: Banque de France.

Produced 20 March 2008

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

Managing Editor
Pierre Jaillet

Editors-in-Chief
Dominique Rougès, David Karmouni

Reviser
Clothilde Paul

Coordinator
Christine Bescos

Translations
Stéphanie Evans, Anthony Dare,
Natalie Lowe, Simon Strachan

Technical production
Nicolas Besson, Angélique Brunelle,
Florence Derboule, Alexandrine Dimouchy,
Virginie Fajon, Christian Heurtaux,
Isabelle Pasquier

Statistics
DESM (BSME)

Orders
Banque de France
07-1050 Service des Relations
avec le public
75049 Paris Cedex 01
Tél. : 01 42 92 39 08
Fax : 01 42 92 39 40

Imprint
Banque de France (SIMA)

Internet
www.banque-france.fr/gb/publications/bulletin/qsa.htm

The Quarterly Selection of Articles *may be downloaded, free of charge, from the Banque de France's website (www.banque-france.fr). Printed versions are available upon request, while stocks last.*

Dépôt légal : May 2008