# BRIGHTER WORLD PROSPECTS, EUROPE STILL IN THE SHADOWS

## GENERAL OUTLOOK

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of the previous forecast</td>
<td>17</td>
</tr>
</tbody>
</table>

## REVIEW OF THE PREVIOUS FORECAST

- Why did the unemployment rate keep on falling in Germany after 2007? | 23   |
- In the Eurozone, why is inflation not lower in the countries most affected by the crisis? | 47   |

## FRENCH DEVELOPMENTS

- France’s international environment                                   | 67   |
- Foreign trade                                                          | 71   |
- Oil and raw materials                                                  | 74   |
- Consumer prices                                                        | 78   |
- Employment                                                            | 83   |
- Unemployment                                                          | 89   |
- Wages                                                                 | 96   |
- Household income                                                       | 98   |
- Household consumption and investment                                  | 102  |
- Entreprises’ earnings                                                 | 105  |
- Corporate investment and inventory                                    | 107  |
- Output                                                                | 111  |

## INTERNATIONAL DEVELOPMENTS

- Financial markets                                                      | 117  |
- Eurozone                                                               | 125  |
- Germany                                                               | 128  |
- Italy                                                                  | 129  |
- Spain                                                                  | 130  |
- United States                                                          | 131  |
- United Kingdom                                                         | 135  |
- Japan                                                                  | 136  |
- China and emerging Asia                                                | 137  |

## FOCUS

- Consumer price index: how are new products integrated?                | 81   |
- Subsidised labour contracts in 2012                                    | 87   |
- The crisis has modified cyclical effects on labour market participation | 92   |
- Eurozone monetary policy: have the VLTRO fulfilled their objectives?  | 120  |
- Can the fall in the activity ratio in the United States be explained by flexion effects? | 132 |

## COUNTRIES ACCOUNTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTRIES ACCOUNTS</td>
<td>140</td>
</tr>
</tbody>
</table>

## STATISTICAL FRENCH APPENDIX

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATISTICAL FRENCH APPENDIX</td>
<td>144</td>
</tr>
</tbody>
</table>

## ECONOMIC OUTLOOK TERMINOLOGY

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECONOMIC OUTLOOK TERMINOLOGY</td>
<td>151</td>
</tr>
</tbody>
</table>
In Q4 2012, activity accelerated in the emerging economies, but the advanced economies did not benefit. On the contrary, activity in the latter was affected by a marked destocking trend and fell back (-0.2% after +0.3%). In addition to this, domestic demand was hit in the United States by the drop in public consumption, although private demand was strong.

In Q1 2013, both the business tendency surveys, which are indicating an almost-general improvement in the business climate, and the first available activity data, suggest that a marked upturn can be expected in the advanced economies (+0.4%). However, their activity should be held back in Q2 2013 (+0.2%), especially in the United States under the effect of fiscal consolidation.

Foreign demand for French products should therefore rise again in H1 2013, although remaining less dynamic than world trade. It is likely to continue suffering from the continuing weakness of internal demand in the Eurozone, despite strong activity in Germany driven by the upturn in investment and exports. The upturn in French exports should therefore remain moderate, especially as the value of the Euro has risen globally since mid-2012.

In France, domestic demand is set to remain sluggish, with activity being almost stable in H1 (0.0% in Q1 then +0.1% in Q2).

Investment in building started falling in Q4 2012. This is likely to continue, given the sharp fall in the number of starts in 2012. Likewise, the marked fall in corporate investment in manufactured goods in H2 2012 should continue into early 2013. The context is indeed likely to remain unconducive to expansion in production capacities: prospects for activity are poor and the capacity utilisation rate is low. In this way, the adjustment in investment, which has not been very pronounced in France since the turnaround in 2011, whether in absolute terms or when compared to the country’s neighbours, is likely to continue.

Household consumption should be almost stable in H1 2013 (0.0% then +0.1%). Purchasing power should continue being held back by the worsening labour market situation and the increase in the tax burden. The return of productivity gains towards their pre-crisis rate, which started at the end of 2011, is likely to lead to large market-sector job losses (37,000 per quarter in early 2013). The drop in total employment should be a little lower, however, due to an increase in the number of subsidised jobs in the non-market sector. The unemployment rate should reach 11.0% in mid-2013 (10.6% in Metropolitan France).

Various uncertainties are surrounding this scenario.

The forecast supposes that the savings ratio falls year on year (-0.6 points) as tax rises should partly affect income that is usually saved. This factor buoying up demand might fail to materialise, especially if the uncertainties as to medium-term income prospects, which are particularly strong on account of the crisis, should encourage households to keep up their savings effort.

In the United States, uncertainties remain great as to fiscal policy and its effects on activity.

Finally, the forecast is based on the hypothesis that oil prices stabilise around $110 a barrel of Brent. Supply and demand prospects in early 2013, however, could lead to a drop in the oil price.
Activity stalled in the advanced economies in Q4 2012

World trade stronger at the end of 2012... After being sluggish in Q3 2012, world trade showed a marked upturn at the end of the year (+0.9% after +0.2%). This overall improvement does hide some widely contrasting situations between emerging and advanced countries, however (see graph 1).

... but without benefiting the advanced economies The upturn in activity in the emerging economies, notably in China, stimulated trade. But imports and exports in the advanced economies fell sharply at the end of 2012. In these countries, activity fell back (-0.2% after +0.3%), hit also by a particular marked destocking trend in the United States, United Kingdom, France and Italy.

Air pocket in the United States In the United States, activity stalled in Q4 2012 (0.0% after +0.8%). Private consumption and investment were strong, but public defence spending fell sharply and imports dropped (-1.1%).

Japan hit by tensions with China In Japan, activity continued to be hit by geopolitical tensions with China: despite the rebound in trade in Asia, Japanese exports fell back sharply once again (-3.7% after -5.1%) and activity remained stable (0.0% after -1.0%).

Europe falls back in Q4 2012

Drop in activity In the Eurozone, the drop in activity in Q4 2012 was more pronounced than in the other advanced countries: -0.6% after -0.1% in Q3 2012. In particular, manufacturing production, which had been stable in Q3, fell back sharply at the end of 2012 in the Eurozone’s largest economies.

German activity stalls In Germany, notably, activity was hit (-0.6% after +0.2%) by the drop in exports and the fall in investment in capital goods for the fifth consecutive quarter. German imports therefore fell, contributing to the slowdown in trade within the Eurozone.

Spain and Italy slide again In Spain and Italy, the fall in activity was also very pronounced (respectively -0.8% and -0.9%). Domestic demand continued to fall and, unlike in previous quarters, foreign trade did not buoy up activity.

1- In Q4 2012, strong divergences in world trade

Source: Centraal Plan Bureau
In France, a less pronounced fall than in the rest of the Eurozone

Consumption held up but investment and exports fell
Activity also fell back in France, although not to the same extent as the other major European countries (-0.3% after +0.2%). Held back by the weakness of trade in the advanced countries, exports dropped (-0.6% after +0.7%). Businesses also reduced their investments (-1.2% after -0.8%), as did households (-0.8% after -0.1%). Household consumption continued to hold up, however (+0.2% after +0.3%). Household spending on manufactured goods progressed slightly, notably thanks to the dynamism of automobile purchases in December 2012, before the introduction of stricter terms on the CO2 emissions penalty, while spending on services remained robust (+0.3% after +0.2%).

Sharp drop in manufacturing production
Activity was also limited by further destocking and manufacturing production therefore fell sharply in France at the end of 2012 (-2.3% after +0.9%). This drop had negative knock-on effects on services, although the latter held up on the whole thanks to strong household spending. Activity in construction, meanwhile, fell back (-0.8% after 0.0%), both in building and public works.

Dynamic emerging economies
In H1 2013, activity should remain dynamic in the emerging economies. In China, notably, the business climate has improved in the manufacturing sector (see graph 2) and domestic demand is showing signs of accelerating.

The business climate is improving distinctly in the advanced countries
The business climate is also improving in all the advanced economies (see graph 2). In the United States, in manufacturing industry, it was well above the expansion threshold in February 2013. In the Eurozone and Japan, it remains lower but is rising from the low points reached in summer 2012 in the Eurozone and in December 2012 in Japan.

Activity to bounce back in early 2013 in the advanced economies...
Activity should also return to a sustained rate of growth in the United States in Q1 2013 (+0.6% after 0.0%) and in Japan (+0.6% after +0.0%). In the Eurozone, activity should stop contracting (+0.1% after -0.6%).

... before slowing slightly in the United States
In Q2 2013, activity should continue at this modest rate in the Eurozone. It should slow down to some extent, meanwhile, in Japan (+0.4%) and even more so in the United States (+0.3%) where the effects of tighter fiscal policies will be felt.
Marked upturn in the United States and Japan in Q1 2013

The Japanese authorities hit the accelerator

The Japanese economy should benefit from several powerful supporting factors at the start of the year. On the one hand, despite lingering tensions with China, dynamic trade in Asia and the very sharp fall in the Yen since the end of 2012 should boost exports. On top of this, with the new stimulus measures passed in February 2013, fiscal policy should be highly positive for activity.

US fiscal policy tightens...

In contrast, the US economy in H1 2013 is likely to face a marked tightening of fiscal policy. The agreement at the end of December between the President and Congress represents a burden of about 1.6 points of household income, a large part of which came into effect on 1st January 2013 with a 2-point rise in the rate of wage contributions. In March 2013, public consumption should also fall back as the “sequester” come into effect.

... by the American economy holds up

Despite this tightening, US domestic demand and activity should hold up. Companies are likely to profit from an improvement in export prospects and still-favourable lending terms to increase their investment expenditure. Household should gradually slow down their spending in the course of the half, although some factors should contribute to a fall in the savings ratio: on the one hand, part of the rise in the tax burden mainly concerns the highest-income families; on the other, the increase in asset prices should generate some wealth effects.

Diverging paths in the Eurozone in H1 2013

The German powerhouse starts up again

The weak progression in activity in the Eurozone in H1 2013 (+0.1% per quarter) hides some very sharp contrasts within the Eurozone. In Germany, according to the prospects in the business tendency surveys (see graph 3), activity is set to become dynamic once again (+0.5% in Q1 2013 then +0.4% in Q2). The orientation of fiscal policy should remain neutral, but German exports should benefit from the upturn in world trade and companies are likely to invest again. Household consumption should also progress again as purchasing power should continue to be buoyed by the strength of the labour market.

But Spain and Italy still lagging

The upturn in demand from Germany, the US and the emerging economies should buoy up Spanish and Italian exports. In both these countries, the business tendency surveys are also showing signs of optimism (see graph 3). Domestic demand should remain very weak, however. Despite the easing of financial tensions, the financing of private agents still remains difficult in both

3 - Business climate is recovering in Eurozone

Source: DG ECFIN
countries: reduced uncertainty on sovereign debt markets has not been passed on to the bank lending market and lending terms tightened in Q4 2012. Fiscal consolidation efforts should also continue in 2013, although with slightly less intensity than in 2012, especially in Italy. Finally, political uncertainty in Italy in the wake of the elections of 24 and 25 February 2013 may weigh down on agents’ expectations. Activity should therefore continue to fall in Spain and in Italy in H1 2013.

**Upturn in French exports**

Demand for French products should therefore continue to be hit by the weakness of activity in Spain and Italy. It should become a little more dynamic in Q1 2013, however, thanks to the upturn in German and American imports. French exports should therefore accelerate: +0.6% and +0.7% in Q1 and Q2 2013, after -0.6% in Q4 2012.

**France: activity almost stable in H1 2013**

Despite more positive prospects for the foreign environment, the business climate remained poor in February, in industry and services alike, well below its long-term average. In particular, it fell by 3 points in services in February. In industry, however, personal production prospects improved significantly in February 2013.

All in all, activity is set to be sluggish in France in H1 2013 (0.0% in Q1 and +0.1% in Q2). Manufacturing production is likely to fall in Q1 2013 (-0.7%), and again slightly in Q2 2013 (-0.2%). Production of market-sector services excluding commerce should progress only weakly (+0.1% per quarter) while activity in construction should continue to fall significantly (-0.7% in Q1 2013 then -0.6% in Q2). Domestic demand is likely to remain weak through this half of the year. The contribution of foreign trade to growth, however, should be slightly positive (see graph 4).

**The deterioration in the labour market to continue**

Market-sector employment fell back in Q4 2012 in all sectors (-45,000). With the weakness of activity, the labour market situation should continue to deteriorate through to June 2013 and 74,000 jobs should be lost. The return of productivity gains towards their pre-crisis rate, which began at the end of 2011, should weigh down on employment, but the drop in market-sector employment should be eased somewhat by the first effects of the Tax Credit for Competitiveness and Employment (CICE).

**4 - Low growth at the beginning of 2013**

![Graph showing quarterly change in % and contributions in points](source: INSEE)
# General outlook

## Unemployment rate to reach 11.0% in mid-2013

The fall in total employment should be smaller than that in market-sector employment due to the increase in the number of beneficiaries of subsidised jobs, notably the *Emplois d’Avenir* programme, in H1 (+37,000). The rise in unemployment should continue, however: from 10.6% of the active population in Q4 2012 (10.2% in Metropolitan France), the unemployment rate should reach 11.0% in mid-2013 (10.6% in Metropolitan France).

## Temporary upturn in purchasing power at the beginning of 2013

### Inflation at a low level

The high level of unemployment and limited utilisation of production capacities should continue to hold inflationary pressures down, even if the increase in food prices is likely to be driven by the rises in commodity prices since the beginning of 2012. Also, with Brent oil prices stabilising at around $110, energy prices should progress little. All in all, headline inflation should stand at 1.2% in June 2013.

### Earned income to continue slowing down

The progression in wages should be limited as the deterioration of the labour market weighs down on wage negotiations. Also, the fall in inflation in 2012 should gradually work through into wages: nominal wages should slow down and the gains in real wages should be inexistent H1 2013.

## Purchasing power to rebound in H1 2013...

### ... because the amounts of tax paid should fall at the start of the year

The new measures provided by the draft Law on Finances for 2013 induce a rise in the tax burden in 2013 of about 1 point of household income over a year, a figure comparable to that in 2012. But in 2012, tax rises mainly affected household income in H2 of the year, and this should be the case once again in 2013. Therefore, the amounts of tax paid by households in H1 2013 should be less than the amounts paid at the end of 2012 when all the amounts were settled at the end of the year.

## Sluggish household consumption

### Ups and downs in the savings ratio

Households generally tend to smooth out the consequences of such jolts in purchasing power on their consumer spending and the savings ratio therefore experiences ups and downs. In H2 2012, although purchasing power fell, consumer spending continued increasing and the savings ratio lost 0.9 points between Q2 and Q4 to fall to 15.5%. Conversely, the upturn in purchasing power at the start of 2013 should result in an increase in the savings ratio. This is likely to remain limited, however, and the savings ratio should stand at 15.8% in mid-2013, a level that is 0.6 points lower than one year previously, as the tax rises in 2012 and 2013 mainly affect income that is generally saved in the short term.

### Stagnating consumer spending

Household consumption should therefore show much less brutal quarterly changes than purchasing power. With the stricter conditions on the CO2 emissions penalty as of 1st January 2013 and as a backlash after certain purchases that were brought forward to December 2012, spending on automobiles should nevertheless be significantly down in Q1 2013 and the consumption of manufactured products should therefore fall at the start of the year (-0.7%) before levelling out in Q2 (+0.2%). Spending on market services should continue to progress at a modest rate (+0.2%) and, all in all, household consumption should stand still in Q1 2013 (0.0%) then progress slightly in Q2 (+0.1%).

---

**Conjoncture in France**
Investment to fall

Bad times in building
Due to the low level of individual and collective housing starts since the beginning of 2012, investment in building, which had still been progressing at the start of the year, fell back in Q4 2012. This drop should continue in H1 2013 as the upturn in collective housing starts at the end of 2012 should only produce its effects from H2.

Corporate investment set to fall again
Investment by non-financial enterprises should continue to fall in H1 2013 (-0.5% per quarter). The context is unlikely to be conducive to expansion in production capacities: activity prospects are poor and the capacity utilisation rate is falling. The investment ratio of non-financial enterprises should stand at 18.1% in Q2 2013, significantly lower than the peak of 18.9% reached in Q4 2011 (see graph 5).

Uncertainties

Household savings
The forecast supposes that, aside from ups and downs from one quarter to the next, the savings ratio should follow a downwards trend. If ever the unusually great uncertainties surrounding the medium-term prospects in terms of income, due to the crisis, should push households to be more cautious, then household spending and therefore activity in France would be weakened.

US public finances
In the United States, the progression in private demand should be a strong factor in the buoyancy of activity. There are greater uncertainties, however, surrounding the orientation of fiscal policy, notably regarding the implementation of automatic cuts in public spending and negotiations on the debt ceiling scheduled for May 2013.

Oil prices
The forecast is based on the hypothesis of oil prices stabilising around $110 per barrel of Brent. The supply and demand prospects for the start of 2013 may nonetheless lead to a weakening of the oil price. On the one hand, demand should be down due not only to the usual seasonal variations but also to weak demand in Europe. The OPEC countries should also have margin to increase their production.

5 - Business investment rate should continue to decline

Source: INSEE
General outlook

6 - Fan chart for Conjoncture in France

How to read it: the fan chart plots 90% of the likely scenarios around the baseline forecast (red line). The first and darkest band covers the likeliest scenarios around the baseline, which have a combined probability of 10%. The second band, which is a shade lighter, comprises two sub-bands just above and just below the central band. It contains the next most likely scenarios, raising the total probability of the first two bands to 20%. We can repeat the process, moving from the centre outwards and from the darkest band to the lightest, up to a 90% probability (see INSEE Conjoncture in France for June 2008, pages 15 to 18). It can therefore be estimated that the first result published by the quarterly accounts for Q1 2013 has a 50% chance of being between -0.2% (lower limit of the fifth band from the bottom) and +0.2% (upper limit of the fifth band from the top). Likewise, it has a 90% chance of being between -0.5% and +0.5%. In Q2 2013, the 90% confidence intervals is [-0.5% ; +0.6%].

Source: INSEE
## Key figures: France and its international environment

Seasonally adjusted / working-day adjusted data (except for prices), quarterly or annual averages, as a %

### International environment

<table>
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<tbody>
<tr>
<td><strong>Advanced economy GDP</strong></td>
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<td>0.2</td>
<td>0.6</td>
<td>0.4</td>
<td>0.0</td>
<td>0.3</td>
<td>-0.2</td>
<td>0.4</td>
<td>0.2</td>
<td>1.3</td>
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<td><strong>Eurozone GDP</strong></td>
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<td>0.2</td>
<td>0.1</td>
<td>-0.3</td>
<td>-0.1</td>
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<td>-0.6</td>
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<td>1.5</td>
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<td><strong>Barrel of Brent oil (in dollars)</strong></td>
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<td>118</td>
<td>113</td>
<td>109</td>
<td>118</td>
<td>110</td>
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<td><strong>Euro-dollar exchange rate</strong></td>
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<td>1.39</td>
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<td><strong>World demand for French products</strong></td>
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<td>0.3</td>
<td>0.9</td>
<td>-0.6</td>
<td>0.0</td>
<td>0.8</td>
<td>0.3</td>
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<td>0.9</td>
<td>1.0</td>
<td>6.2</td>
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### France - supply and use

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<td><strong>GDP</strong></td>
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<td>0.1</td>
<td>-0.1</td>
<td>-0.1</td>
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<td>-0.3</td>
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<td>1.7</td>
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<td><strong>Imports</strong></td>
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<td>-1.0</td>
<td>0.2</td>
<td>1.4</td>
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<td>0.3</td>
<td>-0.1</td>
<td>0.1</td>
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<td>0.1</td>
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<td>0.4</td>
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<td>0.3</td>
<td>0.3</td>
<td>1.4</td>
<td>-1.0</td>
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<td>-0.7</td>
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<td><strong>of which: NFEs</strong></td>
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<td>-0.3</td>
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<td>1.1</td>
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<td>-0.1</td>
<td>-0.8</td>
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<td>3.2</td>
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<td>0.1</td>
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<td>5.5</td>
<td>2.3</td>
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<td><strong>Contributions (in point)</strong></td>
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<td>0.1</td>
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<td>-0.1</td>
<td>0.0</td>
<td>0.9</td>
<td>0.3</td>
<td>0.1</td>
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<td><strong>Domestic demand excluding change in inventories (</strong>)**</td>
<td>1.2</td>
<td>-0.1</td>
<td>-0.3</td>
<td>-0.9</td>
<td>-0.1</td>
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<td>0.8</td>
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<td><strong>Change in inventories (</strong>)**</td>
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<td>0.1</td>
<td>0.0</td>
<td>0.7</td>
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### France - situation of households

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<tr>
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<tbody>
<tr>
<td><strong>Total employment</strong></td>
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<td>44</td>
<td>-23</td>
<td>5</td>
<td>34</td>
<td>-8</td>
<td>-50</td>
<td>-38</td>
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<tr>
<td><strong>Unemployment rate</strong></td>
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<td>9.1</td>
<td>9.2</td>
<td>9.4</td>
<td>9.6</td>
<td>9.8</td>
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<td>10.6</td>
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<td><strong>Metropolitan France</strong></td>
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<td>9.5</td>
<td>9.6</td>
<td>9.8</td>
<td>10.0</td>
<td>10.2</td>
<td>10.2</td>
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<td>10.8</td>
<td>11.0</td>
<td>9.8</td>
<td>10.6</td>
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<tr>
<td><strong>Core inflation (</strong>)**</td>
<td>2.0</td>
<td>2.1</td>
<td>2.2</td>
<td>2.5</td>
<td>2.3</td>
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<tr>
<td><strong>Household purchasing power</strong></td>
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<td>-0.2</td>
<td>-0.3</td>
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<td>0.6</td>
<td>-0.1</td>
<td>0.5</td>
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</tbody>
</table>

(*) Year on year on the last month of the quarter

(**) Inventory changes include acquisitions net of sales of valuable

How to read it: the volumes are calculated at the previous year’s chain-linked prices, seasonally and working-day adjusted, quarterly and annual averages, as a %.

Source: INSEE
In Q4 2012, activity slipped back by 0.3%, slightly more than forecast in Conjoncture in France in December 2012 (-0.2%). Manufacturing output and activity in construction both declined more than expected. However, energy output and market services output were both higher than forecast, sustained by strong consumption of these products.

Household consumption held up better than anticipated, unlike corporate investment which fell more sharply than expected. Both imports and exports declined significantly, whereas a slight rise was forecast. The contribution of foreign trade to growth was just positive (+0.1 point), where we expected it to be nil. Lastly, the destocking trend forecast in December did indeed take place, but was more marked than expected (contribution of -0.4 point against -0.2 point forecast).

Employment in the non-agricultural market sectors slipped back as forecast (-45,000 jobs against -47,000 expected). Lastly, headline inflation at the end of Q4 2012 stood at +1.3%, close to the anticipated +1.4%.

Our forecast for H1 2013 changes little. On the one hand, the decline in investment should be more marked. On the other hand, foreign trade is likely to sustain activity better than predicted. Activity should therefore remain stable in Q1 2013 (against +0.1% forecast), then progress slightly in Q2, by 0.1% as forecast. Employment forecasts remain unchanged. Lastly, inflation in June 2013 should be slightly lower (+1.2% against +1.4% forecast).

In Q4 2012, activity fell back by 0.3%, slightly more than forecast in December’s Conjoncture in France (-0.2%, see Graph 1). First, manufacturing output dropped more sharply than predicted (-2.3% against -1.5% forecast).

Activity also dropped more sharply than forecast in construction (-0.8% against -0.4% forecast), notably due to the decrease in the amounts devoted to civil engineering. However, energy-water-waste output rose (+0.9%) thanks to the dynamism of energy consumption, whereas as we expected a slight drop (-0.5%).

In market services, activity was also a little more sustained than expected. It was stable in market services excluding trade (-0.1% forecast) thanks to the dynamism of household consumption. In trade, activity fell by 0.3%, as forecast: the slightly more sustained household consumption was offset by a more marked slide in investments and exports. Lastly, the production of non-market services increased by 0.3%, as predicted.

1 - Fan chart for Conjoncture in France for December 2012 and growth achieved

Source: INSEE
In Q4 2012, final domestic demand excluding stocks was stable, as expected. Consumption was stronger than forecast (+0.2% against -0.1%). However, investment fell back sharply more than expected (-1.0% against -0.3% forecast), notably corporate investment.

This drop in investment was one of the downward uncertainties highlighted in Conjoncture in France in December 2012. In that issue, the corporate investment ratio seemed to be relatively high but the business tendency surveys did not indicate a turning point. Investments by non-financial enterprises nonetheless declined by 1.2% in Q4 2012, against -0.3% forecast. Purchases slipped back in all the main categories of manufactured products. Additionally, the fall in investments in manufactured goods in Q3 2012 was revised to -1.2% against -0.3%. Corporate investment in construction also fell back more than anticipated (-0.7% against -0.3% forecast), due to the unexpected decline in civil engineering activity. However, investments in services by non-financial enterprises progressed slightly, as predicted. Lastly, household investment slipped back a little more than in our December scenario: -0.8% against -0.6% forecast.

Conversely, the rise in household consumption was higher than expected. This differential is mainly ascribable to the good showing of manufactured goods consumption (+0.1% against -0.4% forecast). In particular, at the end of the year the dynamic expenditure on durables, notably housing capital goods and automobiles, offset the decline in food consumption. Similarly, expenditure on energy-water-waste rose slightly ( +0.2%) where we expected a decline (-0.7%). Lasty, market services expenditures also grew slightly more than expected (+0.2% against +0.1% forecast), sustained by expenditure on transport services and accommodation and catering services.

Consumption by general government progressed in line with our forecasts (+0.4%, as expected). It has been sustained among other things by healthcare expenditure.

An unexpected decline in trade

While domestic demand remained stable, foreign trade slipped back in Q4 2012, unlike in our December forecast. Exports fell back by 0.6% against the forecast of +0.4%, despite world trade being more dynamic than expected. Trade between emerging countries picked up while those affecting the advanced countries declined. France, and more generally the advanced economies, benefited little from the increase in demand from the emerging countries, and our exports suffered particularly from the drop in imports in European countries and the USA.

In line with declining investments and exports, and with the destocking trend observed at the end of 2012, imports slumped (-0.8% against +0.3% forecast). They dropped in all categories of manufactured goods except for agrifood products. However, energy imports were still sustained.

Lastly, the anticipated destocking trend did occur but was sharper than forecast (contribution of -0.4 point to growth against the predicted -0.2 point). It was particularly extensive in manufactured goods. Conversely, energy stocks increased sharply at the end of 2012.

The fall in employment was correctly forecast

Although activity was slightly weaker than forecast, employment fell back as expected in the non-agricultural market branches. 45,000 jobs were lost in Q4, against -47,000 forecast. Temporary employment held up slightly better than predicted: 9,000 jobs were lost against -19,000 forecast. This drop mainly concerned temporary workers employed in industry. Similarly, industrial employment only declined by 9,000 jobs, against the expected -24,000. Conversely, tertiary employment excluding temporary work fell back significantly (-19,000 jobs) where we expected it to be stable.

Lastly, headline inflation at the end of Q4 2012 was 0.1 point lower than our forecast (+1.3%, against +1.4%). This discrepancy can mainly be explained by the unexpected drop in oil prices (-0.3% against +0.3% forecast). Core inflation stood at +0.7%, as predicted. Services inflation did however climb more than forecast. This rise was offset by a lower than predicted increase in non-seasonal food prices.

Our growth forecast is revised slightly downward for Q1 2013, and remains unchanged for Q2

In Q1 2013, activity should remain stable, whereas we predicted a rise of 0.1%. The forecast is unchanged for Q2 (0.1%).

Our scenario for H1 2013 is that of a gradual stabilisation of manufacturing activity: -0.7% in Q1 then -0.2% in Q2 (against 0.0% each quarter, previously), consistent with the rebound in prospects and in foreign order books according to...
the INSEE business tendency survey of February 2013 (see Graph 2). Businesses should profit from the dynamism of world trade and boost their exports. The production of market services should globally grow in line with our December forecast: 0.0% then +0.1%, against +0.1% per quarter previously. However, the decline in activity in construction has been revised upward in this forecast: -0.7% in Q1 (against -0.6% forecast previously) then -0.6% in Q2 (against -0.5% forecast in December).

On the demand side, household consumption expenditure should be stable in Q1, as forecast, then increase by +0.1% in Q2, against 0.0% in December. But investment is likely to slide more sharply: -0.7% per quarter, against our previous scenario predicting a drop of 0.4% in Q1 then 0.3% in Q2. This downward revision affects investments in both manufactured goods and construction.

In H1 2013, domestic demand should sustain growth slightly less significantly than forecast. However, activity should still be supported by foreign trade and by a slowdown in the destocking trend. In Q1, imports are set to be as dynamic as forecast in December. However they are then likely to suffer due to the fall in investments and hence increase less than expected. Exports should be sustained by the dynamic world demand for French products. All in all the contribution of foreign trade to activity should be nil in Q1 2013, then +0.1 point, whereas we previously predicted it would be nil for the whole of H1. Lastly, the contribution of inventory change to GDP growth should be slightly positive in Q1 (+0.1 point, against 0.0 forecast before) then nil in Q2, as anticipated.

The labour market should remain as gloomy as forecast: over H1 2013 as a whole, the non-agricultural market sectors are set to lose 74,000 jobs against 75,000 forecast previously. Lastly, inflation in June 2013 is likely to be slightly lower than predicted (+1.2% against +1.4% anticipated). Indeed, inflation in manufacturing products was lower than expected, as was food inflation.

2 - Recent changes in output, foreign order books and personal production expectations in manufacturing industry

Source: INSEE, Business tendency surveys
Why did the unemployment rate keep on falling in Germany after 2007?

Today, Germany has apparently achieved almost full employment, with a jobless rate of around 5%. And yet just before the 2008 crisis this rate, just as in France, stood at over 7%. Why has unemployment continued to decline since that time, when in all the other advanced economies it is increasing?

There are five possible explanations for this good performance that are often put forward: unemployment has decreased in Germany because the working-age population is decreasing; because growth is higher, especially thanks to better export competitiveness; because short-time working increased considerably during the crisis; because wages have risen much less than productivity since the second half of the 1990s, and finally, because the labour market has changed profoundly as a result of the Hartz reforms, implemented between 2003 and 2005. In fact, the respective contributions of these five factors to the steady reduction in unemployment are very uneven.

First of all, since 2005, Germany’s active population has grown more rapidly than at the beginning of the 2000s, and almost as much as in France, despite a drop in the working-age population: the economic labour force participation rate has seen a distinct rise, mainly among older people. The fall in unemployment is therefore not Malthusian in origin, even though it is true that the active population of young people and adults has decreased since 2005, which could have influenced recruitment behaviour in some sectors. Thus the fall in unemployment is the result of very dynamic job creation factors, which have persisted since 2009.

The fall in unemployment cannot be explained simply by higher growth in economic activity in Germany. German growth has indeed been higher than growth in France for the last eight years (+1.4% compared with +0.8% on average), but this rate is barely higher than the country’s average at the beginning of the 2000s, a period when the unemployment rate was rising. Moreover, the volume of work in Germany today is very much higher than what was forecast by econometric modelling as a function of economic activity.

Finally, short-time working has certainly increased considerably during the crisis, peaking at 1.5 million workers affected in 2009, or the equivalent of 3% of the active population. However, in 2012, short-time working returned to its pre-crisis level; this may explain why unemployment did not increase much in 2009, however it does not explain why the rate has since moved downwards.
Why did the unemployment rate keep on falling in Germany after 2007?

It would appear that the drop in German unemployment is structural. This is what the evolution in real wages would tend to indicate: since 2005, they have risen by only 2%, while the unemployment rate has been halved. In addition, the job vacancy rate is currently at the same level as at the beginning of the 2000s, when the jobless rate was at 8%.

This fall in the structural unemployment rate appears to have happened mainly before 2005, through wage restraint (from 1996 to 2005, unit wage costs decreased by 2.3%) and the Hartz reforms (especially those applied to providing support and benefits for the jobless). The effective unemployment rate only started to fall when external demand took over from the stagnating domestic demand.

Since 2009, effective unemployment has continued to fall, through a reduction in productivity gains. There are several possible reasons for this reduction: reintegration of less productive employees into work; labour retention, given that labour force will become more scarce in the years to come; in a context that is particularly uncertain for business prospects, companies prefer employment, which can be adjusted more flexibly than capital. In all these instances, this drop in productivity gains has been helped because companies are in good financial health, and more especially because of the moderate cost of capital. The absence of any tensions, either in wages or in vacant jobs, seems to suggest that the effective unemployment rate is now close to its structural level.

This performance on the employment front nevertheless has its downside. It has been achieved in part by the creation of part-time or very part-time jobs, and this has led to increased wage inequalities. In addition, the tightening of conditions for receiving benefits, combined still with a very high proportion of long-term unemployed, has led to a large increase in the poverty rate among the jobless.
Why did the unemployment rate keep on falling in Germany after 2007?

Fact: a very large drop in unemployment in Germany since 2005

A large drop in the unemployment rate in Germany since 2005... It is striking that the 2008-2009 crisis reversed this drop in the unemployment rate in Germany only temporarily. It did indeed increase moderately between Q4 2008 and Q3 2009, but then it decreased considerably once again.

... which was almost uninterrupted in 2008-2009 Overall, the drop in unemployment in Germany since 2005 has benefited both men and women and all age groups (see Graph 2). In contrast, the increase at the beginning of the 2000s was much greater among young people, and spared the older age brackets. Today, the unemployment rate for 15-24 year-olds is markedly higher than the rate for the older age bracket, and the rate for 55-64 year-olds has virtually returned to average levels.

A drop that benefited all categories of age and gender The proportion of long-term unemployed has also fallen (see Graph 3), but less so. This proportion currently stands at about 50%, a particularly high level not only in absolute terms, but especially so for a country with almost full employment. For comparison purposes, in 2006 this proportion was 10% in the United States and 22% in the United Kingdom, when these two countries had full employment. Today, the proportion of long-term unemployed in OECD countries is about one third. This overweighting of the long-term unemployed in Germany can be seen across all age groups.

What is the reason for this drop in the unemployment rate? Why is the unemployment rate in Germany lower in 2012 than in 2007, just before the crisis? There are several explanations that are often put forward. It is suggested that unemployment fell in Germany because the active population decreased, because growth was higher, especially as a result of better external competitiveness, because short-time working increased considerably during the crisis, and finally, because the functioning of the labour market was more

1 - Harmonised unemployment rate since 2000

![Graph 1](image_url)
Why did the unemployment rate keep on falling in Germany after 2007?

favourable to employment. The first three of these explanations probably account for only a very small share of Germany’s performance in terms of unemployment rates: this is discussed in the second and third parts of this report. In the fourth part, the structural factors of the fall in unemployment rates are analysed in detail, and in particular, the part played by wage restraint and the Hartz reforms (see Box 2).

2 - Unemployment rates by age

Scope: German active population from 15 to 64 years

Source: Destatis, Employment Survey

3 - Share of long-term unemployed in total unemployment

Scope: German active population from 15 to 64 years

Source: Destatis, Employment Survey
There are several unemployment rate measurements available for Germany. The first, called «unemployment rate as national concept», is based on the number of job seekers working less than fifteen hours per week and who are registered with the National Employment Agency (Bundesagentur für Arbeit). In December 2012, this unemployment rate stood at 6.8%. A second measurement is the «ILO» method, according to the standardised definition by the International Labour Office: this is the one used in this document, as international comparisons are easier to make. As in France, two measurements are used by the Federal Statistics Office Destatis to calculate employment:

- The first is based, like the ILO unemployment rate, on the German equivalent of the French employment survey, (Labour Force Survey, LFS, or Employment survey).
- The second is calculated in the framework of national accounting from over 50 different sources, including employee contributions and data from the Federal Employment Agency. These series of employment data differ substantially: in 2012, there were 40.0 million people in work according to the LFS, and 41.6 according to the national accounting, the difference between the two being 1.6 million. This gap has been reduced in recent years: in 2005 it was 2.3 million.

The first two parts of this report focus on the LFS data, the only data from which labour force participation rates can be calculated by age and by gender. The section on employment, on the other hand, uses data from national accounting, firstly because the series are broken down by branch, and secondly because they are more appropriate for analysing productivity, since they are created in conjunction with production data.

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**Box 1: Measuring employment and unemployment: available data**

- There are several unemployment rate measurements available for Germany. The first, called «unemployment rate as national concept», is based on the number of job seekers working less than fifteen hours per week and who are registered with the National Employment Agency (Bundesagentur für Arbeit). In December 2012, this unemployment rate stood at 6.8%. A second measurement is the «ILO» method, according to the standardised definition by the International Labour Office: this is the one used in this document, as international comparisons are easier to make. As in France, two measurements are used by the Federal Statistics Office Destatis to calculate employment:
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**Box 2: Labour market reforms in Germany**

The German labour market has experienced some major reforms which profoundly modified the way it functions from 2003 onwards. During the 2008 crisis, a certain number of exceptional measures were implemented.

1. Reforms started before 2008

Reforms to the labour market in Germany have been many and varied. They started in 2003 in Chancellor Gerhard Schröder’s government. Commissioned by the government, Peter Hartz, who was at that time a member of the board of the carmaker Volkswagen, submitted a report which gave rise to a series of reforms of active labour market policies. These measures are described in detail in the report by the Commission of economic analysis (Kramarz et al., 2012) and are presented here briefly.

These reforms had three different goals. The first was to make better matches between job offers and applications. The second concerns activating jobseekers according to the principle of “providing support and making demands” (Fördern and Fordern). The third was to increase the demand for labour by reducing labour costs (Jacobi and Klueve, 2007).

**Hartz I**

Relaxing the anti-redundancy regulations, tightening conditions of access to the unemployment benefit system, support for vocational further education and strengthening temporary employment were the main measures of this first labour market reform. This first part came into force on 1st January 2003.

**Hartz II**

On 1st April 2003, the second wave of Hartz reforms came into force. One of the most important measures was the creation of a single “gateway” for the unemployed, the job-center, through cooperation between the Federal Employment Agency and the social funds. Enterprise creation procedures were relaxed, especially for the unemployed. The simplification of the administrative procedures for certain insecure jobs also formed part of these Hartz II reforms. Mini-jobs and midi-jobs were created.

Mini-jobs are poorly paid, exempt from social contributions and taxes for the employee, but taxed at 27% for the employer. The exemptions from social contributions resulted in reduced social entitlements for the employees (which is not the case France). The vast majority (96%) are limited to 400 Euros per month.3 The other jobs called midi-job can exceed this monthly ceiling, but must last less than two consecutive months if they are for 5 days a week, or if not, less than 50 days in one year. This represented 222,000 student jobs or extra jobs for 57,000 people in 2011.3

In practice, mini-jobs already existed before 2003, but these were only jobs that consisted of less than 15 hours per week and which were paid less than 325 Euros per month (and on condition that they were a main job). Midi-jobs are jobs that are paid between 401 and 800 Euros per month, with a decreasing scale of exemption from social contributions with the salary level. They provide a solution for continuity between mini-jobs and standard jobs.

**Hartz III**

The National Employment Agency and the federal employment agencies were restructured in the third part of the Hartz reforms (1st January 2004).

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1. This measure was suspended recently because it was too costly.
2. Since 1st January 2013, they are limited to 450 Euros per month.
3. These jobs should not be carried out professionally.
Why did the unemployment rate keep on falling in Germany after 2007?

**Hartz IV**

Social benefits, especially for the unemployed, were modified extensively with the Hartz IV reform, which came into force on 1st January 2005.

First, unemployment insurance was tightened, not only in terms of the eligibility criteria (people now had to have contributed for twelve months in the last two years, compared with three years previously) but also for the maximum duration of payments (reduced from 32 to 18 months for older people aged over 55 and from 26 to 12 months for the others). Also, anyone unemployed for more than twelve months now fell under the Arbeitlosengeld II (or Alge II) regime and was obliged to accept a job (concept of zumutbar or «any job is acceptable»), even if it did not correspond to the person’s qualifications or if it was located far from his home.

In addition, payments were no longer proportional to previous wages, but instead were a flat-rate benefit, calculated according to need, and subjected to means testing using a «criterion of need», the Bedürftigkeit. Thus if a person’s means and assets (property or goods) were above a certain threshold then aid was cut. Jobseekers could however combine this allowance with income from work, within certain limits. The Hartz IV reform notably created assisted contracts, where the employer paid between one and two Euros per hour (ein-euro-Job), for a few hours of work a week and this income could be cumulated with the unemployment benefit. The ein-euro-job replaced a similar measure, Hilfe zur arbeit, which before 2005 was managed by the municipalities. The increase in employment as a result of the ein-euro-jobs was, at the most, 200,000 jobs more than in 2004 (Hohmeyer and Wolff, 2006) and mainly in the non-market sector. In his assessment of the measure, Hohmeyer (2009) concluded that the programme was rather ineffective with regard to jobseeker employability, and that it even had a lock-in effect for anyone who stayed in this type of job for any length of time.

**Pension reforms**

Alongside the Hartz reforms, Germany also put in place major reforms of the pension system. In particular, these announced the end of early retirement and a gradual increase in the full rate retirement age from 60 to 67.

2. Measures implemented during the 2008 crisis

**Short-time working**

The aim of this measure was to retain the potential of qualified labour while at the same time not penalising businesses during the crisis. Avoiding redundancies and getting quickly back to work if necessary are two key issues in short-time working. The percentage of employees affected by short-time working (Kurzarbeit) increased from less than 0.5% in 2007 to more than 3.5% in Q2 2009 before returning to its original level in Q3 2010 (Fréhaut, 2012). In 2009, about 15 million German employees had experienced an episode of Kurzarbeit.

**Local employment agreements**

Pre-dating crisis coalitions, defensive co-management of the restructuring of export sectors such as manufacturing industries ensured that company competitiveness could be preserved.

During the crisis, more and more of these local agreements were drawn up, often including long-term wage restraint clauses in exchange for job guarantees. These local agreements were for a fixed duration and came with guarantees such as no redundancies for 6 years and the inclusion of apprentices, who were more exposed than other workers to the risk of unemployment (Hege, 2012). They were strictly controlled by the trade unions who could impose financial sanctions on a company that did not respect the guarantees.

**Other instruments**

Some other instruments were used for internal flexibility. To cope with the decline in activity, «time savings» accounts were closed and overtime was ended. For example, the winding down of time savings accounts accounted for approximately 21% of the reduction in hours worked per capita in 2009 (Ziemann, 2010).
Despite the decline in the total population, the active population has increased almost as much as in France since 2005.

The demographics of Germany differ somewhat from those of France since the total population is decreasing. Does this situation favour a «Malthusian» drop in unemployment? The answer would seem to be no. On the one hand, economic theory suggests that demographic changes have at best a transitory effect on the unemployment rate (see Box 3). On the other hand, while the total German population declines, the active population continues to increase (see Table), sustained mainly by policies introduced since the beginning of the 2000s.

From 2005 to 2012, the working-age population in Germany (15-64 year-olds) fell by almost one million (see Table). This decline, which began at the end of the 1990s, concerns mainly the youngest age brackets (15-24 year-olds and 25-54 year-olds) whereas the 55-64 year-old population continues to increase.

Despite this drop in the working-age population, the active population, on the other hand, continues to grow: after virtual stability from 2000 to 2004, the German active population increased by 4.0% between 2004 and 2012 while in France it increased by 4.7%. Most of this increase in Germany occurred in three years (2005, 2006 and 2011), whereas it was much more regular in France (see Graph 4). Whatever the case may be, it is difficult to put a share of the drop in unemployment in Germany down to changes in the active population.

The continued rise in the labour force participation rate cannot be accounted for by the composition of the active population.

The labour force participation rate has increased substantially in Germany in the last six years: it settled at 77.0% of 15-64 year-olds in 2012 or 3.3 percentage points more than in 2005. This rise may be affected by the ageing of the active population, to the extent that the influence of the youngest age groups, who are also the least active, automatically decreases. To neutralise this effect, a «constant structure labour force participation rate» has to be constructed, a non-weighted mean of labour force participation rates by age, which thus eliminates the demographic effects of relative change in the size of the age groups.

This constant structure labour force participation rate, or apparent labour force participation rate, has increased by 2.8 points since 2005, in other words scarcely less than the labour force participation rate (see Graph 5). Thus the composition of the population accounts to a very small degree for the increase in the labour force participation rate in Germany. It should also be noted that the proportion of 55-64 year-olds in the working-age population is no higher today.

### Population change between 2005 and 2012 (p)

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<th>Women</th>
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<tr>
<td></td>
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<tr>
<td></td>
<td>Total Active</td>
<td>Employment</td>
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<tr>
<td>15 to 24 years</td>
<td>-384 -197 23</td>
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<td>25 to 54 years</td>
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<td>55 to 64 years</td>
<td>387 849 962</td>
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<tr>
<td>Total of 15 to 64 years</td>
<td>-442 128</td>
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</tr>
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</table>

How to read it: From 2005 to 2012, a further 1.025 million women aged between 55 and 64 participated in the labour market.

(p) : provisional data, authors’ calculations

Source: Destatis, Employment Survey

March 2013
Why did the unemployment rate keep on falling in Germany after 2007?

than it was in 2000. Population ageing has affected Germany since the 1990s, as a result of the first baby-boom in 1935. In symmetry with this, the proportion of 15-24 year-olds in the working age population is no smaller today than it was in 2000. This is because the birth rate rose in the 1980s, before falling in the 1990s.

The growth in the labour force participation rate overall in Germany is associated to a large extent with that of the labour force participation rate among 55-64 year-olds (see Graphs 6 and 7). Older people are working longer and longer in Germany and the number of people aged 55 to 64 in employment or unemployed, proportional to the total number of people of the same age, is increasing more and more. Thus in 2012, 1.8 million more older people were active than in 2005, whereas the total active population had increased by only 1.1 million.

The labour force participation rate among 55-64 year-olds has increased considerably...

4 - Population and labor force in France and Germany

5 - Rate and proportion of age groups in the population

[p] : provisional data, authors' calculations

Source: Destatis, Employment Survey

How to read it: The proportion of young people in the active population grew from 16% to 18% between 2000 and 2005, before decreasing through to 2012 and settling at 17%.

The apparent labour force participation rate is calculated by dividing the working-age population into 5-year age brackets.

[p]: provisional data, authors’ calculations.

Source: Destatis, Employment Survey
Women’s activity has increased more than that of men, due to a catch-up effect (see Graph 6). This increase is particularly marked among women over 55. It is notable among women aged 25 to 54, whereas the labour force participation rate for men in this age bracket has stabilised (see Graph 7). While the number of women of working age decreased by almost half a million between 2005 and 2011, the number of women in activity increased by almost a million.

While the German population has been declining for several years, the active population (in employment or unemployed) continues to increase, due to the growth in the labour force participation rate of older people and women. What are the factors that account for this phenomenon?

The various reforms put in place between 2003 and 2005 (see Box 2) have certainly helped to increase the active population. By reducing labour costs for some types of employment, certain measures (Hartz II) have encouraged the creation of jobs that are very part-time. This has probably contributed to the increase in activity among women.

**Why did the unemployment rate keep on falling in Germany after 2007?**

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**Graph 6 - Participation rate of women by age**

(\(p\)) : provisional data, authors' calculations

Source: Destatis, Employment Survey

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**Graph 7 - Participation rate of men by age**

(\(p\)) : provisional data, authors' calculations

Source: Destatis, Employment Survey
Why did the unemployment rate keep on falling in Germany after 2007?

The end of early retirement has probably kept older people in activity when they would previously have become inactive. At the same time, the different retirement reforms have pushed back the age at which people draw their pensions. Thus the effective mean age of retirement increased by one year between 2000 and 2010, from 62.5 years old to 63.5 years old. Although difficult to quantify, the reduction in the duration of unemployment insurance (Hartz IV), in particular the shortening of the duration of unemployment insurance benefit for older people from 32 months to a maximum of 18 months, certainly also contributed to increasing the active population.

In addition, the change in unemployment insurance and benefit regimes as a result of the Hartz IV reform (see Box 2) increased the number of people considered as capable of working. This change in regime effectively reduced the number of social welfare beneficiaries who are not obliged to work. Anyone with the physical capacity to work three hours per day, is declared capable of working and is then obliged to accept a job, as «all jobs are acceptable» (Bourgeois, 2004).

Box 3: Does a drop in the active population automatically lead to a drop in unemployment?

It is commonly believed that a slowdown in the active population, and especially a drop in numbers, are factors that will bring about a drop in unemployment. It would then be easier to "provide jobs for everyone". In fact most analyses, both empirical and theoretical, conclude that it has only a very partial effect, which is in any case only transient.

Strictly speaking, there are no empirical assessments of the impact that a stabilisation of the active population would have on the unemployment rate. A slowdown in the active population is usually spread over a decade or even longer, which makes it difficult to identify its effects. However, there are several well-established facts that can be applied to contradict the idea that in this context unemployment decreases automatically. First of all, there is a large amount of literature on the impact of sudden migration influxes on the unemployment rate. For example, Card (1990) analysed the arrival of Cuban refugees in Miami in 1980; Hunt (1992) looked into repatriates from Algeria in the 1960s; Angrist and Kugler (2001) studied the impact of refugees from Kosovo in the 1990s. Each of these studies concluded that a sudden increase in the active population had little impact on unemployment figures. Next, there is absolutely no correlation between active population growth and the unemployment rate in OECD countries (see Graph).

The main theoretical models of the labour market run counter to the Malthusian notion, according to which a demographic slowdown reduces the rate of unemployment. Eventually, this rate is determined by how effectively the labour market is working, or even, according to different models, by underlying productivity gains, the total tax burden as it affects the labour factor and the real cost of capital.
Why did the unemployment rate keep on falling in Germany after 2007?

Certainly in the very short term, a reduction in the size of labour market entry cohorts may lead to a reduction in the employment rate. But at best this has only a transient effect. This drop in unemployment in fact leads to an increase in employees’ bargaining power, and hence to an increase in the cost of labour. This then reduces the demand for labour, and, all other things being equal, brings the unemployment rate back to its original level. The more quickly the repercussions for wages of a drop in unemployment take effect, the shorter the duration of this transient phase and the smaller the drop in the unemployment rate: Cahuc and Zylberberg (2001) believe that, after considering the time delays observed in French macroeconomic data, the drop in the unemployment rate following a sudden stabilisation of the active population should fade within 5 years. If this stabilisation occurs gradually, over a ten-year period, then the impact on the unemployment rate seems negligible if wages do indeed react to this drop in unemployment. Nevertheless, if for different reasons, upward pressures do not affect wages, as seems to be the case in Germany, a Malthusian effect on the employment rate could last longer.

In practice, as the working-age population stabilises it usually ages at the same time (even if, as we have seen, this is not the case in Germany since the 2000s). This happens as the size of the exiting cohorts increases and/or the size of the entry cohorts decreases. Independently of the slowdown in the active population, the impact of ageing on the unemployment rate is ambiguous, as theories about its effects are divided (Domingues Dos Santos, 2001).

On the one hand, a reduction in the flow of new entrants into the job market means that the efficiency of the process of matching people to jobs can be improved. This process is by definition most difficult for first time entrants. It may also result in an increase in productivity, which may in turn lead to a drop in unemployment if wages are not perfectly indexed.

On the other hand, the ageing of the active population may also increase the unemployment rate, via different channels. Ageing may lead to the cost of labour increasing more rapidly than productivity, if pay is related to length of service (Aubert and Crépon, 2004). Also, the ageing of the population may have a negative influence on the very efficiency of the matching process, if an older active population is less adaptable to technological and organisational innovation. Finally, if ageing results in an increase in the cost of labour in order to finance, for example, financial requirements linked with the increasing active/inactive imbalance, then this may lead to an increase in unemployment (Ouvrard, Rathelot and Simon, 2008).

8 - Business growth and employment

![Graph showing overall employment and GDP from 1991 to 2012](source: Destatis, quarterly accounts)
Why did the unemployment rate keep on falling in Germany after 2007?

The two faces of job creation: the resilience of activity and the slowdown in productivity since 2008

Employment has increased strongly and almost continuously since 2005

The volume of employment in Germany has increased substantially since the beginning of 2005 (2.7 million extra jobs), whereas it had previously stagnated: at the beginning of 2005 it was at the same level as at the beginning of 2000, which was also the same level as in 1991 (see Chagny 2008), for an analysis of developments in the labour market in Germany since 1990). Over the last eight years, this increase has been interrupted only in the second and third quarters of 2009. This creation of jobs has been sustained by activity: mean growth has been 1.4% since the beginning of 2005, compared with 0.8% in France. However, while job creations in Germany have been twice as dynamic over this period as in the eight previous years, growth has been identical (see Graph 8). Remarkably, job creation has been much more dynamic than activity would have led one to expect.

The creation of mini- and midi-jobs had an impact especially before 2005

These job creations came about at a time when the functioning of the German labour market was being changed (see Box 2) and underwent structural transformations. The number of mini-jobs and midi-jobs currently stands at 7.8 million and 1.4 million respectively (see Graph 9). These jobs therefore represent a substantial proportion of private paid employment (28.1 million).

9 - Distribution of employment by category in 2012

Data on 30 June, 2012
Graph published on Körner et al., 2013
Source: Bundesagentur für Arbeit
Why did the unemployment rate keep on falling in Germany after 2007?

Before 2003, there were already 4.4 million mini-jobs, according to data from the German employment agency. The increase in the number of mini-jobs since 2003 has happened in two stages (see Graph 10). In 2003 and 2004, it concerned main jobs as well as secondary jobs. Salaried workers aged 25 to 54 were the most affected (see Graph 11). Since that date, the increase has affected only secondary jobs, and this time it was salaried workers aged 55 to 64 who were the most concerned.

The impact of mini-jobs on the volume of employment was not equivalent to the number of mini-jobs as principal jobs (Eichmorst et al., 2012). In addition, these jobs were able to substitute for standard part-time jobs. The same reasoning could be applied to the midi-jobs. Micro-econometric assessments (Jacobi and Kluve, 2007) have been unable to estimate the impact of these measures on employment, as these substitution effects are not corrected.

The growth in these kinds of jobs, and more generally the series of reforms to the labour market, go hand in hand with an increase in inequalities. Whereas in 2000, the median net income represented 1.7 times the net income of the first

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**10 - Number of mini-jobbers**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>3.5 million</td>
</tr>
<tr>
<td>2001</td>
<td>4.0 million</td>
</tr>
<tr>
<td>2002</td>
<td>4.5 million</td>
</tr>
<tr>
<td>2003</td>
<td>5.0 million</td>
</tr>
<tr>
<td>2004</td>
<td>5.5 million</td>
</tr>
<tr>
<td>2005</td>
<td>6.0 million</td>
</tr>
<tr>
<td>2006</td>
<td>6.5 million</td>
</tr>
<tr>
<td>2007</td>
<td>7.0 million</td>
</tr>
<tr>
<td>2008</td>
<td>7.5 million</td>
</tr>
<tr>
<td>2009</td>
<td>8.0 million</td>
</tr>
<tr>
<td>2010</td>
<td>8.5 million</td>
</tr>
<tr>
<td>2011</td>
<td>9.0 million</td>
</tr>
<tr>
<td>2012</td>
<td>9.5 million</td>
</tr>
</tbody>
</table>

*Source: Bundesagentur für Arbeit*

**11 - Number of mini-jobbers paid little by age**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 24 years</td>
<td>0.2 million</td>
</tr>
<tr>
<td>25–54 years</td>
<td>0.6 million</td>
</tr>
<tr>
<td>55–64 years</td>
<td>1.0 million</td>
</tr>
<tr>
<td>65 years and older</td>
<td>1.4 million</td>
</tr>
</tbody>
</table>

*Source: Bundesagentur für Arbeit*
decile of income distribution, in 2011, this ratio had risen to 1.85 (DIW Berlin, SOEP). This increase in income inequalities concerns both the unemployed and those in work. The proportion of unemployed whose standard of living is lower than the poverty line rose from 41% in 2005 to 68% in 2011 (Eurostat). It is difficult to distinguish the global increase in income inequalities for salaried workers, as there is no data covering employment as a whole. Nevertheless, for people with a full-time job, the ratio between the median of net wages and the first decile increased from 1.48 in 2000 to 1.59 in 2010. Moreover, the number of part-time workers has increased considerably: the employment survey estimated that between 2000 and 2011 there had been an increase of 1.1 million.

In order to understand the major increase in employment since 2005, it is better to model the number of hours worked, which is a better reflection of the quantity of work used in the economy. It has also increased substantially since 2005, even though, in the long term, the number of hours worked per capita in Germany has fallen (see Graph 12), as they have in most industrialised countries.

In 2008-2009, it was the number of hours worked per capita, rather than employment, which played an important buffer role. Numbers did indeed fall drastically: on the one hand, the short-time working system was widely used by German industrial companies, and on the other, these companies applied internal flexibility where possible (see Box 2).

However, this movement was only temporary and from 2011 onwards, the number of hours worked per capita has resumed its original trend. For example, the use of short-time working, which had reached a peak of 1.5 million in 2009, returned to its lowest point by the end of 2012, of around 70,000. This flexibility in hours worked does not therefore account for the steady drop in the level of unemployment.

To estimate the contribution of the growth of economic activity to changes in the total number of hours worked in recent years, it is useful to apply econometric modelling which describes the productivity cycle, i.e. adjusting the quantity of work to the activity (see Box 4). In the long term the volume of hours worked depends on underlying activity trends and gains in productivity and also the cost of labour. There is a certain time lag in adjusting to this trend, which gives rise to short-term fluctuations, called the «productivity cycle».

**Econometric modelling of hours worked indicates...**

**Major adjustment to hours worked per capita in 2009...**

**... but the drop was only temporary, which does not explain the persistent dynamism of the employment figures**

**Graph 12 - Hours worked per head in Germany**

*Source: Destatis, INSEE*
Why did the unemployment rate keep on falling in Germany after 2007?

Firstly, the hourly productivity observed today is much lower than the simulation by the model (see Graph 13). This therefore indicates either a temporary surplus of hours worked, or a break in the rhythm of the productivity trend. Thus employment was maintained and unemployment was reduced in Germany not only because of the relatively good level of activity since 2005, but also because employment showed a stronger resistance than expected in the period of crisis.

The evolution in productivity and hence the adjustment of the number of hours worked up to and including 2008 are described relatively well in the model (see Graph 14). In 2006 and 2007, apparent productivity was significantly higher than the long-term trend. Given the acceleration in activity during these years, companies chose to limit recruitment by using available productivity margins with the staff already in place, which stimulated workers’ apparent productivity, including in hourly terms (Burda and Hunt, 2011). This is «normal» behaviour for companies in a period of positive demand shocks. The drop in hourly productivity in 2008 was a mirror image of the earlier behaviour: when activity drops suddenly, employment adjustment is lessened.
Why did the unemployment rate keep on falling in Germany after 2007?

Box 4: Equations for hours worked

1. Modelling hours worked for the entire economy

The employment equation used for Germany models the relationship between hours worked by everyone in employment (employees or free-lance), in all sectors, and a standard set of explanatory variables: gross domestic product, the real hourly cost of wages and a time trend, representative of underlying productivity gains. This is an error correction model, which describes short-term adjustment to a target long-term adjustment. Data were available from 1991 and the start of the estimation period was in Q4 1994. It was decided to stop at Q4 2008, in order not to include the crisis years. The usual tests were carried out (Dickey-Fuller, Elliott-Rothenberg-Stock and Kwiatkowski-Phillips-Schmidt-Shin) with the result that the series were considered to be non-stationary, even though the small number of observations did not allow for a very clear-cut conclusion. Since there were relatively few observations, it was decided that a one-step estimate would be preferable. The long term and the short term were therefore estimated simultaneously, but the non-stationarity of the series was taken into account to test the significance of the error correction term.1

The estimated equation was as follows:

\[ \Delta \text{heures}_\text{trav} = 1.3 - 0.4*(\text{heures}_\text{trav}_{t-1} - \text{pib}_{t-1}) - 0.05*\text{csphr}_{t-1} - 0.3*\text{Eff} + 0.5*\Delta \text{pib} \]

Values from the Student’s t-tests are in brackets.
(c): coefficient constraint

The significance of the error correction term, tested with tables used by Ericsson and MacKinnon (2002), was accepted at a threshold of 10% and would be accepted at a threshold of 0.1% if the series were stationary. Variables in lower case letters refer to logarithms:

- \text{heures}_\text{trav} is hours worked calculated from German national accounts,
- \text{pib} is the German GDP,
- \text{csphr} is the real cost of labour per hour worked,
- \text{Eff} is hourly underlying productivity gains. These are estimated at 0.4% per quarter, or 1.6% per year.

The equation for the long term is therefore:

\[ \text{heures}_\text{trav} = 3.4 + \text{pib} - 0.12*\text{csphr} - 0.88*\text{Eff} \]

The sum of the coefficients that correspond to the cost of labour and efficiency is constrained to -1.

This relationship can also be written as an equation of productivity:

\[ \text{pib-heures}_\text{trav} = - 3.4 + 0.12*\text{csphr} + 0.88*\text{Eff} \]

2. Long-term behaviour in the manufacturing sector and market services

Manufacturing sector

The same procedure was used to model employment in industry.

The equation, estimated from the beginning of 1992 to the end of 2005, is as follows:

\[ \Delta \text{heures}_\text{trav}_\text{manuf} = 1.1 - 0.3*(\text{heures}_\text{trav}_{t-1} - \text{va}_\text{manuf}_{t-1}) - 0.2%*\text{Trend} - 0.3*\Delta \text{heures}_\text{trav}_\text{manuf}_{t-1} + 0.3*\Delta \text{va}_\text{manuf} \]

where:

- \text{heures}_\text{trav}_\text{manuf} is hours worked in the manufacturing industry
- \text{va}_\text{manuf} is value added in the manufacturing industry
- \text{Trend} is productivity, modelled by a trend estimated by the model (productivity gains are estimated at 0.7% per quarter, or 2.8% per year).

Hence the corresponding equation for the long term:

\[ \text{heures}_\text{trav}_\text{manuf} = 3.5 + \text{va}_\text{manuf} - 0.7%*\text{Trend} \]

Market services

Regarding services, the estimate from an employment equation on the model of the total employment or manufacturing employment equation was not conclusive, as the usual tests (Ericsson and MacKinnon, 2002) rejected the significance of the error correction term.1

On the other hand, hourly productivity should have picked up from 2009. However, it has gradually become separated from productivity as simulated in the equation. Thus it was from this date that behaviours appeared that were different from what was expected, and hence there were «extra» jobs, estimated at over 5%.

Changes in productivity differ greatly depending on the sectors of activity (see Graphs 14 and 15). While there was a very marked short-term dip in 2008 in the evolution of productivity in the manufacturing sector (the drop from the end of 2007 to the beginning of 2009 reached 30%), there was only a slight levelling off of productivity in market services.

To examine employment behaviour in more detail in each branch, an equation for employment in hours worked has been modelled for the manufacturing sector, based on the model of the equation for all employment (see Box 4). No statistically satisfactory model was obtained for the services sector; however, examining the changes in productivity in this sector in relation to its trend over the last twenty years is already very informative.

Extra employment in industry since 2010...

If we compare the changes observed and simulated for employment in the manufacturing sector (see Graph 14) we see first of all that when activity accelerated in 2006-2007, apparent productivity in the sector was higher than that in the model simulation. In this period of strong growth, the number of hours worked increased less dynamically than had been predicted. As across the entire economy, at the time of the marked slowdown in 2008 and 2009, apparent productivity came back into line with the expected trends in the economic cycle. From 2010, on the other hand, hourly apparent productivity has been significantly lower than simulated productivity. This differential stabilised in 2011 and 2012, with a rise in manufacturing employment of about 6%.

Extra employment in industry since 2010...

In the market service sector, the scale of mismatches with long-term trends also seems to be considerable. Between 1992 and 2009, it appeared that fluctuations in apparent hourly productivity in services around the long-term trend were limited and of only short duration. In particular, the levelling off of productivity from 2003 to 2005, which could be linked to the implementation of the Hartz reforms, was absorbed by the rebound in productivity in 2006-2007. Since 2009 on the other hand, there seems to have been a persistent downward drift. Apparent productivity gains are low and employment in services is about 5% higher than it would be if productivity had followed the trend (see Graph 15).

... and also in market services since 2009

15 - Hourly productivity observed in the market services sector

* The trend in productivity is estimated over the period 1992 to 2007
Source: Destatis, INSEE
Why did the unemployment rate keep on falling in Germany after 2007?

The interruption in apparent productivity gains contributes to the drop in unemployment in the short term...

... but not necessarily to a «structural» drop in unemployment

If we look at the behaviour of hours worked in Germany, this shows that hourly apparent productivity in industry is currently lower than expected, as it is in the services sector. This «enrichment of employment growth» has contributed, all else being equal, to maintaining a good level of employment and thus to the drop in unemployment over the recent period.

There are two questions to ask here: is this break sustainable and if so, to what extent does it have an effect on the «structural» unemployment rate, which is sustainable in the long term? Counter-intuitively, while a drop in productivity gains can cause a drop in unemployment in the short term, it apparently does not contribute to bringing about a drop in the structural unemployment rate. It may, on the contrary, help increase it if wages are not perfectly aligned with productivity. In fact, in the short term a slowdown in productivity represents, for a given volume of activity, an increase in the demand for work, which thus reduces unemployment and increases workers’ bargaining power. The acceleration of real wage growth, which is all the stronger when wages are not closely indexed to productivity, results in turn in a reduction in the demand for labour, so that the unemployment rate returns, at best, to its original level.

A slowdown in productivity may, on the other hand, result in a drop in the structural unemployment rate, if the reason is not reduced productivity gains for workers in employment, but rather due to the composition of the active population, with an increased proportion of the least productive workers, who were previously unemployed. This is what happened in France, for example, in the 1990s with the easing of social contributions on low wages, which resulted in an «enrichment in employment growth».

In the case of Germany, one can imagine that the interruption in productivity was a result of the effects of the Hartz reforms, especially in services. These reforms reduced contributions on low wages (with notably the creation of mini-jobs and midi-jobs) and encouraged less productive people to join the labour market, especially the service sector. The apparent interruption in productivity would then be due to an alteration in the composition of the workforce. It would then be sustainable at that level and would be the result of a drop in structural unemployment.

Another explanation for the weak productivity gains could be the concerns of German companies in the light of the supposed growing scarcity of labour, linked with the drop in the working-age population, and which will probably accelerate in years to come. This probably encouraged companies to retain a higher volume of employment, to the detriment of productivity. The low level of investment in capital goods in Germany since the beginning of the crisis (the investment rate has fallen 1.4 percentage points since 2008, compared with 0.4 points in France) is coherent with the hypothesis of a change, albeit temporary, in the structure of production, in favour of the labour factor. This may have been caused by the particularly great uncertainty surrounding business prospects, given the prolonged crisis in the Euro zone.

(2) See for example the study by McKinsey (2008), forecasting for 2020 a deficit of 6.1 million people in the labour market
It is likely that the drop in structural unemployment preceded the drop in unemployment

In the short term and for whatever reason, the interruption in the apparent gain in productivity, all things being equal, contributed to the continued decline in unemployment in Germany during the crisis. On the face of it, however, it had no favourable causal effect on long-term unemployment. In this part we try to determine any indications of a drop in long-term unemployment in Germany, and identify the causes.

The aim of the reforms implemented in Germany was to «activate» the unemployed more, by making the conditions for access to unemployment benefit more strict and by considering that any job could be deemed acceptable for the long-term unemployed, regardless of the qualification required or the location. The aim was also to improve support for job seekers, through a reform of the Public Employment Service. It was hoped that these policies would to accelerate «matches» on the labour market, between jobs and workers.4

In the absence of structural changes in the labour market, macroeconomic theory suggests that a stable decreasing relationship exists between the number of vacant jobs and the number of unemployed. This relationship is called the Beveridge curve (see Graph 16). If the curve shifts to the right, this is synonymous with a deterioration in the functioning of the labour market: for the same rate of vacant jobs, the unemployment rate is higher. Conversely, a shift to the left indicates a better match between the unemployed and vacant jobs, and hence a labour market that is functioning more efficiently.

Analysis of the curve raises the following points:

- the implementation of the Hartz reforms at the beginning of 2003 seems to have had an immediate effect, with vacant jobs decreasing by a third during the year 2003, while the unemployment rate increased hardly at all, - conversely, in 2004, we observe a large increase in the number of unemployed, while the number of vacant jobs remained stable, - finally, from the beginning of 2007 to mid-2008,

(4) With no guarantee that these matches will be of better quality, if insufficient time is spent looking for a job

**Greater fluidity in the labour market**

16 - Beveridge curve

How to read it: The rate of vacant jobs is calculated by dividing the number of vacant jobs by the sum of total employment and vacant jobs.

Sources:
- vacancy employment: Bundesagentur für Arbeit, désaisonnalisatoin Bundesbank
- total employment: quarterly accounts
- unemployment rate: Destatis, employment survey
Why did the unemployment rate keep on falling in Germany after 2007?

Box 5: Wages equation

The equation presented here models the cost of labour, derived from the national accounts. It can be calculated per capita or per hour worked, depending on whether the payroll is divided according to paid employment or the total number of hours worked by the employees. The wage costs are real after division by the value added deflator.

To measure the impact of employers’ contributions and wage costs, the concept of the « tax wedge » was used. This corresponds to the ratio between the payroll and wages net of contributions and wage tax. Two comments on its evolution over ten years (see Graph):

● The creation of mini-jobs and midi-jobs at the beginning of 2003 led to a reduction of the tax wedge, as these new jobs were taxed considerably less than standard jobs;
● In 2007, the drop in contributions by 2 points was compensated by a strong increase in the wage tax, such that its downward impact on the tax wedge is barely discernible.

The equation presented here models the cost of labour. Given the relatively short estimation period (1992-2004), long-term and short-term relations are estimated simultaneously.

The model, estimated in one step, is as follows:

$$\Delta \text{cspt} = 4.3 - 0.5 \times (\text{cspt}_{t-1} - \text{def}_{\text{conso}}(t-1)) - 0.05 \times \text{Chômage}_{t-1} + 0.12 \times \text{cfst}_{t-1} + 0.04 \% \times \text{Trend} + 0.2 \times \Delta \text{cfst} - 0.2 \times \Delta \text{cspt}_{t-2} + 0.4 \times \Delta \text{def}_{\text{conso}}$$

(-3.8)        (-4.1)        (2.3)        (3.1)        (2.4)        (-2.4)        (1.7)

Variables in lower case letters refer to logarithms

● cspt is wage costs per capita (payroll divided by paid employment)
● def_conso is the consumption deflator
● Chômage is the rate of unemployment as used by ILO by level
● Trend is a trend

The equation for the long term is therefore:

$$\text{cspt} - \text{def}_{\text{conso}} = 8.9 - 0.01 \times \text{Chômage} + 0.07 \% \times \text{Trend} + 0.3 \times \text{cfst}$$

Concerning the estimation period, two facts emerge:

● firstly, the quarterly trend for real wage costs is around 20% less than that for productivity (0.07% compared with 0.4%, see Box 4), which therefore takes wage restraint into account. In practice, wage restraint in fact corresponds to a sub-indexing of nominal wages in relation to both consumer prices and productivity gains, thus globally it corresponds in value to productivity. However, no model considering these two sub-indexations was able to produce a statistically satisfactory estimate. It was therefore decided to model real wages, thus clearly forcing wage elasticity to match unit prices.
● secondly, indexing to the tax wedge was not unitary. Once again, attempts to force this unit indexing were rejected statistically, which means that a drop in contributions did not correspond to an equivalent drop in the cost of labour, as employees anticipate this drop as a reduction in future income. It is possible, however, that the weakness of the estimated indexing is due to the very uneven nature of the tax wedge series, which may hamper its identification.

The model is valid at a threshold of 10% (and would be at a threshold of 0.1% if the series were stationary).
Why did the unemployment rate keep on falling in Germany after 2007?

The curve clearly shifts to the left, unemployment numbers drop by 1 million, and vacant jobs also decrease.

Thus even though the rate of vacant jobs is the highest today that it has been since figures were available, and in fact is more than double its 2004 level, the improvement in the functioning of the labour market seems obvious, at least since the beginning of 2007.

This result is consistent with the estimate by Krebs and Scheffel (2013) who used a mock-up of the labour market and evaluated the effect of the Hartz IV «activation» measures on the unemployment rate (see Box 2) at -1.4 points.

The cost of labour in Germany has been particularly lacking in dynamism since the second half of the 1990s. Real wages decreased by 0.7% from 1996 to 2007, compared with an increase of +17.3% in France. In particular, this wage restraint reflects the fact that real wages did not follow productivity gains. This can be seen from the econometric modelling described in this paper (see Box 5). The model shows the long-term adjustment in the level of real wages to productivity, to the «tax wedge» and to the unemployment level. The apparent indexation of wages to productivity is very low, around 20%.

In addition, the fall in unemployment that has occurred since 2005 has not resulted in an acceleration in wages, hence the separation in wages observed in relation to expected wages on the basis of previous behaviours from 2005 to 2009 (see Graph 17). This split may be linked with the tightening of the unemployment benefit system put in place by the Hartz IV reform: by reducing employees’ expectations of the income they would receive if they lost their job, this hardening managed to push them into staying in their jobs to the detriment of wage rises.

Today this gap may no longer be increasing, but it still persists: wages are still lower by almost 6% than the model forecast. Thus after the wage restraint episode, the acceleration of wages in 2011 and 2012 is not the result of a catch-up phenomenon since wages are increasing at the rhythm predicted by the model.

17 - Labor costs * observed and simulated
base 100 in 2000 for the cost of actual work observed

* The cost of labor is deflated by the consumption deflator.
Source: Destatis, INSEE
Why did the unemployment rate keep on falling in Germany after 2007?

The very low level of wages being indexed to productivity gains in theoretical models of the labour market, such as WS-PS (Cotis, Méary and Sobczak, 1998), indicates a reduction in the structural unemployment rate. This reduction must therefore have occurred before 2005, when the effective unemployment rate was high, on account of sluggish growth in Germany. The fact that the large drop in the effective unemployment rate in Germany since 2005 has not given rise to an acceleration in real wages confirms this result. The effect of other determinants of structural unemployment traditionally identified in theoretical models of the labour market (social contributions, domestic terms of trade, real cost of capital) would have been less marked.

The tax wedge has little influence on wage formation and hence probably on unemployment too...

In theory, whenever the tax wedge causes a divergence between employee demands and the cost of factors of production, this has an effect on the structural unemployment rate. Since the beginning of the 2000s, social contributions have been reduced in Germany, by around 5 points against the net wage. This reduction, which brought the level back to that of the middle of the 1990s, was concentrated at the beginning of the 2000s, for the most part before 2003. The impact of the Hartz reforms (and especially of the creation of mini-jobs and midi-jobs) is discernable, with a drop of around three points between 2003 and 2004, but it was offset by other movements in the opposite direction (see Box 5).

In fact, when wages are modelled, this could suggest that the majority of employees consider social contributions as deferred income since indexing wages to the tax wedge is much lower per unit. Consequently, the impact of any drop in charges on the structural unemployment rate would be low.

... like the domestic terms of trade

Just like the tax wedge, the difference between consumer prices and value added prices (called the domestic terms of trade) in theory influences the structural unemployment rate. It introduces a gap between the real cost of labour for a company, and employees’ real income. In the 2000s, consumer prices increased in Germany faster than value added prices (+0.6% per year on average), which would tend to increase the structural unemployment rate. The increase in the VAT rate in 2007 does not appear to have had any particular effect, as part of this was absorbed by company profit margins. Here again, the econometric estimate does not show that the terms of trade had any effect on wage formation and hence ultimately on the structural unemployment rate.

The real cost of capital could also have contributed to the drop in the structural unemployment rate

A third determinant of the structural unemployment rate is the real cost of capital. At the beginning of the 2000s, the real cost of capital decreased less in Germany than in the other Euro zone economies, because it was already at a low level. Conversely, no increase in the real cost of capital has been observed in Germany since the beginning of the crisis, since rates have remained very low, and credit has tightened less than elsewhere in Europe. In addition, corporation tax has been reduced significantly in recent years (in 2008, corporation tax rates dropped from 39% to 30%). The evolution in the real cost of capital has therefore been able to contribute favourably to Germany’s recent performance in terms of its unemployment rate. In particular, it has made the drop in the margin rate recorded since 2009 more acceptable for companies, whereas conversely, in Spain, the margin rate and the real cost of capital have grown hand in hand.

Is the decrease in underlying productivity gains a risk for unemployment?

We have seen above that the partial indexing of wages to productivity gains since the second half of the 1990s appears to have been a determining factor in reducing the structural unemployment rate in Germany. Symmetrically, if the stagnation in productivity observed since 2008 were to persist, in parallel with growth in real wages, the structural unemployment rate would rise once more. However, this is a fairly unlikely scenario: as seen at the end of part three, the slowdown in productivity is probably the result of transient factors.

Conjoncture in France
Why did the unemployment rate keep on falling in Germany after 2007?

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In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

Since 2009 the economic situation has diverged sharply between the main Eurozone countries. For example, GDP in Germany has risen 1.4 point above its pre-crisis level while it is 6.3 points lower in Spain and 7.7 lower in Italy, with France in an intermediate position showing a 1.1 points deficit. The unemployment rate stands at 5% in Germany, compared with 26% in Spain. It could therefore be expected that inflation should be much lower in Spain and Italy than in Germany. But in fact inflation has been higher each year in Spain and Italy than in Germany. What is the reason for this apparent paradox?

Several potential factors can be ruled out: difference in methods to measure inflation; difference in composition of consumption baskets; higher food inflation. Similarly, it cannot be said that wages have failed to adjust to the labour market situation. On average over the last two years real wages have progressed by 1.2% in Germany, and fallen by 2.7% in Spain and 1.6% in Italy.

The relative dynamism of inflation in Spain and Italy over the last two years can in fact be ascribed to the following factors:

- indirect taxation has played a significant role over the recent period in Spain and Italy, with a contribution to annual inflation of respectively 0.7 and 0.5 point. Inflation at constant taxation is thus slightly lower in Spain than in Germany and in France, but has remained higher in Italy;

- since 2010 energy inflation has been higher in Spain than in the other three countries, with the differential contributing an annual average of 0.4 inflation point;

- productivity has continued to decline in Italy, while it has improved in Germany and France since 2010, albeit moderately. Consequently, despite the divergence in wages, unit wage costs have followed a parallel path in the three countries. However, productivity has been extremely dynamic in Spain since 2008, to the extent that the growth differential in unit wage costs (UWC) with the other three countries reached 5 points in 2011 and 2012.

- the margin rate of Spanish companies has increased sharply since 2009 (+10 points in four years). Meanwhile, it has fallen in the other three countries since the start of the crisis, thereby attenuating the impact of the increase in unit wage costs on inflation.

Most of these factors are probably temporary, so the inflation differentials in the Eurozone should soon conform more closely to the macroeconomic situation.
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

Since 2009 the economic situations in the four main Eurozone economies have diverged sharply.

The economic trend in the main Eurozone countries has diverged sharply since the end of the crisis (see Table 1). The growth rate in Germany is significantly higher than in France, while activity has been very weak in Italy and Spain. These divergences continued in 2012: GDP growth should stand at +0.9% in Germany, against a 2.2% decline in Italy and a fall of 1.4% in Spain. In France, GDP should remain stable in 2012.

A very marked cyclical trough in Spain and Italy

The level of activity is not, however, sufficient as an indicator of the short-term economic situation because the sustainable growth rate and production capacities are not the same from one economy to the next. The gap between actual output and potential output, or the output gap, theoretically allows for a measurement of the tensions between supply and demand on the goods and labour markets (see Box 1). IMF output gap estimates (see Table 1) confirm the divergences between the European economies: an output gap that is virtually nil in Germany, in the order of -3 points in France and in the order of -4.5 points in Spain and Italy.

Unemployment rates differ widely

The differences in labour market situations also bear testimony to the divergence between the European economies (see Graph 2). In Spain, the unemployment rate has climbed very sharply since 2008 and reached 26.1% in Q4 2012. At the same date, it stood at 11.2% in Italy, a level close to that observed in France (10.6%). Conversely, in Germany, it has fallen since 2005 and settled at 5.3% in Q4 2012.

Table 1

<table>
<thead>
<tr>
<th>GDP Growth rate¹, unemployment rate² and output gap³</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP Growth rate</td>
<td>-5.1</td>
<td>4.0</td>
<td>3.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>7.8</td>
<td>7.1</td>
<td>6.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Output gap</td>
<td>-3.7</td>
<td>-1.2</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP Growth rate</td>
<td>-3.1</td>
<td>1.6</td>
<td>1.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>9.5</td>
<td>9.7</td>
<td>9.6</td>
<td>10.3</td>
</tr>
<tr>
<td>Output gap</td>
<td>-4.6</td>
<td>-3.8</td>
<td>-2.7</td>
<td>-3.0</td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP Growth rate</td>
<td>-3.7</td>
<td>-0.3</td>
<td>0.4</td>
<td>-1.4</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>18.0</td>
<td>20.1</td>
<td>21.7</td>
<td>25.1</td>
</tr>
<tr>
<td>Output gap</td>
<td>-2.8</td>
<td>-3.4</td>
<td>-3.2</td>
<td>-4.8</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP Growth rate</td>
<td>-5.5</td>
<td>1.8</td>
<td>0.6</td>
<td>-2.4</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>7.8</td>
<td>8.4</td>
<td>8.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Output gap</td>
<td>-4.5</td>
<td>-2.9</td>
<td>-2.3</td>
<td>-4.2</td>
</tr>
</tbody>
</table>

(1) Potential output: the highest level of output that can be sustained in an economy over the long term.
(2) The calculation of the level of potential output, and hence of the output gap, is fragile. In particular, it is difficult to estimate the potential GDP level after a period of severe recession and to know the extent of the destruction of productive capacities. The output gap can be estimated either statistically by smoothing or adjusting a trend, or via an implicit structural relationship. This latter method requires the estimation of an equilibrium unemployment rate.

(1) GDP - Seasonal and working-day adjustment
(2) Unemployment rate in the sense of the ILO (International Labor Bureau) - Annual mean
(3) Output gap in percent of potential GDP
Sources: INSEE, National statistical institutes, Eurostat, IMF
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

However, inflation levels remained similar in 2012. In light of these macroeconomic trends, inflation in Spain and Italy, and even in France, should be much lower than in Germany (see Box 1). Yet in 2012, it was similar in Spain, France and Germany, and even much higher in Italy (see Graph 2).

In Spain, inflation is lower than it was prior to the crisis while in Italy it is higher. These inflation levels in 2012 partly mask certain trends which, since 2008, have conformed more closely to economic intuition. In Spain, average inflation in 2011-2012 was far lower than in the period 2000-2007, even though it remained higher than in Germany and France. The case of Italy is more surprising on the face of things, as the differential between inflation in Italy and that in Germany and France has grown slightly since 2007. Lastly, in Germany and France average inflation increased over the period 2011-2012 against that in the period 2000-2007 (see Table 2).

### Table 2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Germany</td>
<td>1.7</td>
<td>1.4</td>
<td>2.3</td>
</tr>
<tr>
<td>France</td>
<td>1.9</td>
<td>1.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Spain</td>
<td>3.2</td>
<td>2.0</td>
<td>2.7</td>
</tr>
<tr>
<td>Italy</td>
<td>2.4</td>
<td>2.0</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: Eurostat

### Graph 1: 1 - Unemployment rate

In % of the active population

Source: Eurostat

### Graph 2: 2 - Overall inflation

Annual growth rate of the HICP (1)

Source: Eurostat

(1) Harmonised Consumer Price Index: this concept is used in all this report.

March 2013 49
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

Box 1: There are numerous causes of inflation differentials

**Different macroeconomic situations bring about inflation differentials**

*A link between unemployment, wages and prices*

There is a close link between the formation of prices and that of wages (see Box 5 in the previous report in this same issue of Conjoncture in France). Theoretically there is an inverse relationship between the unemployment rate (or its variations) and the growth rate of wages. Indeed the bargaining power of employees diminishes as the labour market deteriorates. Furthermore, a rise in unemployment results in a fall in household income and hence in demand. To cope with this and bearing in mind the fall in production costs, companies lower their prices. This is why inflation decreases when unemployment increases.

**How to model price formation**

The goods consumed in a country are either imported or produced locally. For a given sector (manufactured goods, energy, services, foodstuffs), the prices of consumer goods are thus a weighted average of the prices of products produced locally and the prices of imported goods.

The prices of imported goods are themselves generally a function of prices on foreign markets, converted into the national currency via the exchange rate, and of the prices of goods produced locally. Indeed, foreign exporters usually adapt their margins to the conditions of competition that they encounter on the national market. In practice the impact of foreign price variations on domestic prices is negligible, especially compared with the impact of exchange-rate fluctuations, which are more volatile.

In the long term the prices of locally produced goods are the result of a margin (mark-up) on the unit production costs. These costs include the unit wage cost (ratio of wages to productivity), the price of intermediate consumptions, and the cost of capital.

Corporate margins depend on the company’s market power. The higher the demand to supply ratio, the greater this market power. An indicator of the pressure on supply is the production capacity utilisation rate. However, this is an imperfect indicator as its scope only covers the manufacturing industry. An alternative way to model the price-elasticity of demand is to directly use the growth rate of demand.

**Other factors may be at the origin of inflation differentials with a given macroeconomic situation**

**Different baskets of consumption**

Firstly, the various price indices are based on national baskets of goods. But consumer expenditure structures differ from one country to the next. The same price change in a sector may thus have different repercussions on the overall index of each country. For example in Germany, rents weigh heavier in the overall index because Germans rent more than in France, Spain and Italy. The same rise in rent prices will therefore contribute more to an increase in inflation in Germany than in the other countries.

**Measurement differences**

Estimating inflation is highly complex and requires methodological choices that may differ from country to country (see Box 2). The HICP concept, standardised by Eurostat, homogenises the calculation methods as far as possible in order to facilitate international comparisons. However, the methodology used to calculate the prices of certain products, in particular to take account of quality effects, may differ slightly from one country to the next.

**Differences in tax changes**

Inflation is also affected by indirect tax shocks, especially in a period of wide-ranging fiscal consolidation measures. A taxation change can cause a temporary inflation differential between countries as the rise is transmitted by companies to consumers. These rises are either targeted to certain products (energy, tobacco, public transport services, telecommunications, etc.) or are more general VAT rises. Italy and Spain in particular have recently implemented major VAT increases.

**Economic structure differentials**

Lastly, inflation differentials between countries may reflect differences in economic structure. For the same good, price changes may produce a different trend because of the degree of competition in the sector, the nature of wage negotiations, the degree of wage indexation to prices, etc. Inflation may also undergo various shocks and the reaction to the same shock may differ in both scale and speed.
This report presents a first analysis of the factors explaining these inflation differentials other than the macroeconomic situation of the countries and methodological differences (see Box 2). Then price formation mechanisms will be examined by sector, through the prices of energy and food, as well as the core prices.

### Differences in consumption structure barely contribute to the inflation differentials between the four biggest Eurozone countries

There is no basket of goods which is common to all countries for harmonised consumer price indices across European countries, and so products are not weighted in the same way from one country to the next (see Table 3). Indeed this weighting reflects the monetary expenditure of final household consumption in the country in question (Eurostat, 2008). These differences in weighting influence the inflation differentials between countries. For example, foodstuffs, clothing items and café and restaurant expenditure weigh more in Spain and Italy than in France and Germany. In Germany the "housing" and "leisure and culture" items weigh less heavily in headline inflation than they do in the other countries. Lastly, the weight of transports is greater in the French HICP.

To identify the impact of differences in weighting on inflation differentials, it is instructive to create inflation series by country using the Eurozone average weighting. These series serve to estimate how consumer prices would evolve if all the counties had an identical consumption structure to that of the Eurozone average. For each country, the differential between the year-on-year prices calculated using the Eurozone weighting and these same year-on-year values calculated with the weighting of the country is represented (see Graph 3). On average over the period 1998-2012, this differential is nil for the four main countries. This means that the differences in consumption composition do not explain a

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### Table 3

**Weighting of the major sectors in the harmonised consumer price index in 2012**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Germany</th>
<th>France</th>
<th>Spain</th>
<th>Italy</th>
<th>Euro zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>All harmonised consumer price index</td>
<td>1 000</td>
<td>1 000</td>
<td>1 000</td>
<td>1 000</td>
<td>1 000</td>
</tr>
<tr>
<td>Overall index excluding energy, food, alcohol and tobacco</td>
<td>718</td>
<td>698</td>
<td>670</td>
<td>701</td>
<td>699</td>
</tr>
<tr>
<td>Food</td>
<td>117</td>
<td>163</td>
<td>184</td>
<td>169</td>
<td>152</td>
</tr>
<tr>
<td>Alcoholic beverages, tobacco</td>
<td>39</td>
<td>40</td>
<td>29</td>
<td>33</td>
<td>38</td>
</tr>
<tr>
<td>Clothing</td>
<td>54</td>
<td>53</td>
<td>84</td>
<td>97</td>
<td>68</td>
</tr>
<tr>
<td>Housing, water, electricity, gas</td>
<td>239</td>
<td>158</td>
<td>124</td>
<td>111</td>
<td>163</td>
</tr>
<tr>
<td>Household equipment</td>
<td>57</td>
<td>63</td>
<td>67</td>
<td>84</td>
<td>66</td>
</tr>
<tr>
<td>Health</td>
<td>52</td>
<td>41</td>
<td>32</td>
<td>37</td>
<td>44</td>
</tr>
<tr>
<td>Transport</td>
<td>144</td>
<td>174</td>
<td>145</td>
<td>161</td>
<td>154</td>
</tr>
<tr>
<td>Communications</td>
<td>30</td>
<td>31</td>
<td>38</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>Hobbies and culture</td>
<td>120</td>
<td>93</td>
<td>77</td>
<td>63</td>
<td>93</td>
</tr>
<tr>
<td>Education</td>
<td>9</td>
<td>4</td>
<td>14</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Hotels, coffee and restaurants</td>
<td>55</td>
<td>80</td>
<td>138</td>
<td>115</td>
<td>92</td>
</tr>
<tr>
<td>Other goods and services</td>
<td>84</td>
<td>101</td>
<td>68</td>
<td>91</td>
<td>87</td>
</tr>
</tbody>
</table>

*Source: Eurostat*
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

**Box 2: Methodological differences only explain small inflation differentials**

The HICP were designed specifically for the purposes of international comparison. They are devised using a harmonised method with a view to calculating comparable ICP as required by the convergence criterion of the Maastricht Treaty.

However, the process for harmonising price indices is still in progress. The methods recommended by the legislation can be applied with a certain flexibility. For some calculations, several methods can be used. However, they must not be at the origin of a differential of more than 0.1 point in the overall HICP. Additionally, the measure of quality effects can differ from one country to the next in certain sectors. These are sectors in which the "quality effect" is important, i.e. in which products are often replaced by other products of different quality and price. In its Guide to the Harmonised Indices of Consumer Prices, the European Commission indicated in 2004 that a range of specific goods and services such as automobiles, books and CDs, clothing items, computers and telecommunications services, required a better adjustment of quality and sampling.

As an example, the year-on-year prices of sound and image reception, recording and reproduction equipment on the one hand, and telephony and fax equipment on the other, is represented (see Graphs 1 and 2). Overall the prices of these apparatuses have fallen sharply in all countries over the last ten years, reflecting among other things the inclusion of quality effects in each country.

However, the differences between countries are sometimes substantial. For reception equipment, inflation is far lower in France than in Italy. From 2003 to 2012, this gap contributed 0.1 point to the headline inflation differential between the two countries. For telephony equipment inflation from 2003 to 2011 was much lower in Spain than in the other countries, before picking up sharply in 2012. In Spanish headline inflation in 2011 and 2012, bearing in mind the low weighting (0.06%), these fluctuations had a negligible impact.

As regards relatively standard and easily exchangeable goods, it is nonetheless still difficult to know whether these gaps reflect differences of inclusion of quality changes in the price index or of distribution structures that differ from one country to the next (competition between distributors, level of equipment of households, etc.).

1 - Sound and image reception, recording and reproduction equipment

2 - Telephony and facsimile equipment

Source: Eurostat
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

Structural inflation differential. However, these gaps may have short-term repercussions although they are usually limited to +/- 0.2 inflation point. The largest differential is observed at the start of 2009. Spanish inflation would have been 0.5 point higher if it had been calculated with the Eurozone average weighting, since fuels, the prices of which were falling sharply, weigh less in the Eurozone weighting than in that of Spain. At the end of 2012, if inflation were to be calculated with the Eurozone weighting it would be 0.2 point higher in Germany, Italy and Spain.

When corrected for taxation, inflation seems low in Spain but not in Italy.

A measure of the effects of tax changes on prices

To describe the effects of taxation on observed inflation, Eurostat publishes inflation series "at constant tax rates". These series give the theoretical impact of changes to indirect taxes (VAT and excise duty) on headline inflation, and across the four main sectors. This impact is theoretical because it assumes that the change in indirect taxes is transferred to consumer prices immediately. In practice this transfer is slower and only partial, because in the short or even long term, companies absorb part of these changes into their margins (see Box 3).

The difference between the quarterly consumer price variations actually observed and those that would have been observed at constant tax rates gives a measure of the maximum amplitude of inflation differentials between countries; such differentials may be due to fiscal consolidation measures and in particular recent VAT rises (see Graphs 4a to d).

Numerous shocks in the recent period in Italy and Spain

In Italy and Spain there have been numerous changes to indirect taxes since 2010. In Italy, the full rate of VAT rose from 20 to 21% on 17 September 2011. The rise in taxes on energy in 2011 was also large, with a budgetary performance in 2012 that was higher than the VAT rise. In 2012, taxes on tobacco also increased.

In Spain, on 1st July 2010 the full rate of VAT rose from 16 to 18% and the reduced rate from 7 to 8%. Then on 1st September 2012 the full rate was increased once.

3-Differentials between inflation series calculated with the Eurozone weighting and the published HICP series

How to read it: in early 2009, Spanish inflation would have been 0.5 point higher if it was calculated with the Eurozone average weighting.

Sources: Eurostat, INSEE calculations
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

**Box 3: Indirect tax rises are transmitted only partially: the example of the VAT rise in Spain**

Indirect taxation has had a major impact on inflation in Spain and Italy over the last three years. However, VAT rises are usually only partially transmitted to consumer prices. In this case inflation at constant tax rates, whereby the entire theoretical effect of tax changes on prices is subtracted, underestimates inflation “excluding taxation” in the event of tax rises.

In Spain in July 2010, the theoretical impact of the increase in the full and reduced VAT rates is estimated at 1.1%. The Focus in the Conjoncture in France issue of December 2010, “Effects of the VAT rise on consumption in Spain”, proposed a measure of the actual transmission by comparing the observed changes in prices to those ‘without a VAT rise’ which were simulated on the basis of past behaviour. This modelling suggested that this tax rise contributed to a 0.6-point increase in year-on-year consumer prices in October 2010, i.e. a transmission in the order of 54% of the VAT rise to consumer prices four months later. Businesses thus absorbed part of it into their margins in order to limit the rise in their own prices. In September 2012, the tax rise appears to have contributed to a 0.9% year-on-year rise in consumer prices: 50% of the VAT rise was transmitted to the consumer price. Once again, businesses absorbed part of it into their margins.

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4a - Impact of taxes in Germany

4b - Impact of taxes in France

4c - Impact of taxes in Spain

4d - Impact of taxes in Italy

How to read it: In Spain, indirect taxes in 2009 contributed 0.6 point of energy inflation and 0.6 point of food inflation.

Sources: Eurostat, INSEE calculations
again, from 18 to 21%, and the reduced rate from 8 to 10%. The theoretical impact\(^5\) of these rises on the general price level is estimated by Eurostat at respectively 1.1% and 2.0\(^6\) (see Box 3). Since mid-2009 tobacco prices have risen sharply in Spain. From 1997 to May 2009, the year-on-year rise in tobacco prices averaged 6.0%, but since June 2009 this figure has climbed to 13.0%. The impact of tobacco taxes represented a contribution of 0.23 point to headline inflation average between June 2009 and December 2012.

In Germany, taxation has changed little over the last five years. The VAT rate was increased from 16 to 19% on 1st January 2007, and tobacco prices rose in March and December 2004, September 2005 and June 2009.

In France the VAT rate in the catering sector was lowered on 1st July 2009. The reduced rate then rose from 5.5 to 7% on 1st January 2012. Additionally, the TIPP (domestic tax on petroleum products) was raised in 2004 and 2007. However, the TIPP, now called the TICPE\(^7\) was cut by 3 eurocents in September 2012, contributing to a 0.5 point fall in energy inflation (see Graph 4b).

At constant tax rates the inflation differentials between the four economies are more in line with the respective position of the economies in the business cycle (see Graph 5). Inflation has been lower in Spain than in the other countries since the start of 2012, except in August 2012 due to the effects of anticipation of the VAT rise. Spanish inflation at constant tax rates was only 0.9% in December 2012. In Italy however, the level of inflation is still high compared with the other countries.

An analysis of the data on inflation at constant tax rates for various products shows that manufactured goods inflation excluding taxation has been far lower in Spain since 2009 than in the other Eurozone countries. It was even nil in Q4 2012\(^8\) (see Graph 6a). It thus appears to be more in line with the position of the Spanish economy in the cycle, all the more so in that prior to 2008, manufactured

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(5) In practice, the transmission is partial.
(6) The estimate is the same in the Focus, “Effects of the VAT rise on consumption in Spain”, in Conjoncture in France, December 2010.
(7) TICPE: Domestic consumption tax on energy products, formerly the TIPP (domestic tax on petroleum products).
(8) Remember that the method for calculating inflation at constant tax rates, which assumes immediate and total transmission, means that inflation is underestimated just after tax rises.
goods inflation was much higher in Spain than in France or Germany. Conversely, in Italy where manufactured goods inflation was also higher before, it only dropped very slightly in 2012.

In 2012 in Italy, services inflation at constant tax rates was high (see Graph 6b). Its contribution to headline inflation was 0.9 point in 2012, against 0.6 point in the other countries. Transport prices in particular were dynamic due to the transmission of the rises in oil prices. In Spain, services inflation at constant tax rates has fallen significantly since 2009 and is lower than elsewhere: 0.7% as an annual average in 2012.

In Spain the sharp drop in services inflation between October 2008 and April 2010 was fairly generalised. On the one hand the prices of leisure services including repairs and personal care decreased sharply, as did the prices of miscellaneous services, with these two items contributing 2.3 points in total to the drop in services inflation. On the other hand, the end of the property bubble led to a drop in housing services inflation, contributing to 0.5 point of the fall in services inflation over this period.

The inflation trajectories in the different Eurozone countries thus involve trends that differ from product to product. In the next part of this report we examine firstly the price formation of food and energy products, for which external commodity price shocks are very significant, and then the formation of core prices.

**In Spain, less food inflation but more energy inflation**

Changes in food prices at constant tax rates have been fairly similar across the different countries since 2006. Food consumer prices in the four countries react, among other things, to variations in the prices of food commodities, the principal cause of their variability. Over the period 2011-2012, food inflation in France and Germany was higher on average than in Spain and Italy and so cannot explain the relative dynamism of Spanish and Italian inflation (see Graph 6c).

By estimating the variation in food prices and performing a predictive failure test to compare the period 2011-2012 with the period 1996-2009, we observe that...
there is no break between these two periods in any of the countries (see Box 4). Food inflation in 2011-2012 thus behaved in the same way as previously: the low level of food inflation in Spain and Italy does not result from an adjustment of food prices in reaction to weak demand via a fall in margins.

Over the long term, energy inflation appears to have been similar in all four countries since it is highly correlated with the changes in Brent prices in euros (Richard et al., 2008). Indeed there is a cointegration relationship between the energy HICP and the price in euros of Brent over the period 1999-2007 in France, Spain and Italy, meaning that these two variables follow the same long-term trend.

Over the short term however, trends can differ. Up to 2011 in Germany and Italy, energy inflation did not fall as much as in France and Spain during periods when oil prices were falling, and increased less when they were rising. The share of flat-rate tax in indirect taxation in Germany and Italy, causing adjustment rigidities, may have contributed to this. However, in 2012, with the drop in the price of Brent, energy inflation fell sharply in Germany whilst remaining high in Italy (see Graph 6d).

Globally though, energy prices since 2008 have fluctuated in a similar pattern in France, in Germany and in Italy (see Graph 7). However, the variations in energy prices in Spain since 2010 have been quite different to those observed in the other countries. Between January 2010 and December 2012, energy inflation was virtually always higher in Spain than in the other countries (10.4% on average in Spain against 6 to 8% in the other countries).

At constant tax rates over the period 2010-2012, energy inflation thus contributed 1.1 point on average to headline inflation in Spain, against respectively 0.8 point in France, 0.7 point in Germany and 0.6 point in Italy (the energy weighting is lower in the Italian HICP).

In the HICP, energy prices are composed of the prices of electricity, gas and other fuels, and the prices of petrol and lubricants. Gas and electricity prices are mainly

(9) In Germany the cointegration relationship is verified when a longer estimation period is used.
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

**Box 4: Modelling food inflation**

For *Conjoncture* in France, the forecast of the changes to food consumer prices for France is built by modelling price formation sequences along the production chain: agricultural producer prices, agrifood producer prices, and consumer prices (see *Focus in Conjoncture in France* December 2010, “What are the effects of the rise in commodity prices on consumer prices?”). In the present report it is not possible to reproduce this estimation strategy because agricultural and agrifood producer prices are not available for all the countries.

Another possible strategy would have been to highlight - in the same way as for energy prices - a cointegration relationship between food consumer prices and food commodity prices. But the standard tests reject the existence of such a relationship.

However, it is possible to build a model describing the short-term variations in food consumer prices according to the variations in wheat and commodity prices, unit wage cost in agriculture and, where applicable, variations in the Brent price.

In order to test whether the food price formation was modified or not in recent years, these models are estimated over the period 1996-2009, after which statistical forecasts up to 2012 are performed and compared to the price changes actually observed, using Chow predictive failure tests. These suggest that food consumer price formation has not been modified in recent years.

| Predictive failure tests comparing the period 2011-2012 with the period 1996-2009 |
|---------------------------------|-----|-----|-----|-----|
|                                 | Germany | France | Spain | Italy |
| F-statistic of Chow forecast test | 1.14 | 1.66 | 1.62 | 1.56 |
| P-value                         | Prob. F(7.45) = 0.35 | Prob. F(7.45)=0.14 | Prob(7.39)=0.16 | Prob(7.44) = 0.17 |
| Predictive failure tests of Chow | no | no | no | no |

Source: INSEE

7 - Energy price level at constant tax rates

![Energy price level at constant tax rates](chart)

Sources: Eurostat, INSEE calculations
regulated. Once changes to taxation have been taken into account (VAT rises in Spain and Italy), fluctuations in the prices of electricity, gas and other fuels have not differed greatly across the four countries in recent years. Energy inflation differentials are thus due to the changes in petrol prices.

Rises in corporate margins in Spain and in unit wage costs in Italy contribute to the persistence of core inflation

An accounting breakdown of core consumer prices...

All in all, energy and food inflation is globally similar across the four main Eurozone countries. This is not in itself surprising as it is determined to a far greater extent by changes in commodity prices than by those in wage costs. However, wage costs do have a stronger influence on the other items in the basket of goods. Bearing in mind the divergence in the economic situation in the Eurozone, wages have evolved very differently in the four countries. In Germany nominal wages have increased by 3.1% on average over the last two years, against just +0.2% in Spain and +1.0% in Italy. So it is core inflation - excluding foodstuffs and energy - that is expected to be far lower in Spain and Italy. However, even when corrected for taxes, this is not the case in Italy, while observations in Spain are not fully in line with the growth differential in wages.

... according to the prices of domestic resources

To understand these evolutions which seem surprising on the face of things, the core prices (see Graph 8) are broken down according to their determinants (see Table 4). The prices of goods consumed in a country depend on the prices of domestic resources, which are either produced by national producers or produced abroad and imported. The prices of value-added in the non-agricultural market branches are used as an approximation of the prices of national producers. The share of production destined for exports is subtracted from the calculation of prices of domestic resources. For the prices of imported goods, the deflator of imports excluding the share of fuel consumed by households\(^{10}\) was used. All in all, the domestic resources used in this report are the sum of non-exported value-added and imports. Taxes and inventory change notwithstanding, they are equivalent to final domestic demand.

In order to understand the price formation mechanisms of national producers, the differential between the prices of domestic resources and the prices of value-added is then studied. This differential may have two sources. On the one hand, if import prices are very dynamic, most notably due to commodity prices, the prices of domestic resources increase more rapidly than the prices of domestic value-added. On the other hand, competition in exports may incite
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

In Germany, the recent dynamism of the unit wage cost has been almost fully absorbed into margins.

national producers to limit the rise in the prices of exported goods. This behaviour then results in the prices of value-added being less dynamic than those of domestic resources.

The changes in the prices of value-added can then be examined from an accounting viewpoint according to margins in relation to the growth in unit wage costs (see Graphs 9a to 9d). The unit wage cost measures the “cost of a unit produced”. It is calculated as the ratio of the nominal wage cost per head to the actual productivity per worker. A drop in productivity or a rise in the nominal wage cost leads to a rise in the unit wage cost.

In 2011 and 2012, core inflation was slightly higher than in previous years in Germany (+1.3% against +1.0% on average over 1997-2007). Indeed in the 2000s the unit wage cost decreased in Germany because productivity rose sharply while nominal wages progressed only slightly. Conversely, in 2011 and 2012 the unit wage cost picked up sharply since productivity gains were smaller (even though the fact that they dropped in 2008 in 2009 would lead one to expect a catch-up effect), while nominal wages were more dynamic.

This rise in the unit wage cost is offset by a drop in the margin rate, which, after increasing significantly in the 2000s, has fallen since 2008. The prices of value-added have however grown less quickly than core inflation, although the differential has remained constant over time. This stability masks two trends, however. Over the period 1997-2007 core inflation was stronger than the prices of domestic resources. Indeed, the investment in construction deflator stagnated. Since 2008 core inflation has grown at the same pace as the prices of domestic resources. Additionally, the prices of domestic resources were substantially

Table 4

<table>
<thead>
<tr>
<th>Countries</th>
<th>Germany</th>
<th>France</th>
<th>Spain</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1997-2007</td>
<td>1.0</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Core inflation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference between inflation and prices of domestic resources</td>
<td>0.6</td>
<td>0.0</td>
<td>-0.2</td>
<td>-0.1</td>
</tr>
<tr>
<td>Difference between prices of domestic resources and prices of VA</td>
<td>0.0</td>
<td>0.6</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Difference between prices of VA and unit wage cost</td>
<td>1.1</td>
<td>-1.6</td>
<td>0.2</td>
<td>-0.9</td>
</tr>
<tr>
<td>Unit wage cost</td>
<td>-0.7</td>
<td>2.3</td>
<td>1.3</td>
<td>2.0</td>
</tr>
<tr>
<td>including contribution :</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of labor costs per head</td>
<td>1.0</td>
<td>2.9</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>of productivity growth</td>
<td>-1.7</td>
<td>-0.6</td>
<td>-1.2</td>
<td>-0.5</td>
</tr>
</tbody>
</table>

(10) Variations in the import deflator are largely determined by changes in fuel prices, which are highly volatile. As part of this fuel is destined directly for household consumption and as we are modelling the growth of core prices, which thus exclude energy, the import deflator is calculated excluding fuel consumed by households.

How to read it: On average over 2011-2012, core inflation in Germany was +1.3% with contributions of +2.3 point from unit wage costs, -1.6 point from the margin rate, and +0.6 point from the increased dynamism of prices of domestic resources against the price of value-added. All values concern the non-agricultural market branches (except for core inflation).
In France the slowdown in productivity has been offset by the fall in margins, and core inflation has remained unchanged from the pre-crisis period.

Core inflation stood at 1.3% on average for 2011-2012, i.e. the same as in 1997-2007. In France, core inflation grows at the same pace on average as the prices of domestic resources. Furthermore, these prices of domestic resources were only moderately affected by the rebound in import prices in 2011-2012 (contribution of 0.2 point to core inflation). All in all, core inflation has behaved like the prices of value-added.

9 - Contributions to changes in the prices of value-added

Sources: National Statistical Institutes, INSEE calculations
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

In France, productivity has slowed since the crisis but wages have continued to increase at the same pace as before. Therefore, unit wage costs have accelerated and contributed to core inflation more. But core inflation has managed to remain stable because the rise in the unit wage cost has been absorbed into corporate margins, which have fallen since the crisis.

Core inflation slipped back in 2011-2012 (+1.2% on average against +2.7% in 1997-2007). During the 2000s the unit wage cost was dynamic in Spain because nominal wages grew strongly and productivity was stable. In 2011 and 2012, nominal wages stopped progressing and productivity gains grew strongly, so much so that the unit wage cost fell back sharply (-2.6% against +3.5% previously). This slide led to a drop in the prices of value-added, although this was limited by the significant rise in the margin rate.

The transmission of this drop in prices of value-added to core inflation was partly mitigated by the acceleration of import prices which stimulated the prices of domestic resources. All in all, core inflation grew by 1.2% on average in 2011-2012 against 2.7% between 1997 and 2007.

Core inflation fell back only slightly in Italy in 2011-2012 compared to 1997-2007, despite the sharp deterioration in activity. In 2011-2012, core inflation was sustained by the VAT rise in September 2011, explaining the gap between core inflation and prices of domestic resources. Also, as in the other countries, import prices were more dynamic in 2011-2012 and the differential between prices of domestic resources and prices of value-added rose by 0.2 point. However, prices of value-added slowed due to the fall in the margin rate, contributing to the slowdown in core prices. Unit wage costs barely slowed because the drop in productivity worsened, thereby virtually offsetting the sluggishness of wages.

Conclusion

Inflation in Spain and Italy seems high considering the macroeconomic situations of these countries, and this report has highlighted a number of factors that have contributed to sustaining inflation in these countries in recent months.

Some of these factors are the result of shocks that should be exogenous to the price formation processes in the different economies. In particular, these include the increases in indirect taxation which have largely sustained prices, with the VAT rises in September 2011 in Italy and July 2010 and September 2012 in Spain. Additionally, energy inflation in Spain, even corrected for indirect tax rises, was higher than in the other countries. These factors are temporary by nature.

But the persistence of inflation also reflects certain price formation mechanisms in these countries. In Spain unit wage costs fell sharply in 2011 and 2012 due to the stagnation of wages and very high productivity gains. But so far this drop has mainly resulted more in an increase in corporate margins than a slowdown in sale prices. Eventually however, the margin rate will stabilise even if productivity gains do not remain so dynamic, and the weak progress of labour costs will slow down prices in the Spanish economy. Corrected for the effect of the VAT rise in September 2012, core inflation appears to be low in Spain at the start of 2013.

In Italy, the cost of labour also significantly lost ground in 2011 and 2012, but in parallel the drop in productivity gathered pace, so unit wage costs barely slowed. In this country a slowdown in core prices without squeezing corporate margins can only happen if productivity starts to pick up again.
In the Eurozone, why is inflation not lower in the countries most affected by the crisis?

Bibliography

Banque centrale Européenne, 2012 "Inflation differentials in the euro area during the last decade".


French developments
In Q4 2012, activity fell back in the advanced economies (-0.2% after +0.3%), when it had been forecast to be stable in Conjoncture in France in December 2012 (0.0%). It stagnated in the United States and Japan and contracted in the United Kingdom and all the Eurozone countries.

Except for Spain and Italy, final domestic demand in the advanced economies held up, but activity was hit by pronounced destocking and by the sharp fall in exports.

In early 2013, according to the optimistic business tendency surveys in most countries, activity should accelerate in H1 2013. The upturn in the emerging economies, in particular in Asia, would also appear to be confirmed.

Activity should therefore rise again in the advanced economies. In H1 2013, the upturn should be pronounced in the United States, Germany and Japan, thanks to strong domestic demand. In Italy and Spain, however, activity is set to continue contracting.

In the emerging economies, activity accelerated in Q4 2012, resulting in very strong imports. Over the forecasting period, easing of fiscal and monetary measures should continue to buoy up domestic demand.

Ever-more expansionist monetary policies

The Central Banks of the advanced economies have limited room for manoeuvre. The level of their reference interest rates is at all-time lows in the United States (0.25%), United Kingdom (0.5%), Japan (0.1%) and the Eurozone (0.75%). They are making increasingly extensive use, however, of unconventional instruments. In the United States, the Fed is buying $45 billion in long-term Treasury bonds every month, plus $40 billion in mortgage-backed securities, without sterilising its operations. It is also promising not to increase rates as long as unemployment does not drop below 6.5%. The Bank of England is continuing to buy up public debt and now holds the equivalent of 25% of British GDP in Gilts. It is also paying the interest produced by these debts to the Treasury. In Japan, the Central Bank has resumed its government securities purchasing programme, causing the Yen to fall by almost 13% against the US Dollar in two months.

In the Eurozone, the ECB is not currently buying sovereign securities because no country has called upon the OMT programme. However, the three-year refinancing operations (VLTRO)

(1) that is to say that these purchases is not accompanied by an equivalent amount for sale

1 - Inflation should stabilize at a low level in the advanced economies

![Graph showing year-on-year inflation in % from 2006 to 2013](image_url)

Source: National Statistical Institutes, INSEE calculations
triggered in early 2012 are continuing to supply liquidity to banks which had only repaid a small proportion of the amount at the beginning of 2013. Lending is continuing to fall in the Eurozone, however, in response to the weakness of expected demand. In addition to this, the easing of tensions combined with the acceleration in unconventional measures in other advanced economies has led to a sharp rise in the single currency since the start of 2013.

In the emerging countries, Central Banks have significantly eased their monetary policies since the beginning of 2012, further to the slowdown in activity and fall in inflation. Despite the slight rise in inflation recently in Brazil, India and Russia, they are likely to pursue their accommodating policies.

Fiscal consolidation on both sides of the North Atlantic, stimulus elsewhere

In the United States, the agreement at the end of December between the President and Congress succeeded in limiting the scale of the ‘fiscal cliff’ to around 1.5 points of GDP at the beginning of 2013 (against 4.7 points failing an agreement). The burden on households still comes to 1.6 points of their income in 2013, mainly through a 2-point rise in wage contributions on 1st January 2013. Also, with the implementation of automatic spending cuts in March, US public consumption is set to fall.

In Europe, States are still conducting restrictive fiscal policies to try to ensure the sustainability of their public finances. The measures announced or passed for 2013 represent about 1.1 points of GDP for the four largest economies in the Eurozone and 1.2 points of GDP for the United Kingdom. However, in Spain and especially in Italy, fiscal adjustment should be less intense in 2013 than in 2012.

In Japan, meanwhile, the new government of Shinzo Abe voted in in December 2012 has decided on a vast economic stimulus plan (the fifth since the March 2011 earthquake) for a total amount of 10.3 billion Yen, or 2.2 points of GDP. The fiscal stimulus should therefore be clearly positive over the forecasting period.

Inflation to stabilise at a low level in the advanced economies

Since the end of 2011, inflation has eased thanks to the fall in commodity prices (see graph 1). After reaching a peak at 3.1% in mid-2012, the rise in consumer prices in the advanced economies was down to 1.6% year-on-year in December 2012. The increase in oil prices in early 2013 should cause a slight rise in energy prices and inflation should stand at 1.7% over the forecasting period.

The rise in industrial and energy commodity prices in 2010 was passed on with a time lag to core inflation in 2011. But since the beginning of 2012, core inflation has been falling, especially as the still-high level of unemployment weighs down on the bargaining power of employees. The core index should therefore continue to fall (from 1.4% in Q4 2012 to 1.2% year on year in Q2 2013). Inflation should be comparable in the United States and Eurozone.

In the emerging countries, the acceleration in activity is confirmed

In Q4 2012, activity in the emerging countries accelerated, resulting in strong imports (+4.5% after +1.5% in Q3 2012). In early 2013, according to business tendency surveys, the acceleration should continue in the manufacturing sector, in particular in China, India and Brazil. The emerging Asian countries should continue to profit from Sino-Japanese tensions to develop their exports and should be particularly dynamic.

2 - The economic climate is improving significantly since the summer 2012

![Graph: Global PMI indices, level in points](chart.png)

Source: Markit
Clear rebound in the advanced economies in H1 2013...

In Q4 2012, the advanced economies contracted (-0.2% after +0.3%). In these economies overall, private domestic demand progressed slightly but the drop in public consumption made a sharply negative contribution to activity, especially in the United States and Southern Europe. In addition to this, destocking trends held activity back and exports fell sharply, despite the upturn in world trade.

However, the overall short-term climate has improved significantly since its low point in the summer. In manufacturing industry, the business climate is currently above the expansion threshold and in services it is still showing dynamic activity (see graph 2). Activity in the advanced economies should therefore rebound clearly in H1 2013 (+0.4% then +0.2%).

... but still sharply-contrasting outlooks

This overall situation hides some widely diverging situations (see graph 3). In the United States, domestic demand should continue to stimulate activity. Despite tax rises weighing down on household purchasing power, households should benefit from increases in their earned income and a rise in the price of their assets. Financing terms should also remain favourable and the property market should show a marked upturn. The Japanese economy should rebound sharply in H1 2013, under the effect of the sharp fall in the Yen and the stimulus plan passed by the Abe government. In the United Kingdom, strong employment should buoy up household consumption, despite fiscal consolidation.

Activity in the Eurozone should stop contracting, but the situations of the different countries remain contrasted. In Germany, activity should rise significantly under the effect of the upturn in investment and exports. Spain and Italy should benefit more modestly from the brighter world outlook as their exports suffer from the rise in the value of the single currency and as their domestic demand continues to fall. However, investment should gradually stop falling. In France, activity is likely to progress modestly as domestic demand remains somewhat lacking in dynamism.

World demand for French products set to accelerate in H1 2013

In Q4 2012, world trade rebounded (+0.9% after +0.1%), when we had been forecasting stability. The trends diverged widely between advanced and emerging countries: imports and exports of advanced countries fell back significantly, while trade was very strong between the emerging economies, notably in Asia.

For the world economy as a whole, the new export orders component in PMI surveys has risen clearly since its low point reached in July 2012 and was close to the expansion threshold in February 2013 (see graph 4). Also, according to the Asian Customs data available for January 2013, trade in that zone remains dynamic. World trade should therefore accelerate in early 2013: imports from emerging countries should grow, while the acceleration in activity in the advanced economies should bring an upturn in their imports. World trade is likely to progress by 1.3% in Q1 and Q2, a rate quite close to its average growth between 2000 and 2007 (+1.6% per quarter).

The rise in the imports of advanced countries, notably in Europe, should bring an acceleration in world demand for French products in H1 2013 (+0.9% then +1.0% in the first two quarters of 2013, after +0.3% in Q4 2012).
Conjoncture in France

4 - In H1 2013, world trade should accelerate

Sources: Markit, Central Plan Bureau, INSEE forecasts

Table 1

<table>
<thead>
<tr>
<th>Balance of resources and uses of the advanced economies by volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Quarterly changes in %</strong></td>
</tr>
<tr>
<td>2011    2012    2013</td>
</tr>
<tr>
<td>Q1      Q2      Q3      Q4      Q1      Q2      Q3      Q4      Q1</td>
</tr>
<tr>
<td>GDP  0.0       0.2     0.6     0.4     0.4     0.0     0.3     -0.2  0.4</td>
</tr>
<tr>
<td>Private consumption  0.1    0.0     0.5     0.1     0.4     0.1     0.1     0.2  0.2</td>
</tr>
<tr>
<td>Public consumption -0.9   0.0    -0.4    -0.2    0.1    -0.1    0.5    -0.7  0.0</td>
</tr>
<tr>
<td>Investment          0.3    1.2     1.8     1.5     0.6     0.3    -0.4    0.9  0.6</td>
</tr>
<tr>
<td>Exports             1.3   -0.4     2.3     0.0     1.0     1.1     0.0    -1.4  1.2</td>
</tr>
<tr>
<td>Imports             0.9   0.0      1.1     0.5     0.5     0.8    -0.1    -1.2  0.7</td>
</tr>
<tr>
<td><strong>Annual changes in %</strong></td>
</tr>
<tr>
<td>2011    2012    2013</td>
</tr>
<tr>
<td>Q1      Q2      Q3      Q4      Q1      Q2      Q3      Q4      Q1</td>
</tr>
<tr>
<td>Domestic demand excluding inventories</td>
</tr>
<tr>
<td>0.0     0.2      0.4      0.3      0.3      0.0      0.1      0.0   0.2</td>
</tr>
<tr>
<td>Inventories     -0.1   -0.1    -0.1    -0.1    -0.1    -0.1    -0.3    -0.1  0.1</td>
</tr>
<tr>
<td>Net exports     0.1   -0.1      0.2      0.0      0.1      0.1      0.1      0.0  0.1</td>
</tr>
</tbody>
</table>

Forecast

Sources: National statistical institutes, IMF, INSEE forecasts and calculations
Despite the recovery of world trade, exports fell in Q4 2012 (-0.6%), penalised by the contraction in demand from the Eurozone countries. At the start of 2013 demand for French products should pick up thanks to the rise in imports from the advanced countries, particularly Germany, while the adverse effects of the recent appreciation of the euro should be restricted. In H1 2013 exports are likely to grow by 0.6% in Q1, then 0.7% in Q2. At the end of H1 the growth overhang in exports of goods and services for 2013 should be 1.1%.

After two quarters of sharp decline, imports should pick up in H1 2013. They should be sustained by exports but still lack in dynamism bearing in mind the decline in corporate investment. The growth overhang in imports for 2013 should be small at the end of H1 (+ 0.4%).

All in all, between weak French demand and the recovery of foreign demand, the contribution of foreign trade to growth should remain slightly positive at the start of 2013 (0.0 point in Q1 then +0.1 point in Q2).

At the start of 2013, exports likely to be sustained by the rebound in demand from the advanced economies

In Q4 2012, French exports contracted (-0.6% after +0.7%, see Table). They were hit by the fall in demand from the USA and European countries, despite the global recovery of world trade. Indeed this rebound was of little benefit to French exports or to the advanced economies in general; French exports excluding the European Union stagnated, while sales to European Union countries shrank by 1.0%.

Exports of manufactured goods slipped back by 1.5%, after +1.3% in Q3 2012. This drop can mainly be explained by the sharp fall in sales of transport equipment (-6.8% after +7.7%), particularly in the automobile industry. However, exports of agricultural products leaped thanks to several major cereal contracts (+14.4%), while those of energy-water-waste increased sharply (+4.5%). Additionally exports of services continued to grow (+0.7%).

At the start of 2013, exports should pick up, growing by 0.6% in Q1 then 0.7% in Q2. They should be sustained by the growth in world trade (see Graph 1), which in H1 2013 should return to a rhythm close to its average of 2000-2007. World demand for French products should however remain less dynamic than world trade (see Graph 2). Indeed, demand from Spain and Italy should continue to fall in H1 2013 and it is mainly the rebound in German and American imports that will contribute to the recovery of world demand for French products. Furthermore, the effects of the past euro depreciation should start to fade within the forecasting period, while its appreciation since the end of 2012 should slow exports slightly (see Graph 3).

### Foreign trade growth forecast

Changes in % to the chained prices of the previous year. contributions in points

<table>
<thead>
<tr>
<th></th>
<th>Quarterly changes</th>
<th>Annual changes</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td><strong>Exports</strong></td>
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<tr>
<td>All goods and services</td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Non-energy industrial goods (75%*)</td>
<td>1.0</td>
<td>0.3</td>
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<tr>
<td><strong>Imports</strong></td>
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<tr>
<td>All goods and services</td>
<td>0.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Non-energy industrial goods (77%*)</td>
<td>0.8</td>
<td>2.3</td>
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<tr>
<td><strong>Contribution of foreign trade to GDP</strong></td>
<td>0.0</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

*Forecast
* Part of exports (resp. imports) of non-energy industrial goods in exports (resp. imports) in a whole in 2012.

Source: INSEE
Sales of manufactured products are likely to benefit from the upswing in foreign demand and should grow by 0.8% and 0.9% in Q1 and Q2 2013. Exports of services are likely to maintain the growth rate observed at the end of 2012, at 0.7% per quarter. However, exports of agricultural and energy products should remain stable through to mid-2013.

All in all in mid-2013, the growth overhang in exports should be +1.1%. France’s market share is likely to slide slightly over the forecasting period (see Graph 4).

Imports picking up slightly at the start of 2013

In Q4 2012 the decline in imports gathered pace (-0.8% after -0.5%), due to the sharp fall in purchases of manufactured goods. This decline affected all manufactured goods except for agrifood products, which increased. Imports of "other industrial products" in particular fell back (-2.5%), mainly pharmaceuticals. Elsewhere, imports of agricultural products and market services each dropped by 0.6% after two quarters of growth. All in all purchases from the European Union dropped sharply but those from other countries rose slightly.

In H1 2013 imports are likely to pick up, sustained by the growth in exports. This rebound is likely to remain moderate (+0.6% then +0.5% per quarter) because of weak domestic demand, most notably weak corporate investment. Imports of manufactured goods should rebound after two quarters of decline. Purchases of agricultural products should be stable over the forecasting period.

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1 - World demand for French products and contributions of the main partners

2 - World demand for French products and world trade

---

(1) via the import content of exports

Source: INSEE
Conjoncture in France

period, while energy purchases are likely to contract in Q1 (-2.5%) in reaction to the very strong trend towards destocking observed in Q4 2012.

In 2013, the growth overhang in total imports at the end of H1 should be +0.4%. In 2012 imports slipped back slightly (-0.3%). Indeed, purchases from non-EU countries fell back (-3.4%).

All in all, at the start of 2013 the contribution of foreign trade to growth should be nil in Q1 then +0.1 point in Q2. Over 2012 as a whole, the contribution of trade to growth was clearly positive, +0.7 point, thanks to a carryover effect in Q4 2011. However, over the four quarters of 2012 the contribution was virtually nil, illustrating the sluggishness of the economic situation in France and among its trading partners.

3 - Manufactured exports and econometric contributions

![Graph showing quarterly changes in % and contributions in points](image)

Source: INSEE

4 - Market share of France

![Graph showing base 100 in 2000](image)

How to read it: Market share is defined here as the report between French exports and world demand for French products

Sources: INSEE, Tresor
Tensions on the physical oil market are expected to remain limited into mid-2013. Oil production in Saudi Arabia dropped off sharply in late 2012, with the additional capacities of the OPEC producers increasing. Over the forecasting period the international oil supply should be sustained by the dynamism of American output. Demand should remain subdued in developed nations, as is to be expected as winter comes to an end, but this lack of dynamism is also linked to the poor state of economic activity in Europe.

In H1 2013 the price of oil should remain high, fluctuating around $110 per barrel of Brent crude. Lively geopolitical tensions remain an issue in Iran, but also in Mali and the risks for oil companies operating in the major oil-producing countries of the region (Algeria, Libya, Nigeria), have increased.

After the sharp rises seen in the summer due to droughts in the USA and the Ukraine, prices of agricultural commodities have been falling almost continuously since September 2012 thanks to strong harvests in the southern hemisphere. The prices of industrial commodities recovered slightly in late 2012, due to improved growth perspectives in China and the emerging Asian markets, as well as the USA. These prices are expected to stabilise in early 2013.

Rise in OPEC countries spare capacity in Q4 2012

In Q4 2012 non-stock demand for oil rose by 400,000 barrels per day in OECD countries. American consumption remained highly dynamic despite the end of the “driving season”, with demand sustained by unseasonably low temperatures. The cold also sparked a consumption spike in Japan. On the other hand, demand stagnated in Europe due to the decline in economic activity. In the advanced economies the increase in consumption was fully satisfied by a reduction in oil stocks. These stocks had increased considerably over the three previous quarters (see Graph 1).

In non-OECD nations, demand for oil was particularly dynamic in China (+500,000 bpd including stocks, see Graph 1) and the emerging Asian economies (+400,000 bpd including stocks), due to the acceleration of economic activity and some harsh temperatures. Chinese oil consumption was also sustained by advance buying ahead of a tax rise in January 2013. These increases were partially offset by the seasonal decline in demand in the Middle East and, all in all, demand for oil outside the OECD nations (not including stocks) rose by 400,000 bpd.

World oil production1 rose by 700,000 bpd in Q4 2012. With the end of seasonal constraints in the

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1 - In H1 2013, seasonal drop in oil demand

Sources: IEA, INSEE forecast and calculations

---

(1) Demand data (including stocks) and production data are those of the International Energy Agency. They do not coincide at the global level due to measurement inaccuracy.
Gulf of Mexico and the enduring dynamism of extraction from non-conventional sources, American oil production grew strongly in Q4. However the recovery of oil production remained limited in Europe, with maintenance work in the North Sea taking longer than usual.

At the same time, production declined strongly in the OPEC nations (-600,000 bpd), particularly since Saudi Arabia decided to significantly reduce production. Spare capacity from OPEC producers therefore increased (see Graph 2), a sign that tensions on the physical market have eased.

The physical market should ease further in H1 2013...

In Q1 2013 the situation in the physical market should remain positive: oil supply and demand should decrease together, and OPEC spare capacity should not be diminished.

Slow economic growth should aggravate the seasonal decline in consumption in Europe. Having been sustained by temperatures which were lower than usual in late 2012, demand should also drop off in the United States and, to a lesser extent, in China, since in the latter market some consumption was anticipated in Q4 2012.

According to the available production data (up to January 2013), oil production should drop off again in the OPEC nations in Q1. In Saudi Arabia in particular, production in January remained close to the low point reached in December 2012, while its spare capacity remained stable. On the other hand, reduced production in Iraq and Iran reflect supply constraints (see Graph 3). In Iraq, the oil supply should continue to be disrupted in the north of the country by tensions with the Kurdish government. In the south, technical incidents at the port terminals in December 2012 and January 2013 have affected the country’s exports and production, as the storage capacities of these ports are insufficient. In Iran enhanced American economic sanctions came into effect at the start of February 2013, with the freezing of oil revenue in importing countries, and these measures are expected to further weaken the country’s crude oil exports. Meanwhile the supply of liquefied natural gas should stagnate in Q1 2013, adversely affected by the terrorist attack on Algeria’s In Amenas complex.

Supply and demand should thus drop off in Q1 2013, while conditions on the physical market remain positive.

In Q2 2013, tensions in the physical markets should remain low: demand should subside, and total additional production capacity should increase. Indeed as winter comes to an end, oil consumption in the advanced economies should drop off considerably, particularly in Japan (-1.1 million bpd) following the usual pronounced seasonal trend (see Graph 1). Nonetheless, demand should remain dynamic in non-OECD countries, particularly in the Middle East where it will be sustained by seasonal consumption and increased public spending.

At the same time supply should grow slightly, thanks to the OPEC nations where the production of liquefied natural gas should recover after suffering in Q1 2013 from the fallout of the hostage siege at the In Amenas gas complex in Algeria. Moreover, after significantly reducing production in late 2012 Saudi Arabia has enough spare capacity to rapidly increase its oil production. Outside of the OPEC producers oil supply should remain stable; the decline in European production, with the beginning of maintenance work in the North Sea, and the stagnation of American production due to the beginning of the bad weather season in the Gulf of Mexico, should be offset by the seasonal increase in biofuel production.

Sources: IEA, Financial Times, INSEE forecast
**Conjoncture in France**

**... but the price of Brent should remain high at $110 per barrel**

Having remained relatively stable in late 2012, fluctuating around the $110-per-barrel mark, oil prices are up again in early 2013. Prices rose by 2.6% in January then 3.8% in February, reaching $116 per barrel (see Graph 2). Despite the increase in OPEC’s spare capacity and in the stocks held by OECD countries, as well as economic forecasts which remain poor for Europe, prices should continue to be influenced by persistent concerns over OPEC supply. On the one hand, following the hostage drama in Algeria and the war in Mali, foreign oil companies operating in Libya and Nigeria have updated their security policies. Moreover, with enhanced American sanctions taking effect, Iranian production could fall sharply, and it seems unlikely that negotiations over the country’s nuclear programme will reach a successful conclusion before the presidential elections scheduled for June 2013. In H1 2013 oil prices will remain high, fluctuating at around $110 per barrel of Brent crude.

**Excluding energy, agricultural commodity prices have continued to fall but metal prices are on the rise**

Agricultural commodity prices are still on a downward trajectory in early 2013. Abundant cereal grain and soybean harvests in the southern hemisphere partly compensated for the drop-off in American and European production, which suffered as a result of drought. After the rapid price rises seen in Q3 2012 (+35.9% for wheat, +26.7% for corn and +30.8% for soybeans), cereal and soybean prices have been falling almost continuously since September 2012 (see Graph 4). At the end of February 2013 the growth overhangs for Q1 2013 were clearly negative: down by 11.7% for wheat, 3.6% for corn and 7.3% for soybeans. The rain which arrived in early February assuaged the lingering concerns over soybean harvests in South America, and over the yield of the cereal crops sown this winter in the USA. Industrial metal prices rose in late 2012 (copper +2.6% and aluminium +4.1% in Q4, see Graph 5), in line with the upturn in China and the positive signals coming from the American real estate market. At the end of February 2013 the growth overhang for Q1 2013 was +2.0% for copper and +2.3% for aluminium.

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**3 - Saudi, Iranian and Iraqi productions down**

![Graph showing Saudi, Iranian, and Iraqi oil productions](chart1.png)

Source: IEA

**4 - Prices of food commodities**

![Graph showing prices of wheat, maize, and soybeans](chart2.png)

Source: DataInsight
5 - Prices of industrial metals

In US $ per tonne

Source: London Metal Market
Headline inflation reached 1.0% in February 2013 and, after a slight drop in March, should rise slightly to 1.2% in June 2013. The cause of this profile is energy inflation, which should decrease through to April then pick up again.

Core inflation is likely to fall to 0.4% by June 2013, after 0.6% in February. High unemployment should continue to limit inflationary pressure. The spread of imported industrial commodity price rises should continue to exert an upward pressure on inflation: the year-on-year growth in prices of manufactured goods should thus diminish through to June. However, the year-on-year change in prices of services should rise slightly, as the drop in telecommunications prices are likely to be smaller than those of last year. Non-seasonal food prices should pick up, sustained by the spread of price rises in imported food commodities in 2012.

Energy inflation on the rise

The year-on-year energy price rise stood at 2.4% in February 2013. It should fall to 0.6% in April and then rise again to 4.8% in June. Against a backdrop of the stabilisation of the Brent price at €84.0 over the forecasting period, the exit of the sharp increases observed over the first few months of 2012 from the year-on-year figures should mechanically contribute to the drop in energy inflation until April. It should then rise under the effect of the exit of the rises of May and June 2012 from these figures. Overall, the contribution of this item to headline inflation should diminish in H1 2013 (see Graph 1).

Inflation in manufactured goods falling

The year-on-year change in the prices of manufactured products should fall to -0.5% in June 2013, after -0.2% in February. The low production capacity utilisation rates and the high unemployment rate should contribute to moderating inflationary pressure in the manufacturing sector. Additionally, the year-on-year change in the prices of clothing and footwear should fall to -0.4%, after 0.3% in February, under the effect of the drops in cotton prices since the end of 2011. Similarly, the year-on-year change in the prices of other manufactured products is likely to fall to 0.1% in June 2013, after 0.7% in February, because past rises in the prices of industrial commodities should have stopped spreading.

Inflation in services likely to rise

The year-on-year change in the prices of services should increase to 1.3% in June 2013, after 1.0% in February. As in the manufacturing sector, the high level of unemployment should continue to take its toll on wages, contributing to a moderation of the prices of services. However, the price cuts in telecommunications (see Focus) should be lower than in 2012, and the year-on-year change in the prices of transports and communications should rise.

**1 - Inflation in France: contributions of the most volatile items**

![Chart showing contributions of the most volatile items](image_url)

Source: INSEE
Inflation in foodstuffs down slightly, "non-seasonal" products on the rise

The year-on-year change in the prices of foodstuffs should drop slightly to 1.4% in June 2013, after 1.7% in February (see Table), with divergences between seasonal and non-seasonal products. On the one hand, the year-on-year rise in seasonal products, which was high in February (5.6%), should come down to 0.7% over the forecasting period. Conversely, the increases in food commodity prices since the start of 2012 should filter through to consumer prices of non-seasonal food products; the year-on-year changes in these prices should increase to 1.6% in June 2013, after 1.1% in February.

A fall in core inflation, headline inflation stable

Core inflation is measured by taking all prices of energy and seasonal food products and public prices out of the headline index and correcting for any fiscal measures. Over the forecasting period, the year-on-year figure for core inflation should fall to 0.4%, after 0.6% in February (see Graph 2). Generally speaking, in a context of high unemployment the bargaining power of employees tends to weaken, thereby slowing wages and moderating inflationary pressure. The changes in the various items of core inflation should contrast, however: inflation in manufacturing goods should decline; and the prices of non-seasonal foodstuffs should pick up.

Headline inflation stood at 1.0% in February 2013. It should fall to 0.9% in April and then stand at 1.2% in June 2013. This trend is likely to be the result of the energy inflation profile.

2 - Consumer prices in France

Source: INSEE
### Consumer prices
changes as %

<table>
<thead>
<tr>
<th></th>
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<tbody>
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<td>yay</td>
<td>cyoy</td>
<td>yay</td>
<td>cyoy</td>
<td>yay</td>
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<tr>
<td><strong>Food (16.4%)</strong></td>
<td></td>
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<tr>
<td>including: seasonal food products (2.1%)</td>
<td>7.7</td>
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<td>5.6</td>
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<td><strong>Tobacco (2.0%)</strong></td>
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<tr>
<td></td>
<td>6.9</td>
<td>0.1</td>
<td>7.0</td>
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<td><strong>Energy (8.7%)</strong></td>
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<td>including: oil products (5.2%)</td>
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<td>0.2</td>
<td>2.4</td>
<td>0.2</td>
<td>0.9</td>
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<td><strong>Services (43.1%)</strong></td>
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<td>including: rent-water (7.4%)</td>
<td>1.3</td>
<td>0.5</td>
<td>1.0</td>
<td>0.4</td>
<td>1.1</td>
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<td>health services (5.3%)</td>
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<td>0.2</td>
<td>2.1</td>
<td>0.2</td>
<td>2.0</td>
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<tr>
<td>transport-communications (5.2%)</td>
<td>1.3</td>
<td>0.1</td>
<td>1.3</td>
<td>0.1</td>
<td>1.3</td>
</tr>
<tr>
<td>other services (25.2%)</td>
<td>-5.2</td>
<td>-0.3</td>
<td>-7.4</td>
<td>-0.4</td>
<td>-6.9</td>
</tr>
<tr>
<td><strong>All (100%)</strong></td>
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<td>0.6</td>
<td>2.3</td>
<td>0.6</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>All excluding energy (91.3%)</strong></td>
<td>1.3</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>All excluding tobacco (98.0%)</strong></td>
<td>1.2</td>
<td>1.1</td>
<td>1.4</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Core</strong> inflation (60.9%)</td>
<td>0.7</td>
<td>0.4</td>
<td>0.6</td>
<td>0.4</td>
<td>0.5</td>
</tr>
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<td><strong>All HCPI</strong></td>
<td>1.5</td>
<td>1.5</td>
<td>1.3</td>
<td>1.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

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Forecast
yay: year-on-year
cyoy: contribution to the year-on-year value of the overall index
*Consumer price index (CPI) and harmonised consumer price index (HICP)
(1) Index excludes public tariffs and products with volatile prices, corrected for tax measures

Source: INSEE
Consumer price index: how are new products integrated?

Around a thousand varieties of products are tracked in order to measure consumer prices

This Focus presents the mechanism used to include new products in the calculation of the consumer price index (CPI) and illustrates the process with the visible consequences of the arrival on the market of a new mobile phone operator in January 2012.

The CPI is based on an internationally standardised methodology which, for the most part, is inscribed in the European regulations governing calculations of the harmonised indices of consumer prices. For the requirements of calculating the CPI, INSEE tracks a basket of around a thousand varieties of products (goods and services) which are representative of household consumption, involving around 200,000 monthly readings of the prices of the relevant items. Each variety contributes to the consumer price index proportionally to the weight it represented in household consumption expenditure over the previous year. As well as the data collection performed by the field investigators, the INSEE performs centralised readings and, where necessary, works in conjunction with institutional partners to track consumer prices in specific sectors. This is most notably the case with mobile telephony services, which are tracked in close collaboration with the French Telecommunications and Posts Regulator (ARCEP).

Product offerings and consumer preferences are ever-changing

Consumption evolves continually: old products give way to new ones as product offerings and consumer preferences change. The inclusion of new products is an important issue for consumer price indices. It has already been widely studied, most notably by the Boskin Commission in the USA at the end of the 1990s. This commission concluded that the basket of goods and services used for consumer price indices should be regularly adapted to take changes in consumer behaviour into account, as otherwise measured inflation could be overestimated. The risk appears to be less serious for the French CPI, because like most developed countries France conducts an annual revision of the list of product varieties tracked in the CPI.

Products that disappear from the basket of goods are replaced

New products are included in the CPI either to replace an item that can no longer be tracked or as a brand new product. A replacement occurs when an item that used to be tracked in a given outlet disappears. In this case the INSEE replaces it, generally in the same outlet, selecting the new item from among those available for sale and similar in purpose to the previous one. The replacement must therefore belong to the same product variety. Where necessary, the INSEE corrects the price of the new item in order to neutralise the proportion of the price difference between the two items that is linked to the differences in characteristics between them. For example, each year an econometric model is determined describing the price of washing machines according to product characteristics such as brand, drum rotation speed, capacity, or type of opening. If the investigator proposes to replace a washing machine that offers 1000 RPM by one with 1200 RPM, all else being equal, the price variation included in the price index is that actually observed between the two washing machines, corrected for the price difference predicted by the model and conditional upon the difference in characteristics between the machines. This correction serves to measure inflation at constant product characteristics.

New products are included annually

Newly consumed goods which do not belong to one of the 1,000 varieties making up the basket of goods and services tracked for the year are introduced into the CPI basket during the annual renewal. The new varieties are included in the consumer price index basket without generating any variation in index.

When a new product arrives on the market, its consumption generally rises gradually over a period of several months, so the fact that the CPI basket of goods and services is updated annually allows the inclusion of new products at the moment when the share they represent in household consumption expenditure has become significant. However, some goods such as technological products which are highly fashionable as soon as they enter the market immediately represent a significant share of consumption. By definition, in the year that they appear on the market the prices of these goods are not directly tracked in the consumer price index. And yet in the first year their appearance has an indirect impact on measured inflation, via the competitive pressure that these new products exert on similar goods that do feature in the CPI basket.

The case of mobile telephony in 2012 and 2013

The arrival of a new mobile phone operator in January 2012 is a good illustration of this mechanism, and its impact on the consumer price index of telecommunication services was very marked. In this index in 2012, mobile telephony weighed around 50% in the grouping that also covers landline telephony, internet services, and multi-play services. As regards mobile telephony, the index is based on the tracking of a set of services, each one associated with a particular operator. In this system, a new operator that arrives on 1st January 2012 is associated with new services. However, these services cannot be included in the CPI basket until January 2013, when the market share associated with the new services, if it is significant, is known.

Since January 2013 the new operator has been included in the CPI basket: the price variation of the new operator observed between December 2012 and January 2013 contributed directly to the calculated variation in the index.
**Conjoncture in France**

**Year on year index of telecommunications services between 2005 and 2013**

Source: INSEE

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**Bibliography**


Non-agricultural market employment fell once again in Q4 2012 (-45,000 jobs). Employment dropped sharply across all sectors.

Through to mid-2013, the decline in employment is likely to continue in the market sectors: 74,000 jobs likely to be lost in H1 2013, after 91,000 in H2 2012.

In the non-market sectors however, employment should climb once again, most notably due to the increase in the number of newcomers to the «future jobs» scheme: 30,000 jobs should be created in the non-market sectors in H1 2013. All in all, market and non-market employment is likely to continue to fall in H1 2013. Job losses should nonetheless be far less extensive than in H2 2012 (-37,000 jobs after -88,000), thanks to the increase in subsidised employment schemes.

In the tertiary sector job losses should slow

In H2 2012 employment in the tertiary sector declined, with 64,000 jobs losses after a moderate rise in H1 (+8,000 jobs). The drop in temporary employment, which is counted in the tertiary sector regardless of the sector in which the work is performed, was significant (-38,000 jobs). Temporary employment seems to be the first component of employment adjustment: in 2010, after activity picked up once again, growth in employment was mainly down to temporary work; since 2011 however, the stability of activity has led...
once again to a sharp decline in temporary employment. After 61,000 job losses in 2012, temporary employment is set to lose another 24,000 jobs in H1 2013.

In the tertiary sector excluding temporary work, employment also slipped back at the end of 2012 (-25,000 jobs in H2). In H1 2013, employment is likely to fall less markedly in this sector (-11,000).

All in all, the drop in market-sector tertiary employment including temporary work should be smaller in H1 2013 than at the end of 2012 (-36,000 jobs, against -64,000 jobs in H2 2012).

**Fall in industrial employment**

While it held up in 2011 (-6,000 jobs), industrial employment slipped back in 2012 (-29,000) in the wake of the sharp downturn in industrial activity (see Graph 3). Industrial job losses are likely to continue further in H1 2013 (-25,000).

The deterioration in industrial employment looks even more marked when the changes in numbers of temporary staff working in the sector are taken into account. While the rate of recourse to temporary employment in mid-2011 almost returned to its pre-crisis level (7.8% in Q2 2011, see Graph 4), it has since slumped and stood at 6.2% in Q4 2012. As early as H2 2011, as is usually the case in an economic slowdown, the number of temporary workers in industry fell back (-20,000 jobs) and the drop continued in 2012 (-41,000 temporary workers). The rate of recourse to temporary employment in industry should fall slightly in early 2013. All in all, industrial employment including temporary labour used in the sector should decrease once again by 36,000 jobs at the start of 2013, after shedding 39,000 jobs in H2 2012. This decline in industrial employment is globally comparable to the average observed since the start of the 2000s, despite a particularly poor current economic environment.

This shows a certain resistance on the part of industrial employment, which has been visible since 2009.

**The decline in employment has gathered pace in construction**

In construction there has been no employment recovery phase since the start of the crisis in 2008. Job losses continued throughout 2011 (-11,000 jobs in the year) while the other market sectors were creating jobs. In H1 2012, although activity was picking up slightly in the sector, employment remained in a downward trend (-3,000 jobs over the half-year). The decline of the labour force was sharper in H2 2012 (-11,000 jobs) and is set to gather pace once again in H1 2013 (-14,000 jobs) due to deteriorating activity in this sector.

**Non-market employment likely to rise once again thanks to subsidised jobs**

In 2012, 17,000 jobs were created in the non-market sector. This weak progress partly stems from the drop in the number of subsidised work contracts (-6,000 beneficiaries in the non-market sector in 2012, see Focus, “Subsidised labour contracts in 2012”). While the number of beneficiaries increased in H1 2012, it slipped back in H2.

The Finance Law for 2013 provides for 403,000 newcomers to the subsidised contract scheme, including 92,000 for “Future Jobs” contracts, after 395,000 observed in 2012 in Metropolitan France. These newcomers should be evenly spread over the year and the number of subsidised contract beneficiaries should increase significantly in H1 2013 (+35,000, see Table 2). All in all, after a drop in H2 2012 (-8,000 jobs), non-market employment should climb once more in H1 2013 (+30,000 jobs).
3 - Paid employment in the non-agricultural market sectors

4 - Rate of use of temporary employment by sector

Source: INSEE
Conjoncture in France

### Table 1

#### Change in employment

<table>
<thead>
<tr>
<th>Job creations over the period (in thousands)</th>
<th>Change in employment over the period (%)</th>
<th>Level of the end of the period (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>seasonally adjusted</td>
<td>seasonally adjusted</td>
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<tr>
<td>--------------------------------------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------</td>
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<tr>
<td><strong>Market sector employees (1)+(2)</strong></td>
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<tr>
<td>70</td>
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<td>4</td>
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<tr>
<td><strong>Mainly non-agricultural market sectors (1)</strong> (private establishments only)</td>
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<td>15</td>
<td>23</td>
<td>13</td>
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<tr>
<td><strong>Mainly non-market sectors (2)</strong></td>
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<td>55</td>
<td>-99</td>
<td>-9</td>
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<td><strong>Industry</strong></td>
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<td>-6</td>
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<td>-14</td>
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<tr>
<td><strong>Including:</strong></td>
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<tr>
<td><strong>Manufacturing industry</strong></td>
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<tr>
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<td>-3</td>
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<tr>
<td><strong>Tertiary market sector</strong></td>
<td></td>
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<tr>
<td>72</td>
<td>-56</td>
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<tr>
<td><strong>Including:</strong></td>
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<td><strong>Trade</strong></td>
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<td>20</td>
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<td>-3</td>
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<tr>
<td><strong>Market services</strong></td>
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<tr>
<td>(including temporary work)</td>
<td></td>
<td></td>
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<tr>
<td>52</td>
<td>-36</td>
<td>11</td>
</tr>
</tbody>
</table>

**Market sector employees** includes private establishments.

**Mainly non-agricultural market sectors** include private establishments.

**Mainly non-market sectors** include private establishments.

**Self-employed**

**Total Employment**

Forecast
(1) Sectors OQ (private workers)
(2) Sectors DE to MN and RU

How to read it: 62,000 jobs should be destroyed in the market sector during H1 2013. This corresponds to a decrease of 0.3% over the half-year. This sector should employ 17,854,000 workers at June 30th 2013.

Source: INSEE

### Table 2

#### Change in subsidised employment in the non-market sector

<table>
<thead>
<tr>
<th>in thousands</th>
</tr>
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<tbody>
<tr>
<td>2010</td>
</tr>
<tr>
<td>Emplois for the future</td>
</tr>
<tr>
<td>[CUI-CAE replaces CAE + CAV on 01/01/10]</td>
</tr>
<tr>
<td>Contract to Support Employment (CAE)</td>
</tr>
<tr>
<td>Contract for the Future (CAV)</td>
</tr>
<tr>
<td>Young worker’s contract</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Forecast
Note: Including renewal addenda
Source: DARES, INSEE.
Subsidised labour contracts in 2012

Via direct and indirect aid, subsidised contracts reduce the cost to employers of hiring or training certain employees. These subsidised jobs are usually destined as a priority for targeted populations such as the long-term unemployed or young people. In 2012, excluding sandwich courses, virtually all the new beneficiaries of subsidised contracts were given a “single integration contract (contrat unique d’intégration, CUI).” This contract which came into force on 1st January 2010 replaced the contracts that existed previously. Additionally, the “future jobs” scheme was set up in November 2012, although at the end of 2012 the number of beneficiaries of such contracts remained low (1,000).

“Future jobs” are destined for people aged 16 to 25 with few or no qualifications, and as a priority in sensitive urban areas or rural development zones. They are mainly in the non-market sectors (social careers such as teaching or personal assistance), but may also concern the green, digital and tourism industries. Both market-sector CUI and non-market sector CUI are offered to a broader population of people who have difficulty joining the labour market (job applications repeatedly rejected, etc.), irrespective of age or place of residence.

Subsidised contracts are often used counter-cyclically: when an economic downturn occurs the volume of subsidised contracts can be increased rapidly in order to temper the effect of job losses and the resulting rise in unemployment. In the short term, the effect of these contracts on employment differs depending on whether they apply to the market sector or the non-market sector. In the non-market sector the number of jobs created is simply equal to the difference between the contracts signed or renewed and the number of people leaving the contracts in the course of the year. In the market sector however, some of the jobs in an aid scheme would have been created even if the scheme had not existed. So there is a “deadweight” or substitution effect, the scale of which may differ from one contract to the next. The effect on employment of subsidised contracts in the market sector is thus smaller than the variation in the number of beneficiaries. This effect is estimated through empirical studies (Dares, 1996).

Additionally, these evaluations are only valid in the short term. Long-term assessments would require taking into account:

- all the consequences of such schemes on the labour market (adjustment of wages, of labour force participation rates…),
- their effects on human capital, in particular changes in the beneficiaries’ ability to integrate the labour market,
- the impact of the financing method on the economy.

The inclusion of these various long-term effects would be likely to alter the evaluations presented here substantially.

The number of beneficiaries of subsidised contracts in the non-market sector was stable in 2012

In 2012, subsidised employment in the non-market sector was almost stable, with 199,000 beneficiaries of subsidised contracts at the end of 2012 (205,000 at the end of 2011), after a drop of 50,000 in 2011. The total number of non-market subsidised contracts signed or renewed did indeed increase sharply over 2011, with 395,000 contracts in 2012 against 356,000 in 2011 (see Table), in particular because the authorised number of CUI was raised twice in the course of 2012. The number of people leaving the contracts remained at an equivalent level to that of 2011, however. Among these subsidised contracts, 1,000 are “future jobs” set up on 1st November 2012.

Drop in all subsidised contracts in the market sector in 2012

At the end of 2012, the number of beneficiaries of subsidised contracts¹ in the market sector was 622,000, i.e. a drop of 24,000 against 2011. This diminution is due to the simultaneous fall in contracts allowing lower wage costs (CUI in the market sector) and in sandwich courses, particularly professionalisation contracts. The global effect of market-sector subsidised contracts on employment growth is likely to have been slightly negative: 2,000 jobs appear to have been destroyed in 2012 when the deadweight and substitution effects are taken into account.

More than 90% of subsidised contracts in the market sector are sandwich courses: at the end of 2012, apprenticeship or professionalisation contracts had 591,000 beneficiaries, 5,000 jobs fewer than in 2011. There were slightly fewer newcomers to these schemes in 2012 than in 2011: 449,000 newcomers against 459,000 the previous year. The number of newcomers increased for apprenticeship contracts (294,000, a rise of 4,000), but slipped back for professionalisation contracts (155,000, a drop of 14,000).

The other market-sector subsidised contracts are contracts that lower wage costs. There were 31,000 beneficiaries at the end of 2012, i.e. 19,000 fewer than at the end of 2011. Among them, the CUI is still predominant, although in 2012 the number of beneficiaries of this contract fell by 17,000 to stand at 26,000 at the end of the year. The recorded newcomers to the market-sector CUI (51,000) were indeed fewer than the number of leavers (68,000). Additionally, the number of beneficiaries of schemes allowing social contribution exemptions in rural development zones and in urban rehabilitation areas has been virtually stable since 2009 (5,000 beneficiaries at the end of 2012).

(1) Single integration contract (CUI), sandwich courses, (professionalization, apprenticeship), exemptions from social charges (ZRR and ZRU)
## Subsidised employment contract schemes: flows and number of beneficiaries

**in thousands, raw data**

<table>
<thead>
<tr>
<th></th>
<th>Flows of newcomers (including contract renewals)</th>
<th>Variation in number of beneficiaries (y-o-y, end of year)</th>
<th>Number of beneficiaries (end of year stock)</th>
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<tbody>
<tr>
<td><strong>Subsidised employment in the non-market sector</strong></td>
<td></td>
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<td></td>
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<tr>
<td>including:</td>
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<tr>
<td>Non-market CUI</td>
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<td>377</td>
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<td>Contract to Support Employment (CAE)</td>
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<td>&quot;Future jobs&quot;</td>
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<td>Young Worker's Contract</td>
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<tr>
<td>Reduction in wage costs</td>
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<td>Market CUI</td>
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<td>550</td>
<td>547</td>
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<td>Exemptions from social charges (ZRR and ZRU)</td>
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<td>Youth Work Contract</td>
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<tr>
<td>Employment Initiative Contract (old and new formula)</td>
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<td>6</td>
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<td>CI-RMA (old and new formula)</td>
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<td>Sandwich training courses</td>
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<tr>
<td>Apprenticeship</td>
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<td>425</td>
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<td>Professionalization</td>
<td>293</td>
<td>284</td>
<td>284</td>
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<tr>
<td><strong>Reduction in wage costs</strong></td>
<td>175</td>
<td>141</td>
<td>144</td>
</tr>
</tbody>
</table>

* Excluding general measures such as general reductions in social contributions and reduction of working tim

Sources: DARES, Agence de services et de paiement

### Bibliography

DARES (1996), « 40 ans de politique de l’emploi », December, La Documentation française.


In Q4 2012, the unemployment rate settled at 10.2% of the active population in Metropolitan France (10.6% including overseas departments), 0.3 point up on the previous quarter. Since mid-2011, it has increased by 1.1 point in Metropolitan France.

The unemployment rate should keep on rising over the forecasting period. In mid-2013, it should stand at 10.6% in Metropolitan France (11.0% including overseas departments).

In Q4 2012, the unemployment rate stood at 10.2% of the active population

In Q4, the unemployment rate increased for the sixth consecutive quarter (see Graph 1), reaching 10.2% in Metropolitan France (10.6% including overseas departments). In one year the number of unemployed people increased by 266,000. On the one hand total employment has dropped, by 40,000 jobs between December 2011 and December 2012. On the other hand, the active population has increased sharply, by 226,000 people in one year. The effects of retirement reform, and particularly the raising of the legal retirement age from 60 to 60 years and nine months, have contributed to this dynamic expansion of the active population.

Youngsters, the first victims of unemployment

In 2012, the unemployment rate grew across all age categories, but the rise was much higher among people aged under 25: +1.6 point in Q4 2012, and +3.4 points over one year (see Graph2). The unemployment rate among young men started to increase as early as end 2011; and that of young women since mid-2012. All in all, 25.7% of young active people were unemployed at the end of 2012. Since mid-2011, a further quarter of unemployed people have been under 25, while they only represent 19% of the 15-64 age bracket.

The unemployment rate among people aged 50 or over increased by 0.4 point in Q4 2012, and that of people aged 25 to 49 by 0.1 point. It stands at respectively 7.2 and 9.1% of the active population. Since mid-2011, the rise has been equal in scale for the two age groups, that is, +1.0 point.

Men and women affected equally by the rise in unemployment over one year

At the end of 2012, the unemployment rates of men and women were once again very similar (respectively 10.2% and 10.3%). The unemployment rate among men dropped in 2010 before rising sharply again in 2011 following the fluctuations in...
Conjoncture in France

temporary work, where men are very much in the majority (see Employment note). Conversely, the unemployment rate among women remained globally stable in 2010 and in 2011. However, since the start of 2012 the unemployment rates among men and women have been rising in similar fashion.

Unemployment likely to carry on rising through to mid-2013...

Over the forecasting period, the unemployment rate should keep rising. It should reach 10.6% in Q2 2013 (11.0% including overseas departments). Indeed, there are likely to be many job losses: total employment is set to fall by 49,000 between end December 2012 and end June 2013 (see Table).

... however, the active population should grow less rapidly over the forecasting period

On the one hand the short-term growth of the active population should be lower: an increase of 59,000 people in H1 2013, after 72,000 in H2 2012. Indeed since 2011 the first wave of the baby boom generation have now passed the full retirement age (65 years and 4 months), meaning that the general demographics of the active population are less dynamic: those generations entering the 15-64 age group are smaller in number than those leaving this group. In 2013, this trend has accelerated. Moreover, two further effects could potentially impact on the underlying trend. The entry into force, as of November 2012, of the decree of 2nd July 2012 introducing new measures which allow for retirement at age 60 for those who have worked for a certain number of years is expected to slow down the growth of the active population. On the other hand, the decree of 29th December 2011 postponing by one month the age of entitlement to pensions for people born after 1st January 1952 is likely to increase the number of older workers on the labour market, starting from the second half of 2012. The estimated effects of these two measures balance each other out. They have been accounted for as consequences of public policy decisions (see Table). Lastly the "flexion" effects, which have become non-significant since 2008, have been revised: they therefore no longer contribute to variations in the active population (see Focus).■

2 - Unemployment rate in the sense of the ILO by age ranges

Scape: Population of households in Metropolitan France, people aged 15 or over
Source: INSEE, Labor Force Survey
## Changes to the active population, employment and unemployment in Metropolitan France

Quarterly means, in thousands

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<tr>
<td>(a) Contribution of the population and the trend participation rate</td>
<td>41</td>
<td>41</td>
<td>41</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>30</td>
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<td>159</td>
<td>164</td>
<td>144</td>
<td>59</td>
<td>148</td>
<td>159</td>
</tr>
<tr>
<td>(b) Estimated bending effects</td>
<td>-9</td>
<td>-2</td>
<td>-1</td>
<td>.5</td>
<td>8</td>
<td>-2</td>
<td>2</td>
<td>1</td>
<td>-6</td>
<td>7</td>
<td>49</td>
<td>-57</td>
<td>-17</td>
<td>9</td>
<td>1</td>
<td>49</td>
<td>-57</td>
<td>-17</td>
<td>9</td>
<td>1</td>
<td>49</td>
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<tr>
<td>(c) Other short-term fluctuations (residual)</td>
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<td>9</td>
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<td>Reminder: End-of-period employment (see “Employment” note)</td>
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<td>44</td>
<td>.23</td>
<td>5</td>
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<td>-8</td>
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<td>80</td>
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<td>266</td>
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<td>531</td>
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</table>

|                      |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Quarterly means      |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ILO unemployment rate (%) |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Metropolitan France  | 9.1     | 9.1     | 9.2     | 9.4     | 9.6     | 9.8     | 9.9     | 10.2    | 10.4    | 10.6    | 9.6     | 9.3     | 9.4     | 10.2    | 10.6    | 9.6     | 9.3     | 9.4     | 10.2    | 10.6    | 9.6     | 9.3     | 9.4     |
| France (including overseas departments) | 9.6     | 9.5     | 9.6     | 9.8     | 10.0    | 10.2    | 10.2    | 10.6    | 10.8    | 11.0    | 10.0    | 9.7     | 9.8     | 10.6    | 11.0    | 10.0    | 9.7     | 9.8     | 10.6    | 11.0    | 10.0    | 9.7     | 9.8     |

### Forecast

How to read it: Employment and unemployment are not estimated here within strictly equivalent scopes: total population for employment, population of households (excluding collective) for unemployment. As the impact of this difference is very minor (the population outside of households represents less than 1% of the active population), it is neglected here for the unemployment forecasting exercise.

Source: INSEE
The crisis has modified cyclical effects on labour market participation

Changes in active population in Conjoncture in France: the "flexion effects" question

Changes in labour force participation rates depend both on structural factors and on cyclical mechanisms. The quarterly trend in the gap between observed labour force participation rates and trend labour force participation rates (Filatriau O. Insee Première n°1345, April 2011) represents the cyclical component of the change in activity behaviour. At the height of the crisis in 2008-2009 and since mid-2011, this cyclical component has shown a considerable rise (see graphs 1a and 1b).

It is important to take account of this cyclical component when analysing unemployment. In Conjoncture in France, for example, the forecast of the active population and the employment forecast determine the unemployment figure forecast. The active population forecast is based primarily on the trend projections prepared by INSEE. For the outlook forecasts, short-term effects are then added to these long-term trends. These short-term effects show the effects of public policies that were not taken into account in the baseline scenario, and also "flexion effects". Flexion effects express the idea that the individual's decision to be active or inactive is influenced by the short-term economic situation. It can therefore be imagined that, in a poor economic situation, unemployed people feeling discouraged by their inability to find a job might withdraw from the active population, meaning that they stop actively looking for a job or no longer make themselves available for one. This is called the "discouraged worker effect". But there is also a second effect known as the "added worker" effect that can influence

---

(1) These projections appear in line (a) of the table, tracing changes in the active population, employment and unemployment in the note on "Unemployment".

**1a - GDP Growth and differences between the variation of activity observed and the variation trend participation rate for the population aged 15 or more**

Scope: GDP, whole France, activity rate and unemployment rate, metropolitan France, population of households.


---

**1b - Variation of unemployment rate and differences between the variation of activity observed and the variation trend participation rate for the population aged 15 or more**

Scope: GDP, whole France, activity rate and unemployment rate, metropolitan France, population of households.

changes in the active population: when the economic situation is poor, the loss of earnings or a job by one member of a household may lead another member to increase the work they offer\(^2\). These two effects are opposite to each other.

**In recent years, activity among seniors has been influenced more by pension reforms than by the economic situation**

For seniors, the labour force participation rate has taken an upturn and been increasing since 2008 (see graph 2). This rise is largely due to the pensions reform of 2003, increasing the required contribution period from 40 to 41 years, by a rise of one quarter a year as of 2009. However, the progression that has been observed is greater than the effect expected in the active population trend projections.

(2) Symmetrically, in a positive cyclical phase, the "discouraged worker" effect causes individuals to become part of the active population because the probability of finding a job improves, while the "added worker" effect becomes a disincentive to participate as the probability of another member of the household working becomes greater.

(3) A slowdown was expected, given the likelihood that activity among women in this age bracket would reach a ceiling level, but the observed slowdown is much sharper than forecast.

**The "discouraged worker" effect seems predominant for intermediate age groups**

From 2003 to 2012, the intermediate age brackets followed quite regular activity trends without any very sudden shifts, although with a few turning points (see graph 3). The labour force participation rate of men aged 25 to 49 has fallen slightly since 2008, while that among men of ages 50 to 54 dropped significantly in 2011 but seems to be increasing again in 2012. For women aged 25 to 49, the continuous rise recorded for several decades has slowed down noticeably since 2008\(^3\) while for those of ages 50 to 54, the labour force participation rate continues to increase, despite a slight drop in 2011.

**Activity among young people has been particularly volatile since the beginning of the crisis**

Among young people, labour force participation rates since the beginning of the crisis have been significantly different from those prior to 2008 (see graph 4). After remaining more or less stable since 2003, the activity of young people, in particular women, increased notably between 2008 and 2009, at the height of the crisis. These progressions have

---

**2 - Activity rates by sex of the 50-54 years old**

**3 - Activity rates by sex of the 25-49 years and the 50-54 years old**

Scope: Metropolitan France, Population of households

been offset, however, by later falls and the labour force participation rate of the 15-24s has today returned to its pre-crisis level for women, and is even lower for men.

Since 2008, the econometric estimation of flexion effects according to the employment rate has no longer been significant

For Conjoncture in France, flexion effects are traditionally estimated with a specification that takes account of the link between the change in the gap between observed labour force participation rate and trend labour force participation rate on the one hand, and the change in the employment rate on the other⁴. This relation is written:

\[ \Delta T_A - \Delta T_A^* = \alpha + \beta \Delta T_E + \varepsilon \]

where \( T_A \) is the labour force participation rate, \( T_A^* \) the trend labour force participation rate and \( T_E \) the employment rate.

A positive coefficient is interpreted as a predominance of the discouraged worker effect and a negative coefficient as a predominance of the added worker effect.

Prior to 2008, a discouraged worker effect can be estimated clearly. By estimating the specifications for the whole of the 15-64 years bracket between 2003 and 2007⁵ a coefficient is obtained that is equal to 0.43 and significant to 5%. The coefficient estimation is non-significant, however, when the crisis period is included, indicating that flexion effects have been modified since 2008. The Chow predictive failure test also rejects the stability of the relation after 2008 (to a 10% threshold).

The following part proposes alternative specifications.

Disaggregated approaches or those with other explanatory variables are not conclusive

The first possibility consists in making finer estimations of the age and gender classes, while the second consists in examining a formulation of flexion effects not according to the employment rate, but to the unemployment rate.

A distinction was made in this way between different age and gender groups: 15-24 years, 25-49 years, 50-54 years and 55-64 years. The quarterly data from the Labour Force Survey was used. For each group, indexed by \( i \), the specifications were estimated over the period from Q2 2003 to Q2 2012:

\[ \Delta T_{A_{ij}} - \Delta T_{A_{ij}}^* = \alpha_{ij} + \beta \Delta T_{E_{ij}} + \varepsilon_{ij} \]

\[ \Delta T_{A_{ij}} - \Delta T_{A_{ij}}^* = \gamma_{ij} + \lambda \Delta u_{ij} + \nu_{ij} \]

where \( u \) is the unemployment rate. We preferred to use \( \Delta T_E \) (\( \Delta u \), respectively) as explanatory variable, rather than \( \Delta T_{E_{ij}} \) (\( \Delta u_{ij} \), respectively), as due to the size of the Labour Force Survey, employment, unemployment and labour force participation rates are measured with a non-negligible sampling error. This being the case, an error on the employment or unemployment rate within a group will have an automatic effect with the same sign on the labour force participation rate of the said group, thereby wrongly inducing a positive correlation. Another reason is that it is far from easy to determine the relevant variable to take account of the added worker effect in each group. For example, for women of ages 50 to 54, should it be the rate for men of ages 50 to 54 that is taken? By default, we preferred to use global variables, although one drawback of this is that we did perhaps not take as full account of the discouraged worker effect, as people who are likely to give up actively looking for a job, for example, might be more sensitive to the unemployment rate in their age bracket than to the overall unemployment rate.
Finally, the estimation was also made using the instrumental variables method for the specification with the unemployment rate. The instrument used was the growth rate in GDP by volume\(^6\).

For each group and for 15-64 as a whole, the \(\beta\) and \(\lambda\) coefficients that were obtained are presented below (see table).

On the whole, few coefficients were significantly different from zero. The results differ according to the specification that is taken, both within each bracket and on the aggregate level, except for men of ages 55 to 64, for whom the added worker effect appears to prevail\(^7\) : for the specification with the employment rate, the discouraged worker effect appears to dominate the added worker effect, whereas for specifications with the unemployment rate (with or without an instrument), the dominant effect would appear to be the added worker effect. All in all, it therefore does not seem possible to provide any robust evidence of a discouraged worker effect and added worker effect since 2003. These effects have probably become negligible.

---

(6) This was not possible for the specification with the employment rate, as the explanatory power of the growth rate in GDP is not sufficient to be used as an instrument for variations in the employment rate. Likewise, household purchasing power could not be used as an instrument for the unemployment rate or employment rate.

(7) The latter point is somewhat surprising, as it is not this group that is the focus of the theoretical models explaining the added worker effect. It is probable that the simultaneous occurrence of the coming into force of pensions reform and the crisis explains this result.

---

### Results of flexion effect estimation by gender and age

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-24</td>
<td>25-49</td>
<td>50-54</td>
</tr>
<tr>
<td>(\beta_i)</td>
<td>0.00</td>
<td>0.30</td>
<td>0.22</td>
</tr>
<tr>
<td>(\lambda_i)</td>
<td>0.65</td>
<td>0.16</td>
<td>0.21</td>
</tr>
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</table>

How to read it: these results correspond to the estimation by the Ordinary Least Squares method (OLS). When GDP is used as instrument, the coefficient for the 15 to 64 years group as a whole is equal to 0.40***.

*** means significant 1%, ** 5%, * 10%

In 2012, the basic monthly wage increased at the same pace as in 2011 in nominal terms (+2.1% after +2.2%) while the average wage per head slowed slightly (+2.1% after +2.5%). Inflation dropped and unemployment increased continually, but the larger minimum wage increases in 2012 than in 2011 sustained nominal wages. Thanks to the fall in inflation, the real average wage per head increased at the same pace as in 2011 (+0.4%) and the real basic monthly wage picked up slightly (+0.4% after +0.1%).

In H1 2013, the fall in inflation should gradually spread to nominal wages. Additionally the increase in the minimum wage on 1st January 2013 (+0.3%) was modest and the quarterly gains in real wages should be low. However, thanks to the gains in real wages in mid-2012, the growth overhangs at the end of Q2 2013 should be positive, with +0.6% for the basic monthly wage and +0.3% for the average wage per head.

In general government, the nominal average wage per head slowed in 2012 (+1.2% after +1.8%). In real terms it fell back once again (-0.5% after -0.3%), and this decline should continue in early 2013 (-0.2% growth overhang in mid-2013 for the real average wage per head).

In 2012, wages increased at about the same rate as in 2011

In 2012, the basic monthly wage was almost as dynamic as in 2011 in nominal terms (+2.1% after +2.2%). It grew regularly over the course of the year: +0.5% each quarter. The average wage per head grew at the same pace as the basic monthly wage in 2012 (+2.1%), slowing slightly after the 2.5% rise in 2011. The rise in unemployment took its toll on the bargaining power of employees, but as wages are partly determined by past inflation, they benefited from its increase in 2011. In particular, the minimum wage rises further to the strong inflation observed in 2011 and the extra increase on 1st July 2012 sustained the growth in nominal wages. Indeed, the minimum wage was increased by 2.1% in December 2011, 0.3% in January 2012 but also 2.0% in July 2012, bringing the average rise in the minimum wage in 2012 to 3.3% against 1.8% in 2011.

In real terms the basic monthly wage picked up slightly (+0.4% in 2012 after +0.1% in 2011), with the nominal basic monthly wage increasing in 2012 at the same rate as in 2011 while inflation slowed slightly (+1.7% after +2.1%). The real average wage per head progressed in 2012 as it had in 2011 (+0.4%). Real wage gains were made mainly in Q2 and Q3 due to the sharp slowdown in
consumer prices, since wages adjust to inflation with a time lag. In Q4 2012, however, real wage gains appear to have been smaller.

**Real wages should rise very slightly in H1 2013 in the market sector**

At the start of 2013 the minimum wage was increased very slightly (+0.3% on 1st January) because the rise did not take account of the increase in consumer prices excluding tobacco observed between May and November 2012, with observed inflation between November 2011 and May 2012 already having been integrated in the minimum wage rise on 1st July 2012. Furthermore, unemployment is set to continue rising in H1 2013, thereby restricting the bargaining power of employees. In the wake of the fall in inflation, year-on-year annual wages should fall further (see Graph), and real wage gains should be low in each quarter.

The growth overhangs at the end of Q2 2013 should stand at +1.6% for the nominal basic monthly wage and +1.4% for the nominal average wage per head. In real terms they should be +0.6% for the basic monthly wage and +0.3% for the average wage per head.

(1) The individual purchasing power guarantee bonus scheme 2012 is a benefit that concerns civil servants and State agents who lost purchasing power between 2007 and 2011.

---

### Growth of the basic monthly wage and the average wage per head in the non-agricultural market sector and in general government

<table>
<thead>
<tr>
<th></th>
<th>Seasonally-corrected data</th>
<th>Quarterly growth rates</th>
<th>Annual averages</th>
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<tr>
<td></td>
<td></td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
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<td>0.5</td>
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<td>Average wage per head in</td>
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<td>0.4</td>
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<td>the non-agricultural</td>
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<td></td>
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</tr>
<tr>
<td>market sector (NAMS)</td>
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<tr>
<td>Average wage per head</td>
<td></td>
<td></td>
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<tr>
<td>in general government</td>
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<td></td>
<td></td>
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<tr>
<td>(GG)</td>
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<tr>
<td>Household consumer price</td>
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<tr>
<td>index (quarterly national</td>
<td></td>
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<tr>
<td>accounts)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Real basic monthly wage</td>
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<td>-0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Real average wage per</td>
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<td>0.1</td>
<td>0.2</td>
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<tr>
<td>head (NAMS)</td>
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</tr>
<tr>
<td>Real average wage per</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>head (GG)</td>
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</tbody>
</table>

Forecast

Source: INSEE
In 2012, household purchasing power will have declined (-0.2% after +0.5% in 2011), despite the slight drop in inflation (1.7% after 2.1% in 2011). Indeed, the growth of the gross disposable income of households should have slowed considerably (+1.5% after +2.6%) due to less dynamic earned income (+2.0% after +2.9%) and the pick-up in taxes (+9.3% after +6.6%).

Purchasing power should nonetheless increase in 2013 (+0.2 % in H1 2013 after -0.1 % in both semesters in 2012), mainly because of the tax-collecting calendar. Indeed, after a sharp rise in H2 2012 due to increases in the tax burden enacted by successive Finance Laws, tax revenue should remain stable in early 2013. Meanwhile earned income should continue to slow.

**Earned income should continue its slowdown over the forecasting period**

For 2012 as a whole the growth in earned income was less dynamic than it was in 2011 (+2.0 %, after +2.9% in 2011, see Table 1). In particular, the wages received by households slowed perceptibly (+1.9% after +2.9% in 2011; see Table 2) due to the deteriorating labour market. On the one hand, employment declined in the non-agricultural market sectors (see Graph 1). On the other hand, despite the increase in the minimum wage at the end of 2011 and again in July 2012, the average wage per head was less dynamic than in 2011 (+2.1% after +2.5%). Moreover, growth in the property income and gross operating surplus of pure households was also lower in 2012 than in 2011. However, the income of sole proprietors did grow more rapidly in 2012 (+2.9% after +2.4%).

At the start of 2013, earned income is likely to continue decelerating (+0.4% in H1 after +0.9% in H2 2012). The payroll should grow slight more slowly than in the previous half-year (+0.4% after +0.8%) while the gross operating surplus of sole proprietors is also set to slow (+0.8% after +1.2%). Income from property should also slow down in H1 2013 (+0.4% after +0.6%) while the gross operating surplus of pure households should grow more quickly.

**Social benefits still dynamic**

In 2012, social benefits in cash received by households were slightly more dynamic than in 2011 (+3.6% after +3.2%, see Table 3). Social security benefits accelerated slightly (+3.7% after 98 Conjoncture in France

1 - Breakdown of the total wages paid out to households in the competitive non-agricultural sector

[Graph showing quarterly changes in %]

Source: INSEE

(1) The GOS of pure households corresponds to the production of housing services minus the intermediate consumptions required for this production (most notably financial services linked to loans) and taxes (land tax). It corresponds to the rents that homeowners receive from their tenants or could receive if they put their dwelling up for rent ("imputed" rents).
They were sustained on the one hand by the sharp increase in the back-to-school allowance in summer (+25%), and on the other hand by the sharp acceleration in unemployment benefits due to the rise in the number of unemployed. Conversely, old-age allowances were slowed by the gradual effects of the 2010 pension reform, exacerbated by the Social Security Financing Act for 2012. Additionally, social assistance benefits accelerated sharply (+4.6% after +0.4%). They were sustained on the one hand by increases to the adult disability allowance in April and September (five-year plan to boost this allowance over the period 2007-2012). On the other hand, the number of people receiving the earned income supplement (RSA) and the specific welfare allowance increased.

In H1 2013, the increase in social benefits in cash is likely to slow slightly (+1.8% after +1.9%). Social security benefits should remain dynamic: unemployment benefits should continue to grow rapidly in line with the deterioration of conditions on the labour market. Social assistance benefits are likely to slow noticeably in early 2013 (+1.2% after +2.7% in H2 2012) due to the end of the five-year revaluation plan for the adult disability allowance.

Highly dynamic in 2012, the tax burden will remain practically stable in H1 2013

In 2012, total taxes paid by households progressed at a more sustained pace than in 2011 (+6.2% after +5.0%), driven by the acceleration of income tax and tax on assets (+9.3% after +6.6%). In particular, income tax revenues picked up strongly in H2 with the application of the measures voted in for 2012: de-indexation of the income tax rate for natural persons (IRRP), closing of certain tax loopholes and establishment of an exceptional contribution on very high incomes. The reinforcement of capital gains taxation and higher capital taxation also contributed to this acceleration. Lastly, other current taxes were sustained at the end of 2012 by an exceptional solidarity tax on wealth, a measure passed in the spring. Despite the abolition of exemptions on overtime, the progress in employee contributions weakened in 2012 (+2.4% after +3.3%) due to the slowdown in earned income.

In H1 2013, the total tax burden should remain practically stable (+0.5% after +4.7% in H2 2012). Indeed taxes on income and assets paid by households should drop off by 0.3% after a highly dynamic H2 2012 (+7.1%). As in 2012, the measures included in the Finance Law (de-indexation of the income tax thresholds, creation of a 45% bracket, lowering of the family quotient ceiling) will come into play mainly in H2 2013. However in H1 2013 contributions by the self-employed should increase sharply (+5.1% after +1.0% in H2 2012), notably because of the removal of the ceiling on sickness contributions and the abolition of the special allowance for professional costs, both measures included in the Social Security Financing Act for 2013.

Purchasing power slipped slightly in 2012

Over 2012 as a whole the gross disposable income of households slowed perceptibly: it grew by 1.5%, after 2.6% in 2011. Despite the slower growth of consumer prices (+1.7% after +2.1%), household purchasing power fell by 0.2% in 2012, the worst result since the decline recorded in 1984.

2 - Purchasing power of disposable income and contributions

![Chart showing the evolution of purchasing power and other economic indicators](chart_url)

(1) GOS of pure households, property income and current transfers
Source: INSEE
Purchasing power per consumption unit, which accounts for demographic changes among other things, declined by 0.8% in 2012, whereas it was virtually stable in 2011 (-0.1%), (see Box).

In H1 2013, the gross disposable income of households is likely to rebound (+1.0% after +0.3%) due to the stabilisation of taxes. Purchasing power should thus increase once again (+0.2% after -0.1% in each of the three preceding half-years), despite the acceleration of prices (+0.8% after +0.4% in H2 2012). In mid-2013 it should stand at 0.2 point below its mid-2012 level.

### Table 1

#### Household gross disposable income

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Gross disposable income (100%)</strong></td>
<td></td>
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</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income (68%)</td>
<td>1.7</td>
<td>1.1</td>
<td>1.1</td>
<td>0.9</td>
<td>0.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Gross wages (60%)</td>
<td>1.8</td>
<td>1.0</td>
<td>1.0</td>
<td>0.8</td>
<td>0.4</td>
<td>2.3</td>
</tr>
<tr>
<td>GOS of sole proprietors (9%)</td>
<td>0.8</td>
<td>1.5</td>
<td>1.5</td>
<td>1.2</td>
<td>0.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Social benefits in cash (32%)</td>
<td>1.7</td>
<td>1.6</td>
<td>1.8</td>
<td>1.9</td>
<td>1.8</td>
<td>3.2</td>
</tr>
<tr>
<td>GOS of “pure” households (12%)</td>
<td>2.1</td>
<td>1.5</td>
<td>1.2</td>
<td>1.1</td>
<td>1.2</td>
<td>-0.4</td>
</tr>
<tr>
<td>Property income (10%)</td>
<td>1.9</td>
<td>1.2</td>
<td>0.2</td>
<td>0.6</td>
<td>0.4</td>
<td>-0.9</td>
</tr>
<tr>
<td>Social contribution and tax burden (23%)</td>
<td>2.9</td>
<td>3.3</td>
<td>2.1</td>
<td>4.7</td>
<td>0.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Contributions by paid employees (8%)</td>
<td>2.2</td>
<td>1.1</td>
<td>1.0</td>
<td>1.7</td>
<td>0.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Contributions of self-employed persons (2%)</td>
<td>0.6</td>
<td>1.3</td>
<td>0.4</td>
<td>1.0</td>
<td>5.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Income and wealth tax (including CSG and CRDS) (-14%)</td>
<td>3.7</td>
<td>5.0</td>
<td>3.0</td>
<td>7.1</td>
<td>-0.3</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Income before taxes</strong></td>
<td>1.7</td>
<td>1.3</td>
<td>1.2</td>
<td>1.1</td>
<td>0.8</td>
<td>2.0</td>
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<tr>
<td><strong>Household consumer prices (quarterly national accounts)</strong></td>
<td>1.3</td>
<td>0.9</td>
<td>1.0</td>
<td>0.4</td>
<td>0.8</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Purchasing power of gross disposable income</strong></td>
<td>0.2</td>
<td>-0.1</td>
<td>-0.1</td>
<td>-0.1</td>
<td>0.2</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Household purchasing power by consumption</strong></td>
<td>-0.2</td>
<td>-0.4</td>
<td>-0.3</td>
<td>-0.5</td>
<td>-0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

### Table 2

#### From the payroll of non-financial enterprises to that received by households

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Non-financial enterprises (67%)</strong></td>
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<td></td>
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<tr>
<td>including: Average wage per head</td>
<td>2.3</td>
<td>1.3</td>
<td>1.0</td>
<td>0.7</td>
<td>0.3</td>
<td>2.3</td>
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<tr>
<td>Financial corporations (5%)</td>
<td>1.6</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>0.9</td>
<td>2.3</td>
</tr>
<tr>
<td>General government (22%)</td>
<td>0.8</td>
<td>-0.6</td>
<td>2.9</td>
<td>0.6</td>
<td>0.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Households excluding sole proprietors (2%)</td>
<td>0.7</td>
<td>0.5</td>
<td>0.5</td>
<td>0.7</td>
<td>0.6</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Total gross wages received by households (100%)</strong></td>
<td>1.8</td>
<td>1.0</td>
<td>1.0</td>
<td>0.8</td>
<td>0.4</td>
<td>2.3</td>
</tr>
<tr>
<td>including: Non-agricultural market sectors</td>
<td>2.1</td>
<td>1.1</td>
<td>1.1</td>
<td>0.7</td>
<td>0.3</td>
<td>2.2</td>
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</table>
Table 3

Social transfers received and paid by households
change as a %

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Social cash benefits</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>received by households</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(100%)</td>
<td>1.7</td>
<td>1.6</td>
<td>1.8</td>
<td>1.9</td>
<td>1.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Social Security benefits</td>
<td>1.7</td>
<td>1.7</td>
<td>1.8</td>
<td>1.9</td>
<td>2.0</td>
<td>3.6</td>
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<tr>
<td>in cash (72%)</td>
<td>1.5</td>
<td>0.7</td>
<td>1.1</td>
<td>1.2</td>
<td>1.4</td>
<td>2.9</td>
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<tr>
<td>Private funded social</td>
<td>2.9</td>
<td>2.1</td>
<td>1.5</td>
<td>1.6</td>
<td>1.6</td>
<td>2.9</td>
</tr>
<tr>
<td>benefits (7%)</td>
<td>0.3</td>
<td>0.7</td>
<td>2.9</td>
<td>2.7</td>
<td>1.2</td>
<td>0.6</td>
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<td>Social assistance</td>
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<tr>
<td>benefits in cash (8%)</td>
<td>0.3</td>
<td>0.7</td>
<td>2.9</td>
<td>2.7</td>
<td>1.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Total social</td>
<td>2.6</td>
<td>1.8</td>
<td>0.8</td>
<td>1.3</td>
<td>1.1</td>
<td>2.1</td>
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<tr>
<td>contribution burden</td>
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</tr>
<tr>
<td>Actual social</td>
<td>2.5</td>
<td>1.7</td>
<td>0.7</td>
<td>1.2</td>
<td>1.0</td>
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<tr>
<td>contributions paid</td>
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<tr>
<td>by households (100%)</td>
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<tr>
<td>including: Employers</td>
<td>2.9</td>
<td>2.1</td>
<td>0.6</td>
<td>1.0</td>
<td>0.6</td>
<td>2.0</td>
</tr>
<tr>
<td>contributions (63%)</td>
<td>2.2</td>
<td>1.1</td>
<td>1.0</td>
<td>1.7</td>
<td>0.8</td>
<td>1.9</td>
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<tr>
<td>Employees contributions</td>
<td>0.6</td>
<td>1.3</td>
<td>0.4</td>
<td>1.0</td>
<td>5.1</td>
<td>3.1</td>
</tr>
<tr>
<td>(29%)</td>
<td></td>
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<tr>
<td>Self-employed</td>
<td></td>
<td></td>
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<tr>
<td>contributions (8%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Forecast

How to read it: The figures in parentheses give the structure of the year 2011.

(1) Employer contributions are both received and paid by households in the national accounts: they therefore have no effect on gross disposable income.

Source: INSEE

Different ways of measuring purchasing power

The household income that is presented and analysed in Conjoncture in France includes all the income received by all households. This is the relevant reference in macro-economic terms, for example when constructing the balance between resources (GDP and imports) and uses (consumption, investment, exports...) or forecasting GDP. It must be corrected, however, if we want to measure the average purchasing power of the French, in order to take account both of growth in the number of households and changes to their composition. The most relevant correction in this respect consists in dividing income by the number of consumption units in France, thereby taking account of demographic growth and also of the fact that some consumption may be shared within the household (for example, household appliances). A large household therefore makes certain ‘economies of scale’ in relation to a smaller household. In 2012, growth in the number of consumption units was 0.6% (as a comparison, growth in the population was 0.5% and growth in the number of households 1.0%).

Therefore, purchasing power per consumption unit is set to fall in 2012 (-0.8% after -0.1% in 2011). Per inhabitant, the fall should be 0.7% and per household it should be 1.2%.
In Q4 2012, household consumption rose once again (+0.2% after +0.3%). Expenditure on services and purchases of manufactured goods, particularly automobiles, continued to increase. Over 2012 as a whole household expenditure was stable (after +0.2% in 2011). Expenditure on services held up but expenditure on manufactured goods, and more specifically automobiles, slipped back (-0.7% after +0.9% in 2011).

Household consumption should remain almost stable in H1 2013 (0.0% then +0.1% in Q1 and Q2). In Q1 2013, automobile purchases should fall back significantly. However, energy expenditure should pick up due to the weather conditions in early 2013, before contracting in Q2. In mid-2013, the growth overhang for consumption in 2013 should stand at +0.3%.

Household purchasing power has fluctuated sharply from quarter to quarter, mainly due to the calendar set for the entry into force of tax rises. The quarterly profile of consumption should however be smoother, and the savings ratio should therefore have an uneven profile: after slumping to 15.5% in Q4 2012, it should rebound in H1 2013 to 15.8% by mid-2013.

In Q4 2012, consumption expenditure held up at the end of a year of stagnation.

In Q4 2012, household consumption slowed slightly (+0.2% after +0.3%, see Table). At the same time household purchasing power dipped due to the rise in the tax burden and the slowdown in earned income. The savings ratio thus fell back sharply, to 15.5% after 16.2% in Q3 2012.

Consumption of manufactured goods increased slightly in Q4 (+0.1% after +0.6%, see Graph 1). Automobile purchases picked up (+1.0% after +0.5%), particularly in December 2012 as households anticipated the increase in the «malus» on the most polluting cars on 1st January 2013. Purchases of capital goods also accelerated (+3.4% after +0.3%). These two factors more than offset the drop in expenditure on agrifood products (-1.1% after +0.7% in Q3 2012). Consumption of services also rose slightly in Q4 2012, at the same pace as in summer (+0.2%), driven by the consumption of transport services which continued to show strong growth (+1.1% after +1.2%).

Over 2012 as a whole consumption of goods and services thus did not progress, for the first time since 1993. Expenditure on manufactured goods declined (-0.7% after +0.9% in 2011), mainly due to the sharp decrease in automobile purchases (-4.5% in 2012, after +0.6%) concentrated in Q1 2012. Despite the rebound in electricity and gas consumption (+6.0% after -9.0%), the

<table>
<thead>
<tr>
<th>Household consumption and investment expenditure</th>
<th>Quarterly changes in %</th>
<th>Annual changes in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total household consumption expenditure</td>
<td>0.0</td>
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<td>including: Agriculture goods</td>
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<td>-4.4</td>
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<tr>
<td>Manufactured goods</td>
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<tr>
<td>Services</td>
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<td>0.2</td>
</tr>
<tr>
<td>Goods</td>
<td>-0.4</td>
<td>-1.7</td>
</tr>
<tr>
<td>Household consumption</td>
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<td>-0.6</td>
</tr>
<tr>
<td>Household investment</td>
<td>0.0</td>
<td>1.3</td>
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</tbody>
</table>

Forecast
Source: INSEE

Conjoncture in France
consumption of goods slipped back over 2012, by 0.2%, after stagnating in 2011. Consumption of services slowed (+0.4% after +0.8%); most notably, expenditure on accommodation and catering fell back.

In H1 2013, consumption should remain stable

The total consumption expenditure of households should increase slightly over the forecasting period (0.0% in Q1 2013 then +0.1% in Q2).

According to the car registration data available up to February 2013 (see Graph 2) automobile purchases should drop sharply over Q1 2013 further to the increase in the «malus» on the most polluting cars. Additionally, clothing expenditure should remain virtually stable in H1 2013. Purchases of manufactured goods should thus dip in Q1 (-0.7%) before rising slightly in Q2 2013 (+0.2%).

However, after a relatively mild month of December 2012, the cold snap at the start of the year is likely to cause a sharp acceleration in electricity and gas expenditure in Q1 2013 (+2.5% after +0.2%). This should then contract in Q2 (-1.7%). All in all, consumption of goods is likely to fall in Q1 2013 (-0.4%) then stabilise in Q2 (0.0%).

Consumption of services is set to continue growing slightly in H1 2013, at the same pace as at the end of 2012 (+0.2% per quarter): the increase in consumption of transport services should offset the poor level of consumption of accommodation and catering services.

The savings ratio of households set to rebound in H1 2013

In H1 2013 households are likely to make the most of their higher purchasing power to bolster their savings ratio after reducing it at the end of 2012. The savings ratio should reach 15.8% in Q2 2013 after 15.5% in Q4 2012 (see Graph 3), which is 0.6 point lower than a year earlier but higher than its average over the period 2000-2007.

Household investment set to slump

Household investment fell back in Q4 2012 (-0.8%). After rising to a peak at end 2011, housing starts declined sharply in 2012 (see Graph 4). They have picked up very slightly since the end of the year but given the production lead times in construction, household investment is set to slump once again over the forecasting period. In mid-2013, the growth overhang in household investment for the year should stand at -3.3%.

1 - Contributions of the various items to quarterly household consumption

Source: INSEE
French developments

2 - Monthly registrations (corrected for seasonal variations and working days) of new private vehicles

3 - Savings ratio and growth rate of consumption and purchasing power of gross disposable income

4 - Housing starts for all dwellings per quarter

Source: SOeS

Source: INSEE
Enterprises’ earnings

In 2012 the margin rate of non-financial companies fell back once more: measured at factor costs, it reached 29.1% over the year after 29.6% in 2011. On the one hand productivity gains were nil in 2012, while wages per head progressed. On the other hand the rise in oil prices was partially absorbed by companies, and their margin rate suffered due to a slight deterioration in the terms of trade.

In H1 2013 productivity gains should pick up while real wages no longer grow: the margin rate should therefore recover slightly.

Since the start of 2012, the margin rate has stabilised at a low level

The margin rate of non-financial companies dropped continually between mid-2010 and Q1 2012: measured at factor costs, it reached 28.9% in Q1 2012 against 31.1% in Q3 2010 (see Graph 1). This drop of more than two points was caused by an increase in import prices, particularly for energy goods (contribution of -1.6 point) and a faster increase in real wages than in productivity gains (contribution of -0.5 point).

However, the margin rate has stabilised since the start of 2012: it reached 29.0% in Q4 2012, a level slightly higher than that at the start of the year.

The decline in the average margin rate in 2012 against 2011 therefore reflects above all the sharp drop in the course of 2011.

The stabilisation of the margin rate since the start of 2012 is first and foremost the result of the slowdown in import prices, most notably of energy goods: the terms of trade have improved significantly since Q2 2012 (see Graph 2). However, real wage trends have remained more dynamic than productivity gains.

The margin rate should pick up in H1 2013

In H1 2013 the recovery of the margin rate should be confirmed: it should reach 29.3% in Q2 2013 after 29.0% at end 2012, i.e. 2.6 points below its average over the period 1988-2007. The key factor in this recovery should be the return of productivity gains (contribution of +0.4 point), progressing faster than real wages per head (contribution of -0.1 point). Indeed, despite the slight rebound in activity, job losses are likely to continue. In parallel the deterioration of the labour market should slow down progress in wages. However, with the stabilisation of oil prices, the terms of trade should no longer contribute to the recovery of the margin rate (see Table).
**French developments**

### 2 - Contributions to the variation in the margin rate at factor cost of non-financial enterprises

#### Breakdown of the margin rate of non-financial enterprises (NFE)

*in % and in points*

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Margin rate (in level)</strong></td>
<td>29.2</td>
<td>28.5</td>
<td>28.3</td>
<td>28.2</td>
<td>27.8</td>
<td>28.1</td>
<td>28.2</td>
<td>27.8</td>
<td>28.0</td>
<td>28.2</td>
<td>28.0</td>
<td>28.1</td>
</tr>
<tr>
<td><strong>Variation in margin rate</strong></td>
<td>-0.5</td>
<td>-0.8</td>
<td>-0.1</td>
<td>-0.1</td>
<td>-0.3</td>
<td>0.2</td>
<td>0.1</td>
<td>-0.3</td>
<td>0.1</td>
<td>0.1</td>
<td>-1.5</td>
<td>-0.6</td>
</tr>
<tr>
<td><strong>Margin rate at factor costs (in level)</strong></td>
<td>30.3</td>
<td>29.5</td>
<td>29.4</td>
<td>29.3</td>
<td>28.9</td>
<td>29.2</td>
<td>29.3</td>
<td>29.0</td>
<td>29.2</td>
<td>29.3</td>
<td>29.6</td>
<td>29.1</td>
</tr>
<tr>
<td><strong>Variation in margin rate at factor cost</strong></td>
<td>-0.4</td>
<td>-0.8</td>
<td>-0.1</td>
<td>-0.1</td>
<td>-0.3</td>
<td>0.2</td>
<td>0.1</td>
<td>-0.3</td>
<td>0.2</td>
<td>0.2</td>
<td>-1.4</td>
<td>-0.5</td>
</tr>
<tr>
<td><strong>Contributions to the variation margin rate at factor costs of</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Productivity gains</strong></td>
<td>0.4</td>
<td>-0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>-0.3</td>
<td>0.0</td>
<td>0.3</td>
<td>-0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Real wage per head</strong></td>
<td>-0.2</td>
<td>-0.2</td>
<td>0.0</td>
<td>-0.1</td>
<td>0.1</td>
<td>-0.2</td>
<td>-0.4</td>
<td>-0.1</td>
<td>0.0</td>
<td>-0.1</td>
<td>-0.5</td>
<td>-0.3</td>
</tr>
<tr>
<td><strong>Employer contribution ratio</strong></td>
<td>-0.2</td>
<td>-0.1</td>
<td>-0.1</td>
<td>-0.1</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>-0.4</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Ratio of the value-added price to the consumer price</strong></td>
<td>-0.4</td>
<td>-0.2</td>
<td>0.0</td>
<td>-0.1</td>
<td>-0.3</td>
<td>0.4</td>
<td>0.2</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>-0.8</td>
<td>-0.1</td>
</tr>
<tr>
<td><strong>Others factors</strong></td>
<td>-0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>-0.2</td>
<td>-0.1</td>
</tr>
</tbody>
</table>

**Source:** INSEE

**Forecast**

(1) The margin rate measures the share of value-added which remunerates capital. Its variation is broken down in accounting terms between:
- productivity changes (Y/L), with Y value-added and L employment, and the ratio of the value-added price to the consumer price, or terms of trade (Pva/Pc), which play a positive role;
- changes to the real average wage per head (SMPT/Pc) and the employer contribution ratio (W/SMPT, where W represents all compensation), which play a negative role.
- other factors: it is a ratio of the value-added price at factor cost to the value-added price in the sense of the national accounts. This breakdown is summarised in the following equation (see Report, Conjoncture in France, June 2003):

\[
TM = EBE = \frac{EBE}{VA} = \frac{L}{Y \cdot P_{va} \cdot SMPT \cdot P_{va} \cdot P_{c}}
\]

(2) Value-added at factor cost is obtained from gross value-added minus taxes on production net of operating subsidies. The margin rate (share of GOS in value-added) at factor cost is around 1% higher than the margin rate in the sense of the national accounts. In the TM breakdown above, only the terms VA and Pva are affected by this distinction.

**Source:** INSEE
In Q4 2012, corporate investment dropped by 1.2% (after -0.8% in Q3). Expenditure on services picked up but the decline in investments on manufactured goods and construction accelerated. Over 2012 as a whole, corporate investment slipped back somewhat (-0.7% after +5.1% in 2011). Investment expenditure on manufactured goods contracted sharply (-3.6% after +7.6% in 2011) while expenditure on services and construction progressed (respectively +1.3% and +1.6%).

In H1 2013, the decline in corporate investment is likely to continue (-0.5% and -0.5% in Q1 and Q2). Indeed productive capacities are underused and prospects are sluggish in all sectors.

In Q4 2012, investment expenditure on manufactured goods and construction dipped more markedly than in the previous quarter (respectively -2.6% after -1.2% in Q3 and -0.7% after -0.1%).

All in all, over 2012 as a whole investment by non-financial enterprises (NFE) dipped (-0.7% after +5.1% in 2011). It was slowed by the substantial drop in expenditure on manufactured goods (-3.6% after +7.6% in 2011), particularly transport equipment (-9.4%). However, investment in construction held up (+1.3% after +1.6% in 2011) while expenditure on services slowed (+1.6% after +5.4% in 2011).

In 2012, a sharp decline in investments on manufactured goods and a slowdown in expenditure on services

In Q4 2012, corporate investment continued to deteriorate (-1.2% after -0.8% in Q3, see Table 1). Investment in services picked up (+0.2% after -0.9% in Q3) but investment expenditure on manufactured goods and construction dipped more markedly than in the previous quarter (respectively -2.6% after -1.2% in Q3 and -0.7% after -0.1%).

All in all, over 2012 as a whole investment by non-financial enterprises (NFE) dipped (-0.7% after +5.1% in 2011). It was slowed by the substantial drop in expenditure on manufactured goods (-3.6% after +7.6% in 2011), particularly transport equipment (-9.4%). However, investment in construction held up (+1.3% after +1.6% in 2011) while expenditure on services slowed (+1.6% after +5.4% in 2011).

In H1 2013, corporate investment should contract once again. The service companies surveyed in January 2013 remain pessimistic about their expected activity and demand, and more of them predict a contraction in their future investments. The industrialists surveyed in January 2013 predict a drop in their investments in H1 2013 and expect them to be stable over 2013 as a whole. Furthermore, in the manufacturing industry companies report a drop in their production capacity utilisation rate in January 2013 (see Graph 1), which stood at 78.6%, way below its long-term average. Lastly, while interest rates remain low, credit conditions tightened somewhat in Q4 2012 (see Graph 2). The drop in corporate investment should therefore continue in H1 2013 (-0.5% in Q1 and Q2 2013).

### Table 1

**Investment by non-financial enterprises (NFE)**

<table>
<thead>
<tr>
<th></th>
<th>Quarterly variations</th>
<th>Annual variations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2</td>
<td>2011 2012 2013 2011 2012 2013</td>
</tr>
<tr>
<td>Non-energy industrial goods (43%)</td>
<td>3.2 -0.8 -1.4 3.3 -3.9 -0.1 -1.2 -2.6 -1.2 -1.0</td>
<td>7.6 -3.6 -4.7</td>
</tr>
<tr>
<td>Building and public works (28%)</td>
<td>1.2 0.8 0.9 1.0 -0.3 0.6 -0.1 -0.7 -0.4 -0.2</td>
<td>1.6 1.3 -0.9</td>
</tr>
<tr>
<td>Other (29%)</td>
<td>2.0 -0.8 0.1 1.3 0.7 0.7 -0.9 0.2 0.5 0.0</td>
<td>5.4 1.6 0.3</td>
</tr>
<tr>
<td><strong>All non-financial enterprises (100%)</strong></td>
<td>2.2 -0.3 -0.3 2.1 -1.5 0.3 -0.8 -1.2 -0.5 -0.5</td>
<td>5.1 -0.7 -2.1</td>
</tr>
</tbody>
</table>

*Source: INSEE*
Activity prospects unfavourable to investment in manufactured goods

The decline in investment in manufactured goods is likely to continue in H1 2013 (-1.2% per quarter). The activity of capital goods wholesalers, accounting for 40% of investments on manufactured goods, is still unfavourable: sales slumped in January 2013 and order books are sparse. Automobile purchases should also continue to slow. Corporate expenditure on private and heavy-goods vehicles will likely remain low, according to the registration figures available up to February 2013.

In construction, investment set to keep falling in early 2013

In the building sector the entrepreneurs surveyed in February 2013 expect a new contraction in their activity over the coming months. They consider that activity has been poor in recent times and are pessimistic about the coming months. Bearing in mind the delayed effects of the drop in housing starts since the start of 2012, investments in building should slide. However, the order books of civil engineering companies, accounting for 20% of construction investments, are filling up slightly. Civil engineering activity should therefore pick up in early 2013. All in all, corporate expenditure on construction is set to decline in H1 2013 (-0.4% and -0.2% in Q1 and Q2).

Investments in services picking up in Q1 2013

Other investments, mainly in computer services and specialised activities, should still progress slightly in Q1 2013 and stabilise in Q2 2013.

The investment ratio set to fall again in 2013

The investment ratio of NFEs stood at 18.4% at end 2012 (see Graph 3), a figure significantly lower than the highpoint reached at end 2011 (18.9%). As usual, the investment cycle should be more marked than that of activity and the investment ratio should continue to slip back over the forecasting period, returning to 18.1% in Q2 2013. This forecast is surrounded by various uncertainties. In particular, investment might be more dynamic if companies anticipate the effects of the tax credit for competitiveness and employment (CICE) in their work programme. Conversely, the decrease in corporation tax loopholes is a downward uncertainty, although a short-term impact is less likely as these measures target above all companies with the largest contribution capacities.

Inventory changes weighed negatively on growth in Q4 2012

In Q4 2012, inventory change contributed negatively to GDP growth (-0.4 point, after -0.3 point the previous quarter, see Table 2). The increased destocking of manufactured goods (-0.5 point) and lower level of stocking of agricultural products (-0.1 point) were only partially offset by an acceleration in the stocking of energy goods (+0.3 point).

The negative contribution of stocks of manufactured goods comes from the acceleration in the destocking of capital goods, transport

1 - Tensions on production capacities in manufacturing industry

* Proportion of enterprises which, if they received more orders, would not be able to produce more with their current means.

Source: INSEE, quarterly survey on activity in industry
equipment and other industrial goods, as well as the slowdown in the stocking of coking and refining goods. However, the destocking of agrifood goods has halted.

**Over the forecasting period the rhythm of destocking should stabilise**

In Q1 2013, the contribution of inventory to growth should be slightly positive (+0.1%), as the destocking of manufactured goods should slow slightly. According to the monthly business tendency survey in industry in February 2013, industrialists judge their inventory to be slightly lower than usual. However, according to the quarterly business tendency survey in industry in January 2013, they are expecting weak demand and therefore have no incentive to increase it. In Q2 2013, the contribution of inventory to growth should be nil.

Table 2

<table>
<thead>
<tr>
<th>Contribution of inventory changes to growth</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
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<tr>
<td>Quarterly changes</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Agricultural and agrifood products</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>Manufactured products</td>
<td>1.1</td>
<td>0.0</td>
<td>-0.3</td>
<td>-0.9</td>
<td>0.2</td>
<td>-0.4</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Agricultural goods</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Coke and petroleum products</td>
<td>0.1</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Machinery and equipment goods</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>-0.2</td>
<td>0.1</td>
<td>0.0</td>
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<td>Transport equipment</td>
<td>0.0</td>
<td>0.0</td>
<td>-0.2</td>
<td>-0.4</td>
<td>0.0</td>
<td>0.1</td>
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<tr>
<td>Others industrial goods</td>
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<td>-0.1</td>
<td>-0.4</td>
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<td>0.0</td>
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<tr>
<td>Energy, water and waste</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Other (construction, services)</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>TOTAL 1</td>
<td>1.2</td>
<td>-0.1</td>
<td>-0.3</td>
<td>-0.9</td>
<td>0.2</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

**Forecast**

(1) Inventory changes include acquisitions net of sales of valuables.

Source: INSEE
French developments

2 – Criterion for granting credit to businesses\(^1\) and long-term actual borrowing rates\(^2\)

![Graph showing criterion for granting credit and real long-term interest rates.]


(2) Here, the real rate denotes the interest rate on new loans to non-financial companies, the rate of which is revisable at a frequency of more than one year, i.e. at a fixed rate for an initial period of more than one year. This rate is deflated by the producer price index of all goods and services.

Source: INSEE, quarterly survey on activity in industry

3 – Investment rate\(^3\) and borrowing rate long-term real\(^2\)

![Graph showing investment rate and real interest rates.]

(3) Non-financial enterprises (NFE) = non-financial companies (NFC) and sole proprietorships.

Source: INSEE, quarterly survey on activity in industry
After rebounding in the previous quarter, production of goods and services fell back in Q4 2012 (-0.5% after +0.3%). In particular, activity in the manufacturing industry declined sharply (-2.3% in Q4 2012 after +0.9%). At the same time the production of market services stagnated (0.0% after +0.3% in Q3) and activity in construction slipped back (-0.8% after 0.0%).

The business climate remains gloomy in France in February 2013. Production perspectives have picked up in industry, but the business climate fell back in services in February. Through to mid-2013 demand is likely to remain sluggish, and so activity will probably be lacking in dynamism over the forecasting period: the production of goods and services should drop slightly in Q1 2013 (-0.1%) then stabilise in Q2 (0.0%).

At the end of H1 2013 the growth overhang in production should be -0.3% after a rise of +0.1% in 2012.

Production set to stabilise in early 2013

In Q4 2012, the production of goods and services decreased (-0.5% after +0.3% in Q3 2012). Manufacturing output in particular declined sharply (-2.3% after +0.9%, see Graph 1). Activity also slumped in construction (-0.8% after 0.0%). At the same time, the production of market services stagnated (0.0% after +0.3%). Activity in the trade branch fell back particularly in Q4 2012 after the rebound observed in Q3 (-0.3% after +0.4%), mainly due to the decline in exports.

The business climate indicator in France, calculated from business tendency surveys conducted on business leaders, remains stable in February 2013 and stands at 87 points. It is still way below its long-term average (see Graph 2), just like the sectoral indicators. Over the forecasting period, the production of goods and services is thus likely to be sluggish: virtually stable in H1 2013 (-0.1% in Q1, then 0.0% in Q2).

The growth overhang in production for 2013 should stand at -0.3% at the end of H1, after a rise of +0.1% in 2012.

Moderate drop in manufacturing output in H1 2013

Manufacturing output contracted sharply in Q4 2012: -2.3%, partly in reaction to the upswing of Q3 2012 (+0.9%). This was the biggest decline in activity recorded since Q1 2009. All the main branches of the manufacturing industry contributed to the decline in production, except for agrifood. The downturn was particularly marked in the transport equipment sector (-5.8% after +2.4%), mainly due to difficulties in the automobile industry and in the coking-refining branch (-8.3% after +6.0%), affected by the decline in activity at the Gonfreville and Petit-Couronne refineries in Normandy. Production
also slipped back in the capital goods branch (-2.4% after +1.6%) and in the «other manufacturing branches» (-1.5% after +0.0%).

The industrialists surveyed in February 2013 report still-weak domestic demand but note a slight improvement in foreign demand. On the supply side, business leaders remain pessimistic about activity: the corresponding balance of opinion is at a very low level compared to its long-term average (see Graph 3). In January 2013, the industrial production index fell back in the manufacturing sector (-1.4% after 1.3% in December). However, personal production perspectives picked up compared with January, particularly in transport equipment.

Manufacturing output should therefore record a moderate decline in H1 2013 (-0.7% in Q1 then -0.2% in Q2). After a drop of -2.2% in 2012, the growth overhang in manufacturing output at the end of H1 2013 should come to -2.3%.

In construction, activity likely to continue falling

In Q4 2012, production in the construction sector fell back: -0.8% after 0.0% in Q3. This decline can be ascribed to the slowdown in activity in both building and civil engineering.

Production in the construction sector is likely to continue falling in H1 2013 (-0.7% and -0.6% in Q1 and Q2 2013), especially in building. Indeed building entrepreneurs report poor activity levels and order books which they still consider to be not as full as normal (see Graph 4), while housing starts remain at very low levels. In civil engineering activity was poor in November and December 2012, but the opinion of entrepreneurs about expected activity picked up in January 2013 (see Graph 4). Activity in civil engineering should therefore rebound somewhat.

In 2012, production in construction progressed by 1.3%; after slowing in early 2012, activity contracted at the end of the year. At the end of Q2 2013, the growth overhang for 2013 should be -1.6%.

Activity in market services likely to be moderate in early 2013

In Q4 2012, activity in market services excluding trade stagnated, after a rise of +0.2% in Q3. Sustained by household consumption expenditure, production was dynamic in the accommodation-catering sector (+0.6% after +0.2% in Q3), but slowed in financial activities (+0.2% after +0.7%) and real-estate (+0.2% after +0.3%). In information-communication and in transport, production stagnated in Q4 2012.

Lastly, due to the sharp decline in manufacturing output, the production of services to businesses slipped back (-0.2% after +0.3%).

In H1 2013 activity should only pick up slightly: +0.1% per quarter. According to business leaders the situation in services remains poor: the business climate composite indicator stood at 86 in February 2013 (see Graph 2), well below its long-term average. Entrepreneurs remain pessimistic about expected demand and activity (see Graph 5).

In mid-2013, the growth overhang in production of market services excluding trade should be +0.3% after an increase of +0.7% in 2012.

Mainly non-market services still progressing

In mainly non-market services activity increased by +0.3% in Q4 2012, after +0.4% in Q3, and is likely to continue at this pace in H1 2013 (+0.3% per quarter).
French developments

Over the forecasting period, the growth overhang in production of non-market services should stand at +1.0% for 2013, after a rise of +1.2% in 2012.

Activity in trade set to stagnate

Activity in trade worsened significantly in Q4 2012 (-0.3% after +0.4%), mainly because of the slowdown in exports of manufactured goods (-1.5% after +1.3%) and the decline in corporate investment.

In Q1 2013, activity in trade should fall once again (-0.3%), in particular due to the fall in household consumption of manufactured goods (-0.7%). The business climate indicator in wholesale, calculated from business tendency surveys conducted on business leaders in the sector, also continued to fall in January 2013 and the balances of opinion about past activity dipped, most notably in the capital goods sector. In the retail trade, the business tendency survey of February 2013 also indicated a gloomy business climate. In Q2 2013 activity in trade should pick up somewhat (+0.2%), sustained by a slight rebound in household consumption of manufactured goods (+0.2%).

In mid-2013, the growth overhang in production in trade should be -0.2% (after +0.2% in 2012).

Energy production set to progress once more in early 2013

Energy production rebounded in Q4 2012 (+0.9% after -1.3%). This progress is likely to continue in Q1 2013 (+1.1%) under the effect, among other things, of the rise in household consumption expenditure, with high heating expenses due to the weather conditions at the start of the year. Assuming the weather stays true to seasonal norms, energy production should then fall in Q2 2013 (-0.4%). In mid-2013, the growth overhang in energy production should stand at +1.3% after a rise of +1.2% in 2012.

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3 - Opinion on production in manufacturing industry

![Graph showing opinion on production in manufacturing industry]

Source: INSEE

4 - Prospects for activity in construction

![Graph showing prospects for activity in construction]

Source: INSEE
5 - Opinion on production in services

balance of opinion in %

Recent activity (balance of opinion)
Expected activity (balance of opinion, advanced for 3 months)
General activity expectations (advanced for 3 months)

Source: INSEE
International developments
Monetary policies remain highly expansionary

Monetary policy remains highly accommodating in all advanced economies, with the central banks in Britain, America and Japan further intensifying their support in early 2013.

The ECB has maintained interest rates at 0.75%, while preparing to activate the sovereign bond acquisition programme (Outright Monetary Transactions, OMT) announced in Q2 2012. Moreover, advanced repayments of the three-year loans contracted by the banks in late 2011 and early 2012 (VLTRO, \textit{see definition}) have so far been limited. In the UK the Bank of England has also maintained a very low base rate of 0.5%, and has declared itself ready to take further non-standard measures if necessary.

In the USA, the Federal Reserve has maintained a base rate of 0.25% while intensifying its policy of quantitative easing: each month since January 2013, in addition to the 40 billion dollars’ worth of mortgage-backed securities which it has been acquiring monthly since October 2012, the American central bank has purchased 45 billion dollars’ worth of long-term treasury bonds in order to expand the monetary base. Faced with a weak economy, the Japanese central bank also expanded its government securities purchasing programme in January 2013, a programme which should be worth around €925 billion.

1 – Tensions ease on the European sovereign debt market

\textbf{Source: DataInsigh, INSEE}
billion by the end of 2014. The Bank of Japan has also maintained its base rate at 0.1%, while raising its inflation target to 2%.

**Tensions continue to ease on the sovereign debt markets**

The easing of tensions on the sovereign debt markets which began in summer 2012 has continued into Q1 2013 (see Graph 1). In Spain and Italy in particular, financing conditions for sovereign debt have improved considerably. The yield spread between ten-year Spanish bonds and their German equivalents dropped to an average of 354 base points in January 2013, down from 558 in July 2012. Similarly, the spread between German and Italian sovereign yields fell from 442 base points in July 2012 to 267 in January 2013. Nonetheless, political uncertainty stemming from the Italian elections led to a rise in Italian sovereign yields in late February 2013. The direction they will take over the course of this forecasting period remains uncertain.

In those European countries where financing conditions were most difficult, these conditions have improved considerably since Q2 2012. Thus the Irish sovereign yield rate hit 4.1% in early February, the lowest level recorded since January 2007. Portuguese and Greek sovereign bond yields have also fallen significantly since summer 2012. In January 2013 the yield on Portuguese sovereign bonds was 6.3% on the secondary market (compared to 10.5% in July 2012) while the Greek yield stood at 11.3% (compared to 25.6% in July 2012). The most reliable European countries (France and Germany) along with the USA and the UK still enjoy low financing rates on their sovereign debt. However a generalised easing of the uncertainty regarding the sovereign debt markets is encouraging investors to take on greater risk, causing the rates enjoyed by these countries to rise slightly since Q4 2012.

**The European money market remains tight**

The long term-refinancing operations (LTRO) conducted in late 2011 and early 2012 by the European Central Bank alleviated the financing difficulties affecting European banks, but did not succeed in restoring the interbank market to normal working order (see further explanation). The interbank market is therefore characterised by very low rates showing little in the way of volatility (see Graph 2). So even through tensions appear to be at a low point, the money market has not actually returned to normal functioning.

**Still no increase in lending in the Eurozone**

Despite the abundance of liquidity available in the Eurozone, outstanding loans are not growing in the Eurozone (see Graph 3). Indeed the banks have indicated that they have no intention of relaxing their lending conditions given the poor economic outlook. But amid generally poor lending conditions there is considerable variation between countries: in Germany and France the private lending rates are lower than those seen in Spain and Italy, particularly for small loans.

In France, contrary to the prevailing trend in the Eurozone, outstanding loans to non-financial companies rose slightly in Q4 2012 (+1.0% of annualised quarterly growth in December). Consumer credit also grew in Q4 2012 (+1.7% in December), as did property lending (+2.6% in December).

In the USA, lending conditions for non-financial companies have been easing for a year now and, supported by the Fed’s policy of buying mortgage-backed securities, property lending is also on the increase.
Stock markets continue to grow

After stabilising in Q3 2012, the European, American and Japanese financial markets were back in growth in Q4 2012 (see Graph 4). In Q1 2013 the market indices surpassed their January 2011 levels, with the exception of the CAC40. This growth came in a context of abundant liquidity provided by all major central banks and a general decrease in uncertainty, as witnessed by the low volatility of the American and German market indices.

Euro stronger on the currency markets

The Euro has seen a slight appreciation against the dollar, pound and yen since Q4 2012 (see Graph 5). In late January 2013 the Euro-dollar exchange rate hit 1.35, its strongest level since November 2011. This appreciation reflects both the easing of tensions in the Eurozone and the increasingly expansionary bent of monetary policy in other advanced economies. In late February this appreciation was halted following declarations from Mario Draghi and the results of the Italian elections. Over this forecasting period the Euro exchange rate should stabilise at around 1.31 dollars = 1 Euro.

3 – Outstanding loans to non-financial corporations have not increased in the Eurozone.

4 – The market indices have been rising since summer 2012.
The ECB conducted two exceptional refinancing operations at the end of 2011 and the beginning of 2012

In response to the worsening sovereign debt crisis in the Eurozone, which was causing rising tensions on money markets (in particular growing fragmentation of the Eurozone interbank market) due to the exposure of bank balance sheets to sovereign risk, the European Central Bank gradually stepped up the expansionist nature of its monetary policy from Q3 2011 onwards. In this context, in December 2011 and at the end of February 2012, it carried out two exceptional three-year refinancing operations for the banks of the Eurozone (Very Long Term Refinancing Operations, VLTRO): the Central Bank’s standard refinancing operations have one-week maturity, while so-called «long-term» operations usually have maturities of 3, 6 or 12 months. The declared objective of the Central Bank was to ensure that transmission of its monetary policy was not blocked by the liquidity conditions of European banks. These had been deteriorating sharply and diverging between the Eurozone countries, resulting in different credit financing terms between countries (see graph 1). The aim of the two operations was to remedy this fragmentation, avoid a generalised liquidity crisis and the credit crunch that might have followed (brutal drop in lending to economic agents). These two operations led the ECB to grant loans of €489 billion in December 2011 to 523 banks (respectively €530 billion in February 2012 to 800 banks). This was done in the form of loans of unlimited amounts with three-year maturity, at a rate equal to the average of the reference interest rate over the period, which is to say 1.0% prior to July 2012 and 0.75% since then. However, given that a part of these long-term loans derived from the renegotiation of maturities on pre-existing shorter-term loans, the operation resulted in the net creation of €210 billion and then €311 billion (€521 billion in all) of currency by the ECB.
To guarantee the loans, as is usual in refinancing operations, the ECB demanded the temporary transfer of assets (referred to as collateral) by the banks taking the loans to protect against the risk of default by the borrowers. At the same time as the decision to conduct the VLTRO operations, the list of collateral considered eligible by the Central Bank was extended, which contributed to bolstering the prices of certain classes of assets, notably sovereign debt securities. In order to control the level of risk on its balance sheet, the ECB defined discounts (haircuts) applied to eligible assets according to their intrinsic risk levels.

Banks started repaying the VLTRO in early 2013
The December 2011 and February 2012 VLTRO are three-year-maturity loans, but are repayable in full or in part after a one-year period. At the beginning of March, of the gross amount of €1,019 billion allocated, European banks have repaid about €155 billion on VLTRO 1 and €68 billion on VLTRO 2, representing about 22% of the total gross amount and 43% of the net amount allocated.

Who borrowed in the VLTRO?
As for all refinancing operations decided upon by the ECB, the tenders were handled by the National Central Banks of the Eurozone, meaning that the exposure of the banking sectors of the different Euro Zone countries to the two VLTRO is known. Among the major European countries, Italy and Spain are those that made the most extensive use of the VLTRO, with their banks borrowing more than 60% of the total net amount allocated (€521 billion). French banks, meanwhile, borrowed about 14% of the total net amount and started making significant repayments at the beginning of 2013.

What have been the effects of the VLTRO?
The VLTRO have led to a massive increase in the surplus liquidity in the Eurosystem
The two VLTRO granted by the ECB created a large liquidity surplus on the European money market. With the nomenclature of the ECB, a liquidity supply and requirement are defined. Supply is the liquidity injected into the money market by the Central Bank. It is derived from the sum of the amounts allocated in refinancing operations and the amount of day-to-day loans granted by the ECB to these banks (via lending facilities). The liquidity requirement is the quantity of currency the banks must keep in liquid form. It results from the sum of the minimum reserves required by the Central Bank and so-called autonomous liquidity factors that the ECB does not directly control (for example the need for notes and coins of players in the real economy). The liquidity surplus is defined as the difference between liquidity supply and requirements and is therefore an indicator of money market imbalance.

Between 2008 and 2011, the liquidity surplus only rarely exceeded €200 billion. Just before the first VLTRO in December 2011, it stood at €300 billion and, under the impulsion of the two VLTRO, the liquidity surplus reached a peak of €808 billion in March 2012. In mid-February 2013, this liquidity surplus remained high, at close to €500 billion.

This surplus liquidity has eased money market tensions, but has not brought their working back to normal
The plentiful liquidity lent at low rates to the banks in the VLTRO eased the interbank market as the ECB supplied the liquidity required to cover banks’ liquidity needs. Since then, the money market has been characterised by very low rates and volatility, indicating the still very important role played by the central bank in financing the financial sector (see graph 2) in the note on Financial Markets). The surplus liquidity supply as against requirements thus forces those banks wishing to lend their surplus liquidity to do so at very low rates. At the beginning of March, VLTRO repayments did not trigger a rise in interbank rates, showing that the liquidity surplus continues.

The relatively small amount of these repayments confirms the fact that the workings of the money markets continue to be affected and that confidence between the banks has not been restored. The terms of access to financing remain uneven:

[Graph: 2 - Growth in outstanding lending to non-financial enterprises in the Eurozone]

Source: European Central Bank

(1) http://www.ecb.int/mopo/liq/html/index.en.html
some banks have not returned to financing terms with sufficiently advantageous rates or on a sufficiently long-term basis to be able to repay the ECB, while other, sounder banks have found means of financing on the market (by interbank credit but also by debt issues, for example) and are now in a position to repay the Central Bank (and all the keener to do so for the effect on their reputation).

The fall in credit in the Southern European countries has been temporarily halted

By eliminating the risk of a liquidity shortage that was facing European banks at the end of 2011, the VLTRO put an end, in early 2012, to the fall in outstanding credit that had been accelerating at the end of 2011 in the Eurozone (see Graph 2) due to particularly negative developments in the programme countries, as well as in Spain and in Italy. Outstanding credit has been declining again since mid-2012 in the Eurozone, due to the weakness of demand for credit, according to the surveys conducted among banks and non-financial enterprises (BLS and SAFE surveys by the ECB). Thus, the concerns about liquidity or financing no longer contribute to tightening lending conditions (see graph 3). More generally, the strong creation of monetary base (the money created by the Central Bank via bank refinancing operations among other things) has not been followed by an acceleration in the money supply (the money created by the banks when they finance the economy, taken here in its broadest sense (M3), see graph 4).

The VLTRO have contributed to bringing sovereign rates down

The VLTRO were followed by a drop in long-term sovereign rates on the European debt market (see graph 5). On the one hand, the risk of bank default, and therefore of recapitalisation by the States, has been revised downwards. Also, certain European banks have started buying sovereign securities again, usually domestic ones, whereas the European banks were net sellers on the whole in 2011.

### 3 - Factors contributing to tightening of credit

![3 - Factors contributing to tightening of credit](image)

**Source**: European Central Bank

### 4 - Growth in the monetary base and money supply in the Eurozone

![4 - Growth in the monetary base and money supply in the Eurozone](image)

**base 100 in 2000**

**Money supply (M3)**

**Monetary base**

**Source**: European Central Bank
Between December 2011 and November 2012, almost €300 billion in sovereign debt securities were bought up by European banks (see graph 6). There were massive Treasury bond purchases by banks in early 2012 in Italy and in Spain. This decline in sovereign debt tensions came to halt in the Spring, however, and it was only with the European Council meeting in June 2012 and the declarations of Mario Draghi on the future of the Eurozone in July that a new downwards trend was triggered, driven from September onwards by the introduction of Outright Monetary Transactions.

Has the liquidity created by the VLTRO circulated?
The first result of the surplus liquidity in the banking system was a rise in the amounts placed by the banks with the ECB deposit facility. Initially, the European banks sharply increased their overnight deposits with the ECB (from €205 billion in November 2011 to €771 billion in April 2012). The immediate relocation of a large part of the funds injected in the VLTRO came at a cost for the banks, since what had been borrowed at the reference rate of the ECB was largely lent at the floor interest rate of the deposit facility, which is to say 0.25% prior to July 2012. This is a sign of the prevailing risk aversion on the market. After the drop of the deposit facility rate to 0% from 11 July 2011 (at the same time as the cut in the reference rate to 0.75%), the European banks moved en masse to stop placing their surplus liquidity in the deposit facility and simply left it in their current accounts in the form of surplus reserves, the interest rate being zero in both cases (apart from the mandatory part of the reserves on which the ECB pays 0.75%). The amount of the reserves placed with the ECB by the banks thus rose from €109 billion in June 2012 to €539 billion in August 2012, well above the required ratios ($107 billion in August 2012).

This does not mean that the liquidity did not circulate in the economy. Those banks that borrowed liquidities in the LTRO and those that deposited their funds overnight at the ECB were different ones, a sign that the money created by the ECB was used for payments between banks (corresponding to transactions between households and businesses in the Eurozone). The large scale of the banks’ reserves with the ECB is indeed a sign of the poor working of the interbank market, but not, in principle, of the circulation of liquidity in the economy.

5 - European sovereign rates

![Graph of European sovereign rates](Source: Data Insight)

6 - Sovereign bond purchases by the banks

![Graph of sovereign bond purchases by the banks](Source: European Central Bank)

International developments

No shift in inflation expectations

The VLTRO and the resulting strong growth in the monetary base rekindled fears as to a possible surge in inflation in the Eurozone. For the moment, however, the preference of the banks for liquidity and their high risk aversion, plus weak demand for lending due to still-poor activity prospects, have slowed down transmission to the real economy. Inflation expectations therefore remain low today, at levels comparable to ECB objectives (see graph 7).

![Graph 7: Break-even inflation rate in France and the Eurozone until February 2013](image)

**Note:** In February 2013, 10-year expected inflation stood at 1.7% on average in France and 1.5% on average in the Eurozone.

(1): The break-even inflation rate is the difference between the yield on a sovereign bond and the yield on a bond of similar maturity which is index-linked to inflation. In certain conditions, it can be likened to the future inflation expected by the market.

**Source:** Bank of France
Eurozone

A slow recovery against a backdrop of divergences

In Q4 2012, activity in the Eurozone contracted sharply (-0.6% after -0.1%). Despite the acceleration of world trade, exports declined for the first time since 2009 and foreign trade no longer sustained growth. Domestic demand continued to slide at the same pace as in previous quarters.

In H1 2013 the Eurozone should return to growth, +0.1% per quarter, as suggested by the clear recovery of the business climate. The Eurozone should indeed benefit from the pick-up of foreign outlets, and the decline in domestic demand is likely to drop in intensity. After a marked adjustment phase, the investment ratio is low and production capacity renewal requirements are high: investment in capital goods should no longer fall in 2013. Purchasing power should still be penalised by weak earned income, but the impact of the fiscal consolidation measures should also be smaller in 2013 than in 2012 and inflation is expected to come down. In such conditions, consumption should contract less strongly in early 2013 than in 2012.

Over the forecasting period divergences should persist between Germany, where activity is likely to rebound sharply as early as Q1 2013, and Spain and Italy where it is set to continue its decline. In France activity should remain almost stable. All in all, after -0.5% growth in 2012, the overhang for 2013 at the end of Q2 should be -0.3%.

A sharp decline in activity in Q4 2012

Activity in the Eurozone contracted very sharply in Q4 2012 (-0.6% after -0.1%). For the first time for three years exports slipped back (-0.9%). Despite the upswing in demand from the emerging economies, these countries were penalised by the decline in trade in the developed countries. Furthermore, consumption and investment both continued to fall at the same pace as in previous quarters.

A slow recovery in early 2013...

After reaching a low point in October 2012, the business climate has picked up significantly in the Eurozone, especially in Germany (see Graph 1). According to the business tendency surveys in both industry and services, business leaders expect an improvement in activity in Q1 2013. After just over a year of decline, the Eurozone GDP should see a return of very slight growth in H1 2013 (+0.1% per quarter). The growth overhang for 2013 at the end of Q2 should nonetheless remain negative (-0.3%).

...but the various dynamics are still divergent

The gap between the Eurozone countries is likely to widen further (see Graph 2). Activity should be dynamic in Germany, driven by the rebound in investments in fixed assets and in construction. At the other end of the scale, in Italy and Spain activity is set to continue its slide, although the pace of the

1 - Business climate in the Eurozone

Source: DG ECFIN
International developments

Contraction should slow somewhat. In France activity should increase little, slowed by sluggish domestic demand.

Support for exports

According to the business tendency surveys, export prospects should improve significantly in early 2013 (see Graph 3). After slipping back in Q4 2012 (-0.9%), exports should therefore rebound in H1 2013 (+0.7% then +0.9%). They are expected to benefit from the rebound in trade within the Eurozone, particularly via the rise in imports in Germany. Additionally, demand should continue to progress in the other advanced economies and accelerate in the emerging countries. The recent appreciation of the euro should however take its toll on exports, particularly in Spain and Italy.

Investment set to stabilise

After several quarters of marked decline investment in fixed assets should gradually pick up at the start of 2013. Prospects according to the business tendency surveys are improving sharply and the production capacity utilisation rate at long last grew in January. However, this upturn in investments should only be gradual. The financing terms afforded to private agents remain tight in Italy and Spain, although they are steadily improving. In these two countries the interest rates on loans granted to businesses remain high. Additionally, investment in construction is expected to continue its decline, although this should be less marked in 2013 because the construction sector is set to pick up in Germany.

Consumption still struggling

The past weakness of activity is likely to take a further toll on the labour market, and employment should slide once more. The deterioration of the labour market has diminished the bargaining power of employees, and wages are unlikely to progress much in Spain and Italy. Earned income is thus set to increase only slightly in early 2013.

Additionally, the fiscal consolidation measures are likely to slow down the disposable income of households, although overall the measures voted for 2013 are less extensive than in 2012. They are likely to temper the support from automatic stabilisers (a «mechanical» rise in social benefits and a drop in taxes during a downturn). However, the moderation of inflation should help sustain purchasing power, which is expected to fall back less quickly in early 2013 than in 2012.

Consumption should therefore continue to fall in H1 2013 (-0.2% then -0.1%), but not as sharply as in 2012, in line with the expected profile of purchasing power. The savings ratio of households should be stable at 13.0%, as in 2012.

Inflation still heading downwards

In Q4 2012 the rise in the unemployment rate continued (11.9% in January). Bearing in mind the weak level of activity, it should continue to rise through to June 2013. So inflationary pressure should be limited and core inflation should slip back to 1.2% in June 2013, after 1.3% in January 2013 (see Graph 4).

The drop in headline inflation in the Eurozone has been sharp since the start of 2012, and should continue up to April 2013. It is then likely to rise, following the profile of energy inflation. Indeed on the assumption that Brent remains stable at around $110 (€84), the year-on-year increase in energy prices should fall to 1.4% in April 2013, after 5.2% in December 2012. It should then rise to 5.1% in June, as the drops of May and June 2012 cease to affect year-on-year values. Additionally, the sharp rises in commodity prices since the start of 2013 should filter through to food prices. All in all, headline inflation, standing at 2.0% in January, should retain this level in June 2013.

2 - Divergences in the Eurozone

![GDP in volume (base 100 in Q1 2008)](source: Eurostat, INSEE calculations)

Conjoncture in France
3 - Export perspectives in the manufacturing industry

Source: Markit

3 - Consumer prices in the Eurozone

Sources: Eurostat, INSEE calculations
Activity fell sharply in Q4 2012 in Germany (-0.6%). Foreign trade weighed down heavily on growth: exports fell back (-2.0%), while imports held up somewhat given the fall in activity. Investment in capital goods also fell for the fifth consecutive quarter. Only consumption, both public and private, showed a slight increase.

According to the business tendency surveys, the German economy is set to show an upturn in H1 2013. Exports are likely to rise once again, as should investment, and household consumption should remain firm. Activity should increase by 0.5% in Q1 2013 and by 0.4% in Q2. The growth overhang for 2013 at the end of H1 should come to +0.5%.

**German exports likely to pick up again**

After dropping at the end of 2012, German exports should pick up again at the start of 2013, thanks to strong demand from outside the Eurozone: the new export orders component in PMI surveys has been rising since October 2012, as have foreign demand prospects in the IFO Institut surveys (see graph).

**Investment set to bounce back**

After falling by 4.1% in 2012, investment in capital goods should rise again over the forecasting period, driven by exports (+0.7% in Q1 2013 and +2.0% in Q2). Orders for capital goods did show an upturn in 2012, as did production capacity utilisation rates. Most importantly, optimism in business tendency surveys since October shows a return in confidence in the economic outlook.

After falling in 2012 (-0.9%), investment in construction is set to bounce back in 2013. The number of building permits and orders in construction has been on an upward trend since 2010.

**Household consumption should remain strong**

The labour market situation in Germany remains in favour of employees. The slight fall in productivity observed since the beginning of 2011 was accentuated in Q4 2012, with employment continuing to rise despite the fall in activity. At the beginning of 2013, productivity should show an upturn, with employment growing less than activity. The unemployment rate should remain stable at 5.3% over the forecasting period. Wage increases are likely to continue and household purchasing power should progress again, also buoyed up by a fall in social contributions on 1st January 2013. In this context, household consumption, which increased in 2012 despite jolts in activity, should progress by 0.3% a quarter through early 2013 and the savings ratio should remain stable at 15.3%.

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### The business climate is improving

![Graph showing the business climate improving](image)

Source: Business tendency surveys of IFO-institut
Easier on the brakes

Italian activity fell back sharply in Q4 2012 (-0.9%) and should continue to slip through H1 2013 (-0.3% a quarter), although less steeply. At the beginning of 2013, business surveys are showing signs of improvement. Exports would appear to be accelerating and investment in fixed assets levelling out, buoyed up by the need to restore production capacities. Households are likely to continue cutting back on their consumption in 2013, however, with purchasing power falling sharply in H1 2013 despite moderate inflation.

Signs of recovery in manufacturing sector surveys

Manufacturing output is likely to continue falling in H1 2013, but much less sharply than at the end of 2012. On the one hand, purchasing manager surveys in manufacturing industry (PMI) have been showing a clear upturn since the summer, especially as regards their new export order component (see graph). In addition to this, the industrial production index rebounded slightly in December (+0.4%) after falling for three months. The slide in Italian GDP should therefore ease in H1 2013 (-0.3% a quarter). The growth overhang for 2013 at the end of Q2 should be -1.5%.

Fiscal consolidation efforts ease but continue to hold back consumption

Based on the measures passed to date, the fiscal consolidation effort should continue in 2013, although at a lesser rate than in 2012. The additional burden on households should reach 1.7% of their income, which is slightly less than in 2012 (2.1 points of gross disposable income). Inflation should also fall, after the VAT shock in 2012. The deterioration in employment is likely to continue however, and the unemployment rate should reach 11.6% in Q2 2013: in this context, employees are unlikely to be able to maintain their real wages, despite moderate inflation. Household purchasing power is therefore set to continue falling through to mid-2013. In an uncertain political situation, the savings ratio should remain stable, as it has since mid-2011, and households are likely to cut back on their consumption in H1 2013 (-0.6% per quarter).

Upturn in exports and gradual levelling out of investment

The fall in investment in capital goods (-9.2% in 2012) should gradually ease, as activity prospects look up, according to the business tendency surveys. Also, the interest rates granted to small companies have been falling since the beginning of 2012 and exports continue to be stimulated by foreign demand, despite being held back by the recent rise in the Euro. The need to renew production capacities is growing on account of the under-investment in recent years. However, political uncertainties could hold back the upturn in investment to some extent.

The global climate in manufacturing industry is improving

Source: Markit
Spain

Keeping up the rate of adjustment

Activity in Spain has been contracting since the end of 2011 and the trend is set to continue over the forecasting period: -0.4% and -0.3% in Q1 and Q2 2013. Due to the poor job market situation and continuing fiscal consolidation efforts, household purchasing power should continue falling, despite the drop in inflation. Households are therefore likely to continue cutting back sharply on their consumption. Exports should progress, however, thanks to the upturn in world trade, even though they are likely to suffer from the recent rise in the Euro. Investment in capital goods should level out by mid-2013, buoyed up by foreign demand, the easing of financial tensions and the need to renew production capacities.

**Spanish exports held back by the rise in the Euro**

Although they fell back slightly in Q4 2012 (-0.9%), hit by the fall in trade in developed countries, Spanish exports have been strong since 2009. They have benefited notably from the fall in the Euro over the past three years. In H1 2013, Spanish exports are likely to profit from the upturn in world trade, although they should be hit by the recent rise in the Euro, rising again moderately (+0.8% then +1.2% a quarter). With domestic demand still falling, foreign demand is likely to continue to be the sole driver of growth in Spain.

**Investment: restoring production capacities**

The sharp fall in investment over several quarters has generated needs for renewal. Investment in capital goods should therefore enter a catch-up phase, driven by the high level of corporate margins. Investment in capital goods should level out by mid-2013, without really progressing, given low demand for production capacities. In construction, investment is set to continue falling, depressed by the clearing up of the property bubble and the drop in public investment.

**Consumption down and savings ratio stable**

Job losses are set to continue in early 2013 and the unemployment rate, which stood at 26% at the end of 2012, should continue to rise. The rise in the level of unemployment on the one hand and the effort to keep wages down on the other are likely to limit earned income, while the rises in taxes and cuts in welfare benefits passed for 2013 are on a comparable scale to those in 2012. Thanks to the fall in inflation, however, purchasing power of gross disposable income is set to fall back in H1 2013 at a lesser rate than in 2012 (see graph). After falling sharply through to the end of 2012, the household savings ratio should stabilise at a low level (see graph) and consumption is set to contract again in 2013 (-1.0% in Q1 then -0.9% in Q2 2013).

**Savings ratio set to level out**

Sources: INE and INSEE calculations
The US economy stalled in Q4 2012 (0.0%): while domestic private demand was strong (+0.9%), public and defence spending contracted sharply. Activity should accelerate significantly in Q1 2013 (+0.6%). Residential investment should continue to rise again and US exports should benefit from the acceleration in world trade. In Q2, household consumption is likely to be hit by the rise in taxes and public spending should contract again: activity is likely to slow down significantly (+0.3%).

A «fiscal cliff» of some 1.5 points of GDP...

The agreement found at the end of December between Congress and the President makes an additional burden of $195 billion on household income in 2013. The bulk of this sum comes from the rise in wage contributions. Tax rates will also rise on revenues from capital and for the highest income tax bracket. The burden on households should thus increase by more than 7% from Q1 2013. Regarding spending, the automatic cuts coming into force on 1st March potentially represent 7% of the spending scheduled by the Federal State in 2013. The forecast is based on the hypothesis of an agreement being found and of public consumption contracting moderately in Q2 (-0.5%).

Under the effect of the fiscal shock, household purchasing power is likely to fall in H1 2013. The drop, however, should be softened by the moderate level of inflation and strong employment. Job creations, at an average of 180,000 a month in 2012, should barely weaken over the forecasting period and the unemployment rate should fall back slightly (see Focus). Several factors should also favour a fall in the savings ratio: on the one hand the rise in certain taxes on the wealthiest households; on the other, the rise in the price of assets should generate wealth effects. All in all, consumption should hold up in Q1 2013 (+0.4%), as suggested by new vehicle registrations until February 2013 (see graph) but then slow down sharply in Q2 (+0.2%).

Investment remains dynamic as the foreign-trade driver starts up again

After falling sharply in Q4 2012, US exports should benefit from the acceleration in trade, and notably in Asian demand, and rise again significantly. Over the forecasting period, companies are set to profit from their high margin levels and still-favourable financing terms to continue developing their production capacities. In parallel, the construction sector should continue to grow at a sustained rate.

Sources: Bureau of economic analysis, INSEE calculations
International developments

Can the fall in the activity rate in the United States be explained by flexion effects?

The unemployment rate has been falling in the US since the end of 2009

After rising sharply and very quickly from the beginning of the crisis, from 4.5% in mid-2007 to a peak of 10.0% in October 2009, the US unemployment rate has fallen significantly. It stood at 7.8% in December 2012 (see graph 1).

The labour force participation rate is also falling

In parallel, the labour force participation rate of over-16s has also fallen sharply. Since 2007, it has dropped by about 2.5 points and by 1.4 points since the end of 2009. This fall which has continued during the labour market improvement phase, also seems much more pronounced than in previous economic cycles (see graph 2). It is therefore only natural that we should wonder to what extent the fall in unemployment might not be a sign of discouragement among unemployed workers, leading them to withdraw from the labour market.

Age structure explains about half the drop in the labour force participation rate

The labour force participation rate is the ratio of the active population to the population of working age. Taking account of the age and gender structure of the population, a change in the overall labour force participation rate between two dates can be broken down into two contributions (see appendix): on the one hand, the changes in the participation rates of each age and gender group (referred to here as the ‘underlying variation’) and, on the other hand, the variation in the respective weights of the different age and gender classes in the population of working age for a given labour force participation rate in each of those classes (referred to here as the ‘structure by age and gender’). In particular, ageing of the population leads to an increase in the proportion of seniors in the population. As the latter have a lower labour force participation rate than the average, the overall participation rate tends to fall quite mechanically, even if rates per age group remain constant.

An underlying labour force participation rate is therefore constructed, in which the weight of each age bracket and gender group is fixed at a given date. The decline observed between 2007 and 2012 in this underlying participation rate, by about 1.2 points, is half that in the overall rate (see graph 3).

Changes in the labour force participation rate trends of the different age brackets

This underlying labour force participation rate shows the trends in the participation rate in the different age groups. Some are structural, such as the fall in labour market participation among young people as they study longer, but the crisis has amplified this shift (see graph 4). Conversely, it seems to have had little effect on the structural rise in labour force participation rates of the over-55s (see graph 5). For the median age groups (25-54 years), the fall in rates has been about 1.5 points since 2007 and has been homogenous between the different age brackets (see graph 6).

Flexion effects have probably been weaker since 2008 than those observed in previous crises

In addition to the structural changes in activity behaviour, the economic situation can induce modifications in labour market participation behaviour, through ‘flexion effects’: a part of the population may withdraw from the active

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1 - Unemployment rate in % of the active population

2 - Labour force participation rate of more than 16 years in % of population over 16 years

Source: Bureau of Labor Statistics

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(1) The data of the Bureau of Labor Statistics defines 13 age brackets with 5 year intervals from 16-19 years to over 75, making a total of 26 categories when the stratification takes account of age and of gender.

(2) The result is sensitive to the base year used. However, by testing several base years in the period 1981-2012, we conclude that the result is always qualitatively the same, i.e. that half of the drop in the participation rate between 2007 and 2012 is due to the population’s age and gender structure. Quantitatively, the underlying rate lost between 1 and 1.5 point between 2007 and 2012 depending on the base year used. In all that follows, the breakdown of the structure of the active population in 1981 is used as a reference.

132

Conjoncture in France
International developments

3 - Underlying labour force participation rate

4 - Labour force participation rate of 16-24 years

5 - Labour force participation rate of more than 55 years

6 - Labour force participation rate of 25-54 years

7 - Unemployment rate and underlying labour force participation rate

8 - Unemployment rate and rate of «discouraged» workers

Source: Bureau of Labor Statistics
population when the labour market deteriorates and come back when employment prospects improve. This behaviour appears clearly in the relative changes in the unemployment rate and the "underlying" labour force participation rate (see graph 7).

In 2008, for example, the fall in the labour force participation rate was rather moderate, given the scale and speed of the rise in the unemployment rate. Conversely, since 2010, the labour force participation rate has not been rising, although the unemployment rate has been falling. All in all, the labour force participation rate level seems to be in line with the situation on the labour market.

Another sign of the relative resilience of the US active population during the crisis is provided by the trend, among those who are inactive, in the number of people who do want a job but do not meet the statistical definition of the unemployed (see appendix). Among these people, US statistics distinguishes those people who have recently stopped looking for a job by discouragement. The «discouragement» rate of the population of working age but does seem in line with what would have been expected given the scale and speed of the rise in the unemployment rate (see graph 8). On the other hand, the number of people who would like a job but have given up looking altogether for over a year has increased since 2007, by about 700,000 people (0.4% of the active population). Almost 2% of the active population is now in this case, a level comparable to that at the end of the 1990s.

All in all, the labour force participation rate in the United States corresponds today to what would be expected on the basis of the level of employment, demographic structure and the usual phenomena of discouraged workers.

### Appendix

1. **Definitions**

US labour-market statistics are taken from the Current Employment Statistics (CES) programme, the results of which are published each month by the Bureau of Labor Statistics (BLS). For each month, the reference week is that including the 12th day of the month.

The figure for **employed persons** includes all those people who, in the reference week:

- were paid for work, no matter what its duration,
- were self-employed in their own company or farm,
- or worked unpaid in a family-run company or farm for at least 15 hours.

Anyone who was absent from work for reasons of sickness, bad weather conditions, leave, professional conflicts or personal reasons is also counted as being in employment.

**Unemployed persons** refers to all the people who meet the following criteria: they did not have a job in the reference week, they were available for work immediately and took specific steps to find a job during the four-week period ending with the reference week. This definition complies with that of the International Labour Organisation (ILO). The **active population** includes people in employment and those who are unemployed.

The **labour force** participation rate is defined as being the ratio of the active population to the population of working age. Among those who are inactive, the BLS makes a distinction between those persons wanting to work but not counted as unemployed either because they were not available in the reference week or because they were no longer actively looking for a job.

2. **Breakdown of the trend in the labour force participation rate according to age and gender structure**

The labour force participation rate is written as the weighted sum of the labour force participation rates of the different age and gender classes, in the form:

\[ \text{Activity rate} = \frac{\text{Active population}}{\text{Total population}} \sum_{i} \frac{PA_i}{PT_i} \]

where \( i \) represents the age and gender classes. Thus, the variation (in points) in the labour force participation rate between date 1 and date 2 may be written:

\[ TA_2 - TA_1 = \sum_{i} \left( \frac{PA_{i,2}}{PT_{i,2}} - \frac{PA_{i,1}}{PT_{i,1}} \right) \]

= \[ \sum_{i} \left( \frac{PA_{i,2}}{PT_{i,2}} \right) - \sum_{i} \left( \frac{PA_{i,1}}{PT_{i,1}} \right) \]

= \[ \sum_{i} \left( \frac{PA_{i,2}}{PT_{i,2}} \right) - \sum_{i} \left( \frac{PA_{i,1}}{PT_{i,1}} \right) \]

underlying variation  
effect of age and gender structure
After falling back in Q4 2012, British activity is likely to rise again in H1 2013. Although fiscal consolidation is set to continue, domestic demand should hold up well: with the fall in inflation and buoyant private employment, households should increase their consumer spending moderately, while firmer demand from abroad should support corporate investment. Activity should continue to be hit by weak energy production, however.

Still short of energy in early 2013

British activity fell again at the end of 2012 (-0.3%) as the one-off boosts in Q3 faded out (London Olympics, additional bank holiday for the Queen’s Jubilee) and due to the extended shutdown of part of North Sea oil production. After quarterly ups and downs, activity slowed down overall in the UK in 2012 (+0.2%). Energy production is likely to remain weak in Q1 2013, hit by the shutdown of the Schiehallion platform (North Atlantic). All in all, activity is likely to progress moderately: + 0.2% per quarter.

Fiscal consolidation continues...

For the fiscal year ending in March 2013, new fiscal consolidation measures represented an effort of around 1.2 points of GDP. The great majority of these measures were based on spending cuts: social welfare benefits paid to households increased by less than inflation, abolition of family benefit from January 2013 for the highest-earning households and cuts to the budgets of government departments. Around 300,000 public-sector jobs have been cut since 2011. Budget cuts are set to continue at the same rate in 2013-2014 and the cuts in welfare benefits are likely to be stepped up. Households should benefit, however, from a further rise in the income tax payment threshold.

... but private employment should support household purchasing power

At the beginning of 2013, household purchasing power should be hit by further reductions in benefits, but inflation should fall after the rises at the end of 2012 (university fees, electricity prices). Above all, purchasing power should be buoyed by strong private employment which is likely to continue progressing despite weak activity. British households should therefore increase their consumer spending moderately.

Financing terms are easing

Despite the negative effect on their margins of the lack of productivity gains, companies are set to slightly increase their investment on production assets in early 2013. On the one hand, they should benefit from a monetary policy that remains accommodating and also from government measures aimed at enhancing their access to credit (Funding For Lending and Supply Chain Finance schemes). These brought a very significant easing of lending terms at the end of 2012 (see graph).

On the other hand, foreign trade outlets should be stronger, buoyed by the acceleration in world demand and the recent depreciation of the Pound Sterling.
In Q4 2012, activity stagnated in Japan (0.0% after -1.0% in Q3), under the effect of a contraction in corporate investment and, above all, a further fall in exports, hit by diplomatic tensions with China.

In H1 2013, Japanese activity should start growing again (+0.6% in Q1 and +0.4% in Q2). Exports are likely to be boosted by the recent fall in the Yen and accelerating Asian demand. In addition to this, the new stimulus plan passed in February 2013 should buoy up activity.

**Industrial production to bounce back in Q1 2013**

After falling back sharply in Q3 (-4.2%) and in Q4 2012 (-1.9%), the industrial production index rose again in December 2012 and January 2013 (see graph). According to the survey of production forecasts in industry from the Ministry for the Economy (METI), it should increase again sharply in February 2013, notably in the automobile and electronics branches. The business climate as measured by the business tendency surveys is also showing a significant improvement in expectations in the manufacturing sector in early 2013.

**Domestic demand set to be stronger**

In Q4 2012, private consumption showed an upturn (+0.5% after -0.5%). In particular, new vehicle registrations, which had collapsed in the summer with the end of public subsidies for purchases of "ecological" cars, have risen again significantly since October. The low unemployment rate, which fell back to 4.2% in January 2013, is also enabling employees to negotiate real wage rises and household consumption should continue to increase moderately over the forecasting period. Also, the 10.3 billion Yen stimulus plan (2.2% of GDP) announced by the new Shinzo Abe government should boost public spending. To meet this stronger demand, companies are likely to increase their investment expenditure.

**The sharp fall in the Yen should boost exports**

Japanese exports fell sharply in Q4 2012 due to diplomatic tensions with China. They should grow significantly in H1 2013, buoyed by accelerating demand from Asian countries other than China and by the sharp fall in the Yen. The vast asset-purchasing programme launched by the Bank of Japan (see Financial Markets) has brought a sharp drop in the Yen against the other major currencies since December (-12% from November 2012 to February 2013 against the US Dollar).

![Japanese industrial production to bounce back in Q1 2013](image)

Source: Japanese Ministry of Economy Trade and Industry, Markit
In Q4 2012, activity, and notably industrial activity, accelerated in China and in all the emerging countries of Asia, while trade bounced back strongly in the zone. According to the January business tendency surveys and production data, activity is set to accelerate further in H1 2013. The sharp rise in Chinese domestic demand, and notably in household consumption and in investment, should benefit the whole of the région.

Trade on the up in Asia

Trade in Asia was very strong during the world economic upturn, but slowed down suddenly from mid-2011 onwards. As an illustration, the exports of Asian countries other than Japan progressed by 0.8% between Q3 2011 and Q3 2012 and imports by 4.0%, against an average annual progression of around 12% between 2000 and 2007. The fall in final demand from advanced countries, notably in Europe, and tighter monetary policies, notably in China, would seem to have slowed down the whole of the Asian production chain.

In Q4 2012, however, trade bounced back strongly in Asia and Chinese exports to Europe levelled out. According to Customs data and business tendency surveys in early 2013, this upturn in activity would appear to be confirmed.

Domestic demand accelerating in China

Activity should be buoyed up in particular by strong Chinese domestic demand. For example, private consumption accelerated in Q4 2012 and this trend is set to continue in H1 2013: new vehicle registrations reached an exceptionally high level in January, exceeding even their January 2011 peak (see graph). This upturn in domestic demand has been favoured by macroeconomic policies.

Since the beginning of 2012, the sharp drop in inflation, back down to 2.0% in January 2013, has allowed the Chinese authorities to continue easing their monetary policy. The Chinese government and local provinces have also announced the financing of several public infrastructures for an amount of close to 2% of GDP. To meet this increasing demand, industrial production should remain strong: the PMI survey for manufacturing industry has been above the expansion threshold since December 2012 (50.4 points in February 2013).

The «dragons» profit from the Sino-Japanese dispute

In Q4 2012, activity accelerated significantly in South Korea and Taiwan, and rose again in Singapore. In particular, manufacturing production was very dynamic, buoyed by exports, notably to China. While Sino-Japanese tensions caused a considerable drop in Chinese imports from Japan, China’s biggest supplier, Korean and Taiwanese products would seem to have played the role of substitutes for Japanese products. Over the forecasting period, they should continue to benefit from the strength of Japanese and Chinese demand.
Countries Accounts
### Eurozone

#### Supply and use table (in real terms)

<table>
<thead>
<tr>
<th>GDP</th>
<th>Private consumption (57%)</th>
<th>Investment (19%)</th>
<th>Public consumption (22%)</th>
<th>Exports (44%)</th>
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#### Contributions to GDP growth

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#### GDP growth contributions

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### Consumer prices in Eurozone

#### CPI groups (2013 weightings)

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### France (21%)1

#### Supply and use table (in real terms)

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<td>0.1</td>
<td>-0.4</td>
</tr>
<tr>
<td>0.1</td>
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<td>0.0</td>
<td>0.1</td>
<td>-0.2</td>
</tr>
<tr>
<td>0.3</td>
<td>-0.1</td>
<td>-0.4</td>
<td>-0.9</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>0.0</td>
<td>-0.2</td>
<td>-0.3</td>
<td>0.0</td>
<td>0.1</td>
<td>-0.3</td>
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</table>

#### Contributions to GDP growth

<table>
<thead>
<tr>
<th>Domestic demand excluding inventories</th>
<th>Inventories</th>
<th>Foreign trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3</td>
<td>1.2</td>
<td>-0.6</td>
</tr>
<tr>
<td>-0.4</td>
<td>-0.1</td>
<td>0.5</td>
</tr>
<tr>
<td>0.2</td>
<td>-0.9</td>
<td>0.2</td>
</tr>
<tr>
<td>0.3</td>
<td>0.2</td>
<td>0.7</td>
</tr>
</tbody>
</table>

### Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2011.
yoy: year-on-year
cyoy: contributions year-on-year
(1) Share in Eurozone GDP
Sources: Eurostat, INSEE forecasts
### Germany (28%)\(^1\)

Supply and use table (in real terms)

<table>
<thead>
<tr>
<th>GDP</th>
<th>2011 Q1</th>
<th>2011 Q2</th>
<th>2011 Q3</th>
<th>2011 Q4</th>
<th>2012 Q1</th>
<th>2012 Q2</th>
<th>2012 Q3</th>
<th>2012 Q4</th>
<th>2013 Q1</th>
<th>2013 Q2</th>
<th>2013 Q3</th>
<th>2013 Q4</th>
<th>Annual change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption (57%)</td>
<td>0.7</td>
<td>-0.5</td>
<td>1.3</td>
<td>-0.3</td>
<td>0.2</td>
<td>0.2</td>
<td>0.0</td>
<td>0.1</td>
<td>0.3</td>
<td>0.3</td>
<td>1.7</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Investment (18%)</td>
<td>4.2</td>
<td>0.2</td>
<td>0.4</td>
<td>0.8</td>
<td>-1.0</td>
<td>-1.9</td>
<td>-0.4</td>
<td>-0.7</td>
<td>1.1</td>
<td>1.5</td>
<td>6.4</td>
<td>-1.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Public consumption (19%)</td>
<td>0.1</td>
<td>0.6</td>
<td>0.2</td>
<td>0.5</td>
<td>0.6</td>
<td>-0.3</td>
<td>0.7</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>1.0</td>
<td>1.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Exports (50%)</td>
<td>2.7</td>
<td>0.5</td>
<td>2.1</td>
<td>-0.5</td>
<td>0.7</td>
<td>3.3</td>
<td>1.5</td>
<td>-2.0</td>
<td>0.9</td>
<td>1.0</td>
<td>7.9</td>
<td>4.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Imports (45%)</td>
<td>2.3</td>
<td>2.2</td>
<td>1.7</td>
<td>-0.4</td>
<td>-0.7</td>
<td>2.3</td>
<td>0.6</td>
<td>-0.6</td>
<td>0.9</td>
<td>1.2</td>
<td>7.5</td>
<td>2.2</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Contributions to GDP growth

- Domestic demand excluding inventories: 1.2 -0.1 0.9 0.1 0.0 -0.3 0.1 0.0 0.4 0.5 2.3 0.3 0.7
- Inventories: -0.2 1.3 -0.8 -0.1 -0.2 -0.1 -0.3 0.2 0.0 0.0 0.2 -0.6 0.0
- Foreign trade: 0.3 -0.7 0.3 0.0 0.7 0.7 0.5 -0.8 0.1 0.0 0.6 1.2 -0.2

### Italy (17%)\(^1\)

Supply and use table (in real terms)

<table>
<thead>
<tr>
<th>GDP</th>
<th>2011 Q1</th>
<th>2011 Q2</th>
<th>2011 Q3</th>
<th>2011 Q4</th>
<th>2012 Q1</th>
<th>2012 Q2</th>
<th>2012 Q3</th>
<th>2012 Q4</th>
<th>2013 Q1</th>
<th>2013 Q2</th>
<th>2013 Q3</th>
<th>2013 Q4</th>
<th>Annual change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption (61%)</td>
<td>0.0</td>
<td>-0.2</td>
<td>-0.7</td>
<td>-1.1</td>
<td>-1.5</td>
<td>-1.1</td>
<td>-1.1</td>
<td>-0.7</td>
<td>-0.6</td>
<td>-0.6</td>
<td>0.1</td>
<td>-4.3</td>
<td>-2.4</td>
</tr>
<tr>
<td>Investment (20%)</td>
<td>0.4</td>
<td>-0.3</td>
<td>-1.3</td>
<td>-2.1</td>
<td>-3.7</td>
<td>-1.8</td>
<td>-1.2</td>
<td>-1.2</td>
<td>-0.9</td>
<td>-0.6</td>
<td>-1.4</td>
<td>-8.0</td>
<td>-3.2</td>
</tr>
<tr>
<td>Public consumption (20%)</td>
<td>-0.4</td>
<td>-0.5</td>
<td>-0.4</td>
<td>-0.4</td>
<td>-1.8</td>
<td>-0.6</td>
<td>-0.1</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>-1.2</td>
<td>-2.9</td>
<td>-0.2</td>
</tr>
<tr>
<td>Exports (29%)</td>
<td>0.6</td>
<td>0.4</td>
<td>1.2</td>
<td>0.9</td>
<td>-0.6</td>
<td>1.0</td>
<td>1.2</td>
<td>0.3</td>
<td>0.5</td>
<td>0.7</td>
<td>6.6</td>
<td>2.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Imports (30%)</td>
<td>-1.3</td>
<td>-2.1</td>
<td>-1.1</td>
<td>-2.4</td>
<td>-3.6</td>
<td>-0.6</td>
<td>-1.7</td>
<td>-0.9</td>
<td>-0.7</td>
<td>0.0</td>
<td>1.1</td>
<td>-7.8</td>
<td>-2.3</td>
</tr>
</tbody>
</table>

Contributions to GDP growth

- Domestic demand excluding inventories: 0.0 -0.3 -0.7 -1.2 -2.0 -1.2 -1.0 -0.6 -0.6 -0.5 -0.5 -4.8 -2.1
- Inventories: -0.4 -0.2 0.0 -0.5 0.1 0.0 -0.1 -0.7 0.0 0.0 -0.5 -0.6 -0.7
- Foreign trade: 0.5 0.7 0.6 0.9 1.0 0.5 0.9 0.4 0.3 0.2 1.4 3.0 1.3

### Spain (11%)\(^1\)

Supply and use table (in real terms)

<table>
<thead>
<tr>
<th>GDP</th>
<th>2011 Q1</th>
<th>2011 Q2</th>
<th>2011 Q3</th>
<th>2011 Q4</th>
<th>2012 Q1</th>
<th>2012 Q2</th>
<th>2012 Q3</th>
<th>2012 Q4</th>
<th>2013 Q1</th>
<th>2013 Q2</th>
<th>2013 Q3</th>
<th>2013 Q4</th>
<th>Annual change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption (58%)</td>
<td>-0.6</td>
<td>-1.2</td>
<td>-0.6</td>
<td>-1.0</td>
<td>0.5</td>
<td>-1.1</td>
<td>-0.5</td>
<td>-1.9</td>
<td>-1.0</td>
<td>-0.9</td>
<td>-0.8</td>
<td>-2.2</td>
<td>-3.6</td>
</tr>
<tr>
<td>Investment (21%)</td>
<td>-1.0</td>
<td>-1.2</td>
<td>-1.3</td>
<td>-3.3</td>
<td>-2.5</td>
<td>-3.1</td>
<td>-1.3</td>
<td>-3.9</td>
<td>-1.5</td>
<td>-1.1</td>
<td>-5.3</td>
<td>-9.1</td>
<td>-6.5</td>
</tr>
<tr>
<td>Public consumption (21%)</td>
<td>1.7</td>
<td>1.3</td>
<td>1.3</td>
<td>-0.1</td>
<td>-1.1</td>
<td>-0.3</td>
<td>-2.5</td>
<td>-0.3</td>
<td>-1.0</td>
<td>-1.0</td>
<td>-0.5</td>
<td>-3.7</td>
<td>-3.3</td>
</tr>
<tr>
<td>Exports (30%)</td>
<td>1.0</td>
<td>1.2</td>
<td>3.5</td>
<td>0.1</td>
<td>-2.6</td>
<td>1.8</td>
<td>5.1</td>
<td>-0.9</td>
<td>0.8</td>
<td>1.2</td>
<td>7.6</td>
<td>3.1</td>
<td>3.9</td>
</tr>
<tr>
<td>Imports (31%)</td>
<td>-1.0</td>
<td>-2.0</td>
<td>0.8</td>
<td>-2.8</td>
<td>-2.0</td>
<td>-1.3</td>
<td>2.7</td>
<td>-4.8</td>
<td>-1.4</td>
<td>-0.8</td>
<td>-0.9</td>
<td>-5.0</td>
<td>-4.6</td>
</tr>
</tbody>
</table>

Contributions to GDP growth

- Domestic demand excluding inventories: -0.2 -0.7 -0.8 -1.3 -0.5 -1.4 -1.1 -2.0 -1.1 -1.0 -1.8 -3.9 -4.1
- Inventories: 0.0 0.0 0.0 0.0 0.1 0.0 0.1 0.0 0.0 0.0 0.2 0.1 -0.1
- Foreign trade: 0.5 0.9 0.7 0.8 -0.1 0.9 0.7 1.2 0.7 0.6 2.3 2.5 2.7

---

Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2011.

yoy: year-on-year

cyoy: contributions year-on-year

(1) Share in Eurozone area GDP

Sources: Eurostat, INSEE forecasts
### Supply and use table (in real terms)

#### United States of America

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td><strong>GDP</strong></td>
<td>0.0</td>
<td>0.6</td>
<td>0.3</td>
<td>1.0</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Private consumption (71%)</td>
<td>-1.3</td>
<td>-0.3</td>
<td>-0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Private investment (12%)</td>
<td>-2.0</td>
<td>-0.4</td>
<td>-0.3</td>
<td>-0.4</td>
<td>0.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Public consumption (25%)</td>
<td>0.0</td>
<td>0.9</td>
<td>-0.1</td>
<td>-0.1</td>
<td>2.6</td>
<td>-0.9</td>
</tr>
<tr>
<td>Exports (32%)</td>
<td>1.4</td>
<td>-1.9</td>
<td>0.0</td>
<td>2.9</td>
<td>-1.5</td>
<td>-1.3</td>
</tr>
<tr>
<td>Imports (34%)</td>
<td>-2.6</td>
<td>-0.2</td>
<td>0.1</td>
<td>1.6</td>
<td>0.0</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Contributions to GDP growth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic demand excluding inventories</td>
<td>-1.1</td>
<td>0.0</td>
<td>-0.1</td>
<td>0.0</td>
<td>1.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Inventories</td>
<td>0.3</td>
<td>0.7</td>
<td>0.7</td>
<td>-0.7</td>
<td>-0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>Foreign trade</td>
<td>1.2</td>
<td>-0.5</td>
<td>0.0</td>
<td>0.4</td>
<td>-0.5</td>
<td>-0.9</td>
</tr>
</tbody>
</table>

#### United Kingdom

<table>
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<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td><strong>GDP</strong></td>
<td>0.4</td>
<td>0.1</td>
<td>0.6</td>
<td>-0.3</td>
<td>-0.1</td>
<td>-0.4</td>
</tr>
<tr>
<td>Private consumption (62%)</td>
<td>-1.3</td>
<td>-0.3</td>
<td>-0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Investment (14%)</td>
<td>-2.0</td>
<td>-0.4</td>
<td>-0.3</td>
<td>-0.4</td>
<td>0.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Public consumption (25%)</td>
<td>0.0</td>
<td>0.9</td>
<td>-0.1</td>
<td>-0.1</td>
<td>2.6</td>
<td>-0.9</td>
</tr>
<tr>
<td>Exports (32%)</td>
<td>1.4</td>
<td>-1.9</td>
<td>0.0</td>
<td>2.9</td>
<td>-1.5</td>
<td>-1.3</td>
</tr>
<tr>
<td>Imports (34%)</td>
<td>-2.6</td>
<td>-0.2</td>
<td>0.1</td>
<td>1.6</td>
<td>0.0</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Contributions to GDP growth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic demand excluding inventories</td>
<td>-1.1</td>
<td>0.0</td>
<td>-0.1</td>
<td>0.0</td>
<td>1.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Inventories</td>
<td>0.3</td>
<td>0.7</td>
<td>0.7</td>
<td>-0.7</td>
<td>-0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>Foreign trade</td>
<td>1.2</td>
<td>-0.5</td>
<td>0.0</td>
<td>0.4</td>
<td>-0.5</td>
<td>-0.9</td>
</tr>
</tbody>
</table>

#### Japan

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td><strong>GDP</strong></td>
<td>-1.8</td>
<td>-0.9</td>
<td>2.5</td>
<td>0.1</td>
<td>1.5</td>
<td>-0.2</td>
</tr>
<tr>
<td>Private consumption (60%)</td>
<td>-1.4</td>
<td>0.8</td>
<td>1.4</td>
<td>0.5</td>
<td>1.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Investment (21%)</td>
<td>-0.5</td>
<td>-0.3</td>
<td>1.7</td>
<td>4.4</td>
<td>-0.2</td>
<td>1.6</td>
</tr>
<tr>
<td>Public consumption (20%)</td>
<td>0.1</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>1.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Exports (15%)</td>
<td>-0.3</td>
<td>-7.1</td>
<td>8.7</td>
<td>-3.1</td>
<td>3.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Imports (16%)</td>
<td>1.4</td>
<td>-0.5</td>
<td>3.3</td>
<td>1.7</td>
<td>2.1</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Contributions to GDP growth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic demand excluding inventories</td>
<td>-0.9</td>
<td>0.5</td>
<td>1.2</td>
<td>1.4</td>
<td>1.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Inventories</td>
<td>-0.6</td>
<td>-0.3</td>
<td>0.5</td>
<td>-0.4</td>
<td>0.3</td>
<td>-0.3</td>
</tr>
<tr>
<td>Foreign trade</td>
<td>-0.2</td>
<td>-1.0</td>
<td>0.8</td>
<td>-0.8</td>
<td>0.2</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

**Forecast**

How to read it: % in brackets represent the weight in the nominal GDP in 2011

Sources: BEA (USA), ONS (UK), Japanese government (Japan), INSEE forecasts
Statistical French Appendix
## GOODS AND SERVICES: SOURCES AND USES AT CHAIN-LINKED PREVIOUS YEAR PRICES

**Billion euros and percentage changes from previous period**

**Working-day and seasonally adjusted data**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>avg**</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross domestic product (GDP)</strong></td>
<td>449.4</td>
<td>449.6</td>
<td>450.5</td>
<td>450.8</td>
<td>449.3</td>
<td>449.6</td>
<td>1800.2</td>
</tr>
<tr>
<td>% change</td>
<td>0.8</td>
<td>0.0</td>
<td>0.2</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Imports</strong></td>
<td>135.1</td>
<td>133.6</td>
<td>133.6</td>
<td>132.2</td>
<td>132.4</td>
<td>134.3</td>
<td>534.6</td>
</tr>
<tr>
<td>% change</td>
<td>3.5</td>
<td>-1.1</td>
<td>0.0</td>
<td>-1.0</td>
<td>0.2</td>
<td>1.4</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Total resources</strong></td>
<td>990.6</td>
<td>988.6</td>
<td>990.0</td>
<td>989.9</td>
<td>988.6</td>
<td>990.1</td>
<td>3959.2</td>
</tr>
<tr>
<td>% change</td>
<td>1.4</td>
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<td>0.0</td>
<td>-0.1</td>
<td>0.2</td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Households' consumption expenditures</strong></td>
<td>253.8</td>
<td>251.6</td>
<td>252.3</td>
<td>252.0</td>
<td>252.3</td>
<td>251.8</td>
<td>252.5</td>
</tr>
<tr>
<td>% change</td>
<td>0.0</td>
<td>-0.9</td>
<td>0.3</td>
<td>-0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
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<td>120.3</td>
<td>120.3</td>
<td>120.5</td>
<td>120.7</td>
<td>121.3</td>
<td>121.8</td>
<td>122.2</td>
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<tr>
<td>% change</td>
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<td>0.0</td>
<td>0.1</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.4</td>
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<tr>
<td><strong>Government's collective consumption expenditures</strong></td>
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<td>72.9</td>
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<td>0.4</td>
<td>0.3</td>
<td>0.2</td>
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<td>47.3</td>
<td>47.3</td>
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<td>48.0</td>
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<td>-0.3</td>
<td>0.3</td>
<td>2.1</td>
<td>-1.5</td>
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<td>-0.8</td>
</tr>
<tr>
<td><strong>Exports</strong></td>
<td>121.3</td>
<td>122.3</td>
<td>123.3</td>
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<td>125.4</td>
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<td>126.6</td>
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<td>% change</td>
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<td>0.8</td>
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<td>1.6</td>
<td>1.0</td>
<td>0.3</td>
<td>0.7</td>
</tr>
</tbody>
</table>

### Contributions:

- **Domestic demand excluding inventory changes**
  - 0.3  | -0.4  | 0.2  | 0.3  | 0.0  | 0.1  | 0.1   | 0.0   |
- **Inventory changes**
  - 1.2  | -0.1  | -0.3  | -0.9  | -0.1  | 0.2  | -0.3  | -0.4  |
- **Net foreign trade**
  - -0.6  | 0.5  | 0.2  | 0.7  | -0.4  | -0.3  | 0.3   | 0.1   |

### Forecast

- Includes consumption expenditures by non-profit institutions serving households (NPRSHs)
- **Inventory changes include acquisitions net of sales of valuables**
- **Overhang**

## MANUFACTURED GOODS: SOURCES AND USES AT CHAIN-LINKED PREVIOUS YEAR PRICES

**Percentage changes from previous period**

**Working-day and seasonally adjusted data**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>avg**</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td><strong>Actual production</strong></td>
<td>2.8</td>
<td>-0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>-1.3</td>
<td>-1.0</td>
<td>0.9</td>
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<tr>
<td>of which Value added</td>
<td>1.1</td>
<td>-0.9</td>
<td>-0.6</td>
<td>-0.2</td>
<td>-1.0</td>
<td>-0.7</td>
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<tr>
<td>Intermediate consumption</td>
<td>3.3</td>
<td>-0.5</td>
<td>-0.5</td>
<td>0.7</td>
<td>-1.4</td>
<td>-1.1</td>
<td>1.0</td>
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<tr>
<td><strong>Imports</strong></td>
<td>3.9</td>
<td>-0.5</td>
<td>-0.3</td>
<td>-1.4</td>
<td>0.8</td>
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<tr>
<td>Taxes on products excluding subsidies</td>
<td>0.3</td>
<td>-1.2</td>
<td>-0.1</td>
<td>0.0</td>
<td>-0.9</td>
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<td>-0.2</td>
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<tr>
<td>Trade and transport margins</td>
<td>0.8</td>
<td>0.3</td>
<td>0.0</td>
<td>-0.1</td>
<td>-0.2</td>
<td>-0.2</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total resources</strong></td>
<td>2.5</td>
<td>-0.4</td>
<td>-0.3</td>
<td>-0.2</td>
<td>-0.5</td>
<td>0.0</td>
<td>0.1</td>
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<tr>
<td><strong>Intermediate uses</strong></td>
<td>1.7</td>
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<td>-0.1</td>
<td>0.4</td>
<td>-0.5</td>
<td>-0.5</td>
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<tr>
<td><strong>Households' consumption expenditures</strong></td>
<td>0.4</td>
<td>-1.6</td>
<td>0.3</td>
<td>0.4</td>
<td>-0.6</td>
<td>-0.6</td>
<td>0.6</td>
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<tr>
<td><strong>General government's individual consumption expenditures</strong></td>
<td>0.2</td>
<td>0.8</td>
<td>1.5</td>
<td>0.3</td>
<td>1.8</td>
<td>1.1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Gross fixed capital formation (GFCF)</strong></td>
<td>3.1</td>
<td>-0.5</td>
<td>-1.1</td>
<td>3.0</td>
<td>-3.5</td>
<td>-0.1</td>
<td>-1.1</td>
</tr>
<tr>
<td>of which Non-financial enterprises (incl. unincorp. enterprises)</td>
<td>3.2</td>
<td>-0.8</td>
<td>-1.4</td>
<td>3.3</td>
<td>-3.9</td>
<td>-0.1</td>
<td>-1.2</td>
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<td>Other</td>
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<td>1.2</td>
<td>0.5</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.3</td>
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<td><strong>Inventory changes</strong></td>
<td>2.8</td>
<td>-0.1</td>
<td>-0.9</td>
<td>2.3</td>
<td>-0.5</td>
<td>0.7</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Exports</strong></td>
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<td>0.5</td>
<td>0.3</td>
<td>2.0</td>
<td>1.0</td>
<td>0.3</td>
<td>1.3</td>
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<tr>
<td><strong>Domestic demand excluding inventory changes</strong></td>
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<td>0.6</td>
<td>-0.7</td>
<td>-0.5</td>
<td>0.4</td>
</tr>
</tbody>
</table>

### Forecast

- **Inventory changes include acquisitions net of sales of valuables**
- **Overhang**

---

**Conjoncture in France**

- 144
### GOODS AND SERVICES: SOURCES AND USES

**CHAIN-LINKED PREVIOUS YEAR PRICES INDEX**  
percentage changes from previous period  
working-day and seasonally adjusted data

<table>
<thead>
<tr>
<th></th>
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<th>2012</th>
<th>2013</th>
<th>ovhr**</th>
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<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
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<tr>
<td>Gross domestic product (GDP)</td>
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<td>0.3</td>
<td>1.0</td>
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<tr>
<td>Total resources</td>
<td>1.2</td>
<td>0.6</td>
<td>0.3</td>
<td>0.5</td>
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<tr>
<td>Household’s consumption expenditures</td>
<td>0.8</td>
<td>0.5</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>General government’s consumption expenditures</td>
<td>0.5</td>
<td>0.4</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>GFCF</td>
<td>1.1</td>
<td>0.7</td>
<td>0.7</td>
<td>0.5</td>
</tr>
<tr>
<td>of which Non-financial enterprises (incl. unincorp. enterprises)</td>
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<td>0.5</td>
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<td>1.1</td>
<td>1.5</td>
<td>1.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Exports</td>
<td>1.5</td>
<td>0.3</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Domestic demand excluding inventory changes*</td>
<td>1.2</td>
<td>0.7</td>
<td>0.3</td>
<td>0.4</td>
</tr>
</tbody>
</table>

*Inventory changes include acquisitions net of sales of valuables

**Overhang

### MANUFACTURED GOODS: SOURCES AND USES

**CHAIN-LINKED PREVIOUS YEAR PRICES INDEX**  
percentage changes from previous period  
working-day and seasonally adjusted data

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>ovhr**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
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<tr>
<td>of which Value added</td>
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<td>0.2</td>
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<tr>
<td>Intermediate consumption</td>
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<td>1.3</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Imports</td>
<td>1.5</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
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<tr>
<td>Total resources</td>
<td>1.7</td>
<td>0.8</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Intermediate uses</td>
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<td>1.1</td>
<td>0.2</td>
<td>-0.4</td>
</tr>
<tr>
<td>Households’ consumption expenditures</td>
<td>1.1</td>
<td>0.6</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td>General government’s individual consumption expenditures</td>
<td>-0.4</td>
<td>-0.1</td>
<td>-0.1</td>
<td>-0.3</td>
</tr>
<tr>
<td>GFCF</td>
<td>0.7</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
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<td>of which Non-financial enterprises (incl. unincorp. enterprises)</td>
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<td>0.5</td>
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<td>0.2</td>
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<td>General government</td>
<td>0.8</td>
<td>0.6</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Exports</td>
<td>1.5</td>
<td>0.3</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Domestic demand excluding inventory changes*</td>
<td>1.7</td>
<td>0.8</td>
<td>0.3</td>
<td>0.1</td>
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</table>

*Inventory changes include acquisitions net of sales of valuables

**Overhang

### PRODUCTION (by sector) AT CHAIN-LINKED PREVIOUS YEAR PRICES

percentage changes from previous period  
working-day and seasonally adjusted data

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>ovhr**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
<tr>
<td>Agriculture</td>
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<td>Manufacturing</td>
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</tr>
<tr>
<td>Energy, Water and Waste</td>
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<td>-2.3</td>
<td>1.2</td>
<td>-1.8</td>
</tr>
<tr>
<td>Construction</td>
<td>0.9</td>
<td>1.0</td>
<td>1.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Trade</td>
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<td>-0.1</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Market services excluding trade</td>
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<tr>
<td>Non-market services</td>
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<tr>
<td>Total</td>
<td>1.2</td>
<td>0.0</td>
<td>0.2</td>
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</table>

*Overhang

March 2013
## INVESTMENT (non-financial incorporated and unincorporated enterprises) AT CHAIN-LINKED PREVIOUS YEAR PRICES

Percentage changes from previous period  
Working-day and seasonally adjusted data

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Manufactured goods</td>
<td>3.2</td>
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<td>-1.4</td>
<td>3.3</td>
<td>-3.9</td>
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<td>-2.6</td>
<td>-1.2</td>
<td>-1.2</td>
<td>7.6</td>
<td>-3.6</td>
<td>-4.7</td>
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<tr>
<td>Construction</td>
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<td>0.9</td>
<td>1.0</td>
<td>-0.3</td>
<td>0.6</td>
<td>-0.1</td>
<td>-0.7</td>
<td>-0.4</td>
<td>-0.2</td>
<td>1.8</td>
<td>1.3</td>
<td>-0.9</td>
</tr>
<tr>
<td>Other</td>
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<td>1.3</td>
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<td>0.7</td>
<td>-0.9</td>
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<td>5.4</td>
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<td>2.1</td>
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<td>-0.6</td>
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<td>-0.5</td>
<td>-0.5</td>
<td>5.1</td>
<td>-0.7</td>
<td>-2.1</td>
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</table>

*Forecast
*Overhang

## INVENTORY CHANGES (per product) AT CHAIN-LINKED PREVIOUS YEAR PRICES

GDP changes contributions, %  
Working-day and seasonally adjusted data

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<td>0.0</td>
<td>0.0</td>
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<td>0.1</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>Manufactured goods</td>
<td>1.1</td>
<td>0.0</td>
<td>-0.3</td>
<td>-0.9</td>
<td>-0.2</td>
<td>0.3</td>
<td>-0.4</td>
<td>-0.5</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.7</td>
<td>-1.2</td>
<td>-0.5</td>
</tr>
<tr>
<td>Energy, Water and Waste</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>Construction</td>
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<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>1.2</td>
<td>-0.1</td>
<td>-0.3</td>
<td>-0.9</td>
<td>-0.1</td>
<td>0.2</td>
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<td>0.1</td>
<td>0.0</td>
<td>0.8</td>
<td>-1.1</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

*Forecast
*Overhang

## IMPORTS (CIF) AT CHAIN-LINKED PREVIOUS YEAR PRICES

Percentage changes from previous period  
Working-day and seasonally adjusted data

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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<tbody>
<tr>
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<td>-1.7</td>
<td>-2.5</td>
<td>7.5</td>
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<td>-0.6</td>
<td>0.0</td>
<td>0.0</td>
<td>2.8</td>
<td>6.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Manufactured goods</td>
<td>3.0</td>
<td>-0.5</td>
<td>-0.3</td>
<td>-1.4</td>
<td>0.8</td>
<td>2.3</td>
<td>-1.3</td>
<td>-1.7</td>
<td>1.2</td>
<td>0.7</td>
<td>6.7</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Energy, Water and Waste</td>
<td>14.6</td>
<td>-7.6</td>
<td>1.1</td>
<td>1.6</td>
<td>-2.9</td>
<td>-5.0</td>
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<td>1.2</td>
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</tr>
<tr>
<td>Total goods</td>
<td>4.6</td>
<td>-1.3</td>
<td>0.0</td>
<td>-1.1</td>
<td>0.3</td>
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<tr>
<td>Total services</td>
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<td>0.7</td>
<td>-0.3</td>
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<tr>
<td>Total*</td>
<td>3.5</td>
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<td>0.0</td>
<td>-1.0</td>
<td>0.2</td>
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<td>0.5</td>
<td>5.2</td>
<td>-0.3</td>
<td>0.4</td>
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</table>

*Forecast
*Including territorial correction
**Overhang

## EXPORTS (FOB) AT CHAIN-LINKED PREVIOUS YEAR PRICES

Percentage changes from previous period  
Working-day and seasonally adjusted data

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Agricultural goods</td>
<td>0.0</td>
<td>-4.3</td>
<td>0.4</td>
<td>7.1</td>
<td>-13.5</td>
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<td>14.4</td>
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<td>-2.2</td>
<td>-5.2</td>
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<tr>
<td>Manufactured goods</td>
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<td>0.5</td>
<td>0.3</td>
<td>2.0</td>
<td>1.0</td>
<td>0.3</td>
<td>1.3</td>
<td>-1.5</td>
<td>0.8</td>
<td>0.9</td>
<td>4.5</td>
<td>3.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Energy, Water and Waste</td>
<td>18.2</td>
<td>-1.8</td>
<td>6.4</td>
<td>-6.8</td>
<td>-9.4</td>
<td>-1.5</td>
<td>-1.7</td>
<td>4.5</td>
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<td>0.0</td>
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<tr>
<td>Total goods</td>
<td>1.3</td>
<td>0.2</td>
<td>0.5</td>
<td>1.9</td>
<td>0.2</td>
<td>0.5</td>
<td>0.9</td>
<td>-0.8</td>
<td>0.7</td>
<td>0.8</td>
<td>4.6</td>
<td>2.6</td>
<td>1.3</td>
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<tr>
<td>Total services</td>
<td>2.7</td>
<td>2.5</td>
<td>1.0</td>
<td>0.2</td>
<td>-0.2</td>
<td>-0.4</td>
<td>0.7</td>
<td>0.7</td>
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<td>0.7</td>
<td>9.0</td>
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<tr>
<td>Total*</td>
<td>1.5</td>
<td>0.8</td>
<td>0.8</td>
<td>1.6</td>
<td>0.1</td>
<td>0.3</td>
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<td>-0.6</td>
<td>0.6</td>
<td>0.7</td>
<td>5.5</td>
<td>2.3</td>
<td>1.1</td>
</tr>
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</table>

*Forecast
*Including territorial correction
**Overhang
## HOUSEHOLDS’ CONSUMPTION EXPENDITURES AT CHAIN-LINKED PREVIOUS YEAR PRICES

Percentage changes from previous period
Working-day and seasonally adjusted data

<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Agricultural goods</td>
<td>0.8</td>
<td>0.2</td>
<td>-0.9</td>
<td>0.3</td>
<td>0.1</td>
<td>-1.7</td>
<td>-0.1</td>
<td>-0.5</td>
<td>0.3</td>
<td>0.0</td>
<td>0.6</td>
<td>-1.5</td>
</tr>
<tr>
<td>Manufactured goods</td>
<td>0.4</td>
<td>-1.6</td>
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<td>0.4</td>
<td>-0.6</td>
<td>-0.6</td>
<td>0.6</td>
<td>0.1</td>
<td>-0.7</td>
<td>0.2</td>
<td>0.9</td>
<td>-0.7</td>
</tr>
<tr>
<td>Energy, Water and Waste</td>
<td>-8.2</td>
<td>-4.4</td>
<td>3.8</td>
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<td>7.0</td>
<td>3.2</td>
<td>-3.3</td>
<td>0.2</td>
<td>2.5</td>
<td>-1.7</td>
<td>-9.0</td>
<td>6.0</td>
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<td>Trade</td>
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<td>-1.0</td>
<td>-0.2</td>
<td>-0.6</td>
<td>-1.3</td>
<td>-0.6</td>
<td>-1.6</td>
<td>-0.3</td>
<td>-0.3</td>
<td>-1.0</td>
<td>-3.2</td>
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<tr>
<td>Market services excluding trade</td>
<td>0.4</td>
<td>0.2</td>
<td>0.3</td>
<td>-0.1</td>
<td>0.2</td>
<td>-0.2</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
<td>0.8</td>
<td>0.3</td>
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<tr>
<td>Non-market services</td>
<td>0.6</td>
<td>0.2</td>
<td>0.9</td>
<td>0.2</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
<td>0.3</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Territorial correction</td>
<td>8.8</td>
<td>21.6</td>
<td>19.8</td>
<td>11.3</td>
<td>0.9</td>
<td>-3.5</td>
<td>-7.1</td>
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<td>-4.5</td>
<td>-3.0</td>
<td>41.0</td>
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<tr>
<td>Total consumption expenditures</td>
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<td>-0.9</td>
<td>0.3</td>
<td>-0.1</td>
<td>0.1</td>
<td>-0.2</td>
<td>0.3</td>
<td>0.2</td>
<td>0.0</td>
<td>0.1</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Total consumption</td>
<td>0.1</td>
<td>-0.6</td>
<td>0.3</td>
<td>0.0</td>
<td>0.2</td>
<td>-0.1</td>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
<td>0.2</td>
<td>0.5</td>
<td>0.3</td>
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</table>

*Forecast

*Overhang

## MAIN RATIOS (non-financial corporate sector)

Percentage points
Working-day and seasonally adjusted data

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Wage costs / Value added (VA)</td>
<td>67.3</td>
<td>68.0</td>
<td>68.0</td>
<td>68.1</td>
<td>68.4</td>
<td>68.1</td>
<td>68.0</td>
<td>68.1</td>
<td>68.0</td>
<td>67.8</td>
<td>68.2</td>
<td>67.8</td>
</tr>
<tr>
<td>Taxes on production / VA</td>
<td>5.2</td>
<td>5.3</td>
<td>5.3</td>
<td>5.4</td>
<td>5.4</td>
<td>5.4</td>
<td>5.5</td>
<td>5.7</td>
<td>5.7</td>
<td>5.7</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Margin ratio (GOS* / VA)</td>
<td>29.2</td>
<td>28.5</td>
<td>28.3</td>
<td>28.2</td>
<td>27.8</td>
<td>28.1</td>
<td>28.2</td>
<td>27.8</td>
<td>28.0</td>
<td>28.2</td>
<td>28.5</td>
<td>28.0</td>
</tr>
<tr>
<td>Investment rate (GFCF / VA)</td>
<td>20.1</td>
<td>20.0</td>
<td>20.0</td>
<td>20.4</td>
<td>20.2</td>
<td>20.2</td>
<td>19.9</td>
<td>19.6</td>
<td>19.6</td>
<td>19.5</td>
<td>20.1</td>
<td>20.0</td>
</tr>
<tr>
<td>Saving ratio (savings / VA)</td>
<td>14.3</td>
<td>13.4</td>
<td>13.0</td>
<td>13.1</td>
<td>13.0</td>
<td>13.4</td>
<td>13.4</td>
<td>12.6</td>
<td>12.9</td>
<td>12.7</td>
<td>13.5</td>
<td>13.1</td>
</tr>
<tr>
<td>Tax pressure (Income taxes / gross disposable income before taxes)</td>
<td>18.9</td>
<td>19.4</td>
<td>20.7</td>
<td>19.6</td>
<td>19.3</td>
<td>19.0</td>
<td>19.8</td>
<td>21.9</td>
<td>22.0</td>
<td>23.5</td>
<td>19.6</td>
<td>20.0</td>
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<tr>
<td>Self-financing ratio (cash earnings)**</td>
<td>71.3</td>
<td>66.9</td>
<td>65.1</td>
<td>64.5</td>
<td>64.0</td>
<td>66.1</td>
<td>67.4</td>
<td>64.8</td>
<td>65.6</td>
<td>65.1</td>
<td>66.9</td>
<td>65.6</td>
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</tbody>
</table>

*Forecast

**Savings / GFCF

***Overhang
### HOUSEHOLD INCOME
percentage changes from previous period
working-day ans seasonally adjusted data

<table>
<thead>
<tr>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>ovhg*</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
</tr>
<tr>
<td>Gross operating surplus</td>
<td>1.0</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>of which Unincorporated enterprises</td>
<td>0.5</td>
<td>0.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Households excluding unincorporated enterprises</td>
<td>1.3</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Gross wages and salaries</td>
<td>1.0</td>
<td>0.9</td>
<td>0.4</td>
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<tr>
<td>Net interests and dividends</td>
<td>1.4</td>
<td>0.4</td>
<td>0.7</td>
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<tr>
<td>Social benefits (in cash)</td>
<td>0.9</td>
<td>1.1</td>
<td>0.7</td>
</tr>
<tr>
<td>Other net resources</td>
<td>-7.7</td>
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<td>0.8</td>
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<tr>
<td>Total resources</td>
<td>1.0</td>
<td>0.9</td>
<td>0.6</td>
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<tr>
<td>Income and wealth taxes</td>
<td>2.7</td>
<td>0.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Employees’ social contributions</td>
<td>1.1</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Social contributions by self-employed and non-employed persons</td>
<td>0.1</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Total charges</td>
<td>1.9</td>
<td>0.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Gross disposable income (GDI)</td>
<td>0.7</td>
<td>0.9</td>
<td>0.2</td>
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<tr>
<td>Consumption deflator</td>
<td>0.8</td>
<td>0.5</td>
<td>0.4</td>
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<tr>
<td>Real GDI</td>
<td>0.0</td>
<td>0.4</td>
<td>-0.2</td>
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<tr>
<td>Social benefits (in kind)</td>
<td>0.9</td>
<td>0.6</td>
<td>0.5</td>
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<tr>
<td>Adjusted gross disposable income</td>
<td>0.8</td>
<td>0.8</td>
<td>0.3</td>
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</table>

*Forecast
**Overhang

### MAIN RATIOS (households)
percentage points
working-day and seasonally adjusted data

<table>
<thead>
<tr>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>ovhg***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
</tr>
<tr>
<td>Saving ratio</td>
<td>15.6</td>
<td>16.7</td>
<td>16.3</td>
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<tr>
<td>Financial saving ratio*</td>
<td>6.6</td>
<td>7.7</td>
<td>7.1</td>
</tr>
<tr>
<td>Weight of taxes and social contributions**</td>
<td>18.9</td>
<td>18.9</td>
<td>19.2</td>
</tr>
<tr>
<td>Gross wages and salaries / gross disposable income</td>
<td>59.7</td>
<td>59.6</td>
<td>59.8</td>
</tr>
<tr>
<td>Social benefits (cash) / gross disposable income</td>
<td>32.2</td>
<td>32.3</td>
<td>32.5</td>
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</table>

*Forecast
**Savings excluding dwelling / gross disposable income
***Taxes and social contributions / gross disposable income before taxes and social contributions
****Overhang
BUSINESS TENDENCY SURVEYS

Business tendency survey

Business tendency surveys are qualitative surveys intended to track the economic situation of the moment and to forecast short-term trends. Business leaders or households are regularly surveyed. The results of these surveys are obtained very quickly - at the end of the month under observation - and their findings are crucial to short-term analysis and forecasting.

They provide an overview of a given sector and shed light on areas that are only covered much later, if at all, by classical statistics, for example household surveys. For businesses, the surveyed sectors are industry, services, retail and automobile sales and repairs, wholesale, and construction.

Some of these surveys (on households, industry, investment in industry, services, retail and automobile sales and repairs, building industry and civil engineering) are part of a harmonised European system of business tendency surveys to which the member States of the European Union contribute. The questionnaires, classifications and processing methods are all harmonised.

The data gathered in these business tendency surveys are called qualitative because the respondents are asked to provide qualitative assessments rather than quantities in regard to the variables covered by the survey. For example, in this type of survey entrepreneurs are asked to specify whether their order books are 'fuller than normal', 'normal' or 'not as full as normal', and whether their cash flow is 'better', 'equivalent', or 'worse' than it was in the previous survey. By contrast, in conventional quantitative surveys, respondents will be asked to supply the actual amount of orders underway. The Investment in Industry survey combines quantitative and qualitative questions.

Composite indicator

The composite business climate indicator summarises the mood of the responses given by business leaders in the Business Tendency Surveys: the higher it is, the more positive the view industrialists have of the economic outlook. It is built with a long-term average taking a value of 100.

This composite indicator is calculated by factor analysis. This technique can summarise the concurrent trends of several variables whose movements are closely correlated. Changes in the composite indicator therefore provide a relevant insight into the economic situation, influencing all the balances of opinion in the business tendency surveys.

Turning point indicator

The turning point indicator attempts to detect, as early as possible, the moment when economic trends are reversed. Each month it plots the difference between the probability of the economic trend being positive and the probability of it being negative.

The indicator varies between +1 and -1: a point very close to +1 (or -1 respectively) indicates that activity is in a distinct upturn phase (or distinct downturn phase, respectively). The moments when the indicator is very close to 0 are considered phases of stabilisation, i.e. the growth rate is returning towards its long-term average. During these phases the signals received are very mixed and do not show any pronounced movement upwards or downwards.

The value of the indicator for the latest month may be revised the following month, and it is therefore advisable to wait for at least two consecutive months before interpreting a big variation as being the signal of a major change in economic trends.

Balance of opinion

The balance of opinion is defined as the difference between the proportion of respondents having expressed a positive opinion and the proportion of respondents having expressed a negative opinion.

The questions in business tendency surveys usually call for a response chosen from three possibilities: "up", "stable" or "down".

From these responses, the percentage of respondents (households or entrepreneurs) saying "up" (positive responses), "stable" or "down" (negative responses) is calculated for each question, taking account, in the case of enterprises, of the relative size of the enterprise and of the sub-sector concerned.

A balance of opinion is then established for each question as being the difference between the percentage of respondents giving a positive response and the percentage of respondents with a negative response.

In business tendency surveys on industrialists, for example, the balance of opinion on past sales or on business prospects is calculated. In the surveys on households, a balance of opinion on unemployment in France or on the current financial situation of households is calculated.

NATIONAL ACCOUNTING TERMS

Final (or actual) consumption of households

Household consumption as a whole. It is the sum of household consumption expenditure and the individualised consumptions included in the final consumption expenditure of general government.
Household consumption expenditure is restricted to the expenses that households bear directly. It includes the share that they pay towards healthcare, education and accommodation after any reimbursements. It also includes "imputed rents", i.e. the rent which households that own their main residence implicitly pay to themselves.

The individualised consumptions included in the final consumption of general government are those for which the beneficiaries can be precisely defined. This is the case, in particular, of expenditure on education and healthcare.

**Gross operating surplus (GOS)**

Gross operating surplus is the balance of the trading account of companies. It is equal to value-added minus payroll and other taxes on production, and plus operating subsidies.

Gross operating surplus can be calculated net, after deduction of the consumption of fixed capital, i.e. depreciation of the capital further to foreseeable wear and tear or obsolescence.

**GOS of pure households**

The rents received by pure households are what is known in national accounting as the gross operating surplus (GOS) of pure households. It corresponds to the rents that homeowners receive from their tenants or would receive if they rented out their property ("fictional rents"), minus property tax.

**Investment or Gross fixed capital formation (GFCF)**

In the national accounts, corporate investment, particularly that of non-financial companies, is called gross fixed capital formation (GFCF). It represents the acquisitions of net fixed assets (minus the sales of same) made by resident producers.

Fixed assets are tangible or intangible assets resulting from the production process and used either repeatedly or continuously in other production processes over a period of at least one year.

**Purchasing power of income**

The purchasing power of income is the quantity of goods and services that can be bought with an income unit. Its growth is linked to that of prices and incomes.

If prices increase while income is constant, there is a drop in purchasing power. If the increase in income is greater than that of prices, the purchasing power of income will rise.

**Property income**

Income received by the owner of a financial asset or a tangible non-produced asset in exchange for making this asset available to another institutional unit. It mainly includes the dividends paid by companies, interest, and rent from land (rent from housing is a tangible produced asset and is considered as payment for a service).
**Basic monthly wage**

Changes in the basic monthly wage reflect the average variation in wages at a constant qualification structure. The basic monthly wage does not include bonuses of any kind, or overtime.

It is an index that is estimated from the Acemo quarterly survey conducted by the DARES (survey on the activity and employment conditions of the workforce). This survey covers quarterly 20,000 to 30,000 establishments or companies with 10 employees or more in the non-agricultural market sector. The basic monthly wage is listed for 16 professional categories. Each establishment or company declares the basic wage of a work position considered as representative of a professional category. This position is tracked from survey to survey.

**Average wage per head**

Changes in the average wage per head reflect variations in the wages paid by all companies. This indicator is built by comparing changes in the total payroll and in the number of employees, both of which are measured from comprehensive sources (tax data from companies). Unlike the basic monthly wage, it includes micro-enterprises and also integrates structuring effects (changes in qualifications and in the proportion of part-time work), short-term effects (level of overtime) and seasonal effects (bonuses).

**Real wages and nominal wages**

Compensation of employees can be measured either at current currency values, in other words at current prices, or at constant prices, i.e. after inflation is deducted. The former is known as the nominal wage and the latter as the real wage.

**Household savings ratio**

The proportion of the disposable income (or adjusted disposable income) of households which is not used for consumption expenditure (or final consumption) is their savings. The difference between disposable income and adjusted disposable income - which corresponds to social transfers in kind - is also the difference between consumption expenditure and final consumption. There is only one definition of savings. However, there may be several savings ratios depending on which definition of income the savings are plotted against. In short-term analyses, the savings ratio calculated against gross disposable income is preferred.

**Margin rate**

The margin rate measures the share of added value which services capital. It is the ratio of gross operating surplus to added value.

The margin rate:
- grows when labour productivity or terms of trade increase;
- diminishes when the real average wage per head or the employers’ contribution rate increases.

For further information, read the special report in *Conjoncture in France*, June 2003.

**Margin rate at factor cost**

The margin rate at factor cost (meaning the cost of production factors) measures the share of added value at factor cost which services capital. Added value at factor cost is calculated as gross added value minus taxes on production plus operating subsidies. The margin rate at factor cost is around 1% higher than the margin rate as defined in the national accounts.

**Self-financing ratio**

Ratio of gross savings to gross fixed capital formation (GFCF).

**Consumption unit**

A weighting system assigning a coefficient to each member of the household and used to compare standards of living between households of different sizes and compositions. With this weighting, the number of people is converted into a number of consumption units (CU).

To compare the standard of living of households, consumption per person is not satisfactory, as the needs of the household do not increase proportionally to its size. When several people live together, it is not necessary to multiply all the consumer goods (in particular durable consumer goods, appliances, etc.) by the number of people in order to keep the same standard of living. Therefore, to compare the standards of living of households of different sizes or compositions, we use a measurement of income corrected by the consumption unit using an equivalence scale.

The most widely used scale at present (known as the OECD scale) uses the following weighting:
- 1 CU for the first adult in the household;
- 0.5 CU for the other persons aged 14 years or older;
- 0.3 CU for the children under 14 years.

**Value added**

Value added is equal to the value of production minus intermediate consumption.
ECONOMIC TERMS

Unemployed person (ILO)

In application of the international definition adopted in 1982 by the International Labour Organisation (ILO), an unemployed person is a person of working age (15 or over) who meets three conditions simultaneously:

- they were without employment, meaning that they did not work, even for one hour, in the course of the reference week;
- they are available to take up employment within two weeks;
- they have actively looked for a job in the previous month or have found one starting within the next three months.

Note: An unemployed person (ILO) is not necessarily a person registered with Pôle Emploi (and vice versa).

Competitiveness

The competitiveness of an economy or a company is its ability - or otherwise - to gain market share from its competitors. To sell its products, a company can rely on its price competitiveness or its non-price competitiveness. The former is directly linked to the sale price. Non-price competitiveness depends on the quality of the product, its degree of innovation, and after-sales service, among other things.

At the level of an economy, price-competitiveness can be seen in the real effective exchange rate (see definition).

Potential growth and output gap

The potential growth of an economy is the maximum speed at which it could grow without causing inflation to accelerate, in other words without creating excessive tension in the goods and labour markets. It is a function of production factors, capital stock, the active population and technical progress. Econometric techniques can be used to determine this potential growth, consisting in extracting a trend from a cycle. The Hodrick-Prescott filter is one of these techniques. The idea is that on average over the long term, an economy progresses in line with its potential growth. Short-term incidents may cause it to deviate momentarily from this potential. It is also possible to build a production function that takes the various factors into account. Estimating these factors is the most difficult part.

The output gap is the difference between the observed growth of the economy and its potential growth.

World demand for French products

This is calculated from estimated imports for each of France’s trading partners, weighted by the share of France in these imports. It is an indicator of foreign demand and, along with competitiveness, is an important determinant of exports.

French demand for products of trading partners

French demand for products of trading partners is calculated by weighting each item of demand (from companies, households, general government and exports) by its content in imports.

Flexion effects

When the economic outlook is poor, a proportion of the population may decide not to join the labour market, or prefer to withdraw from it (young people may decide to pursue their studies, unemployed people may stop looking for jobs, etc.). Symmetrically, a good economic outlook encourages more people to enter the labour market. So depending on the outlook, the activity rate, which is the ratio between the job-seeking population and the population of a working age, may vary: this variation is called a flexion of the activity rate driven by the economic outlook. A calculation of these flexion effects allows an estimation of the active population.

Employment (ILO)

Persons employed in the sense of the International Labour Organisation (ILO) are those aged 15 or older who worked for any amount of time, if only for one hour, in the course of the reference week. This notion is different from that of employment in the sense of the population census, which concerns persons having declared they had a job on the census form.

The notion of employment in the sense of the ILO is therefore broader than that in the sense of the population census. Some people may consider that occasional jobs are not worth declaring in the census.

The measurement of employment in the sense of the ILO can be made only through specific questions, such as those of the Labour Force Survey, one of the primary objectives of which is to make this measurement.

Core inflation

For the purposes of economic analysis, the INSEE publishes a core inflation index. It allows us to observe deeper trends in the changes in prices. It does not
include prices which are subject to government intervention and products whose price is volatile, i.e. which experience high variability due to climatic factors or tensions on the global markets. Seasonal products, energy, tobacco and public service charges are all excluded. The core inflation index is also corrected for tax measures. It is a seasonally-adjusted index.

Additionally, the core inflation index is corrected for tax measures (rise or fall in VAT, specific measures imposed on products etc.) in order to neutralise the effect on the price index of variations in indirect taxation or government measures which directly affect consumer prices. Core inflation is thus better suited to analysis of inflationary tensions, as it is less sensitive to exogenous phenomena.

**Active population**

The active population includes all people with a job, constituting the occupied labour force, and the unemployed. Its growth mainly depends on demographics, trends in the activity rate, and flexion effects (see definition).

**Real effective exchange rate**

To get an idea of the competitiveness of a country or a zone, we have to be able to evaluate its currency in relation to all the exchange rates of its main trading partners, taking into account the weight of each one.

This is what economists call the effective exchange rate, the rate that allows us to take into account the structure of the country or zone’s foreign trade. To prevent competitiveness studies from being distorted due to prices changing in different ways in different zones, economists calculate a “real effective” exchange rate which also takes account of the rate of inflation of trading partners.

**Terms of trade**

This is an indicator allowing an assessment of the advantage that a given economy gains from its trading relations with foreign countries. It is calculated as the ratio between a country’s export price and its import price.

**Activity rate**

The activity rate is the ratio between the number of active persons (occupied labour force and the unemployed) and the corresponding total population.

It can be calculated for women, men, or a specific age group.

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**Economic Outlook Terminology**

**Unemployment rate**

The unemployment rate is the percentage of unemployed people in the active population (occupied labour force + the unemployed).

An unemployment rate per age can be calculated by calculating the ratio of the unemployed persons in an age group to the labour force of that age. Likewise, unemployment rates can be calculated by gender, by socio-professional category, by region, by nationality, by qualification level, etc.

**STATISTICAL TERMS**

**Growth overhang (ovhg)**

The growth overhang of a variable for a year N corresponds to the growth rate of the variable between year N-1 and year N that would be obtained if the variable remained until the end of year N at the level of the last known quarter.

For example, when the last known quarter for a year N is the third quarter, the variable’s growth overhang for year N is equal to the growth rate between N-1 and N that would be obtained if the variable remained at the same level in the fourth quarter as in the third quarter.

**Contribution to GDP growth**

GDP growth may be broken down into the sum of contributions from its various components: consumption expenditure of households and general government, investments, changes in inventories and trade balance.

In simple cases, the contribution of a component to an aggregate (GDP for example) is equal to the product of that component’s growth rate by its weight in the aggregate on the previous period.

This formula is not valid with chain-linked volumes at the price of the previous year, a concept of volume according to which the national accounts are published. However, as a first approximation the previous calculation with the growth of the component in chain-linked volume and weight in value provides a relatively accurate measurement of the contribution.

**Dynamic contributions**

Dynamic contributions are a technique used in econometrics. The starting point is an equation linking an explained variable (consumption, investment, exports, prices, wages, employment, etc.) to its economic determinants (income for consumption, demand for investment, etc.). The calculation of dynamic contributions gives an insight into the respective weight of the various determinants of the level or rate of growth of the explained variable. These contributions
are termed dynamic, as opposed to static contributions which are obtained simply through an accounting breakdown. They explicitly take into account the lag(s) with which the explanatory variables have an effect on the explained variable: for example, the variation in consumption in a given quarter may also depend on the variation in income in the previous quarter.

**Seasonal and working-day adjustment**

The development of a statistical series may in general be broken down into three factors: a trend, a seasonal component and an irregular component. Seasonal adjustment is a technique that statisticians use to eliminate the effect of normal seasonal fluctuations on data, so as to bring out fundamental trends (trend and irregular component).

For example, the seasonally adjusted unemployment rate eliminates variations due to the seasonal habit of hiring in the summer and dismissing in the winter in sectors such as agriculture and the building industry.

Additionally, to compare periods that do not have the same number of working days as each other, a working-day adjustment is made.

**Year-on-year change and average**

A year-on-year change compares a value at two dates, generally a year or a quarter apart.

For example, the year-on-year change in a variable in a given Quarter Q corresponds to the change (as a %) obtained between the level of the variable in Q and its level in the same quarter of the previous year (Q-4). The quarter-on-quarter change is obtained by calculating the difference between the variable in Q and its level in the previous quarter (Q-1).

When the variable is monthly, year-on-year change is calculated between the level in a given month and that in the same month of the previous year (for example, December in year N and December in N-1). However, the change in the annual average compares the average of one year and the average of the previous year.

For example, a phrase such as “In 2012, salaried employment increased by...” can have two meanings, depending on whether reference is being made to average salaried employment in the course of 2012 and the average for 2011, or whether a year-on-year comparison is being made between the situation on 31 December 2012 and on 31 December 2011.

These two trends may be very different. For example, if there was strong growth in year N-1 and a small decline in year N, then the change in annual averages may be positive, while year-on-year change is negative.

When events are no longer included in the year-on-year calculation - for example, a sharp rise in oil prices in a given month will affect the measurement of year-on-year inflation for the following eleven months, before disappearing from the calculation - this is called the “base effect”.

**FINANCIAL TERMS**

**Yield curve**

The yield curve gives a view of the relationship between the values of interest rates and their terms. This curve is usually ascending because of the existence of a risk premium (long rates higher than short rates). However, it may reverse, most notably when operators expect a drop in inflation.

**Nominal and real interest rates**

An interest rate is either the cost of a loan to the borrower or the remuneration of an investment. It is expressed as a percentage, usually over a reference period of one year. The nominal interest rate is also known as the apparent interest rate. It is calculated in current euros, without taking account of the fact that inflation mechanically depreciates the amount of the loan. The real interest rate is the nominal rate corrected for inflation. It is calculated in constant euros. If inflation is denoted p, the nominal interest rate n and the real interest rate r, and assuming that p and n are not too high, we can write:

\[ r = n - p. \]

Otherwise, the following equation is used:

\[ 1 + r = \frac{1 + n}{1 + p}. \]