CONJONCTURE IN FRANCE

December 2016

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The issues of *Conjoncture* in France along with a glossary of economic outlook terminology are available as soon as they are published on the "Economic Outlook" and "Collections" sections of the INSEE website www.insee.fr.

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GROWTH TESTED BY UNCERTAINTIES

SPECIAL ANALYSIS

GENERAL OUTLOOK

FRENCH DEVELOPMENTS

INTERNATIONAL DEVELOPMENTS

FOCUS

Growth tested by uncertainties

In summer 2016, despite signs of improvement, the emerging economies were still struggling: the Russian economy is no longer declining, but the recession in Brazil has deepened and China is slowing down again. Growth firmed up slightly in the developed economies, however. It regained momentum in the United States, increased again in Japan and held up despite the shock of the Brexit referendum vote in the United Kingdom. Eurozone gross domestic product continued to progress moderately (+0.3%), slowing down a little in Germany and Spain, while picking up in Italy. As expected, activity rebounded slightly in France (+0.2%) after posting a dynamic performance in Q1 and then stalling in the spring.

Despite the fact that the political uncertainties are not easing, the business climate has been improving since the summer in the emerging countries and developed economies alike. It is a good sign for a recovery in world trade in 2017, after a rise in 2016 that was its weakest since 2009. In late 2016 and H1 2017, growth should keep up its pace in the United States, driven by reinvigorated domestic demand despite an upturn in inflation. In the United Kingdom, however, activity is likely to weaken significantly after being spared over the summer, as corporate investment and household consumption are hit by the effects of the Brexit vote.

In the Eurozone, prices should also accelerate, driven by petroleum products, although inflation is likely to continue to be contained. That rise in inflation is likely to erode gains in household purchasing power. Consumption is unlikely to slow down, however, as households' propensity to save levels out. In addition, residential investment is now growing in France and in Italy where it was holding GDP growth back until 2015, and should continue to stimulate growth in H1 2017. Finally, productive investment should gain in impetus as businesses have restored their self-financing capacity and interest rates remain very low.

In France, the business climate confirms these trends in domestic demand: it is holding up at a little over its long-term average in services and in industry, and improving significantly in building. In addition, exports are set to accelerate in early 2017, both in response to demand from Eurozone trading partners and due to aeronautics deliveries that should be dynamic once again. Foreign trade should therefore stop holding back French growth in H1 2017, after making a 0.7 point negative contribution in 2016.

Domestic demand should drive growth in GDP which should increase a little at the end of 2016 to +0.4%, then remain almost at this level in H1 2017: +0.3% in Q1 and +0.4% in Q2. After two years of moderate growth (+1.2% in 2015 and 2016), the annual growth overhang for 2017 should be +1.0% in mid-year, as one year earlier. Market-sector employment should continue to progress strongly through to mid-2017, as it continues to be buoyed by the measures aimed at boosting the employment intensity of growth. Taking account of the non-market branches, total employment should progress more quickly than the labour force and the unemployment rate should fall slightly again in France to 9.8% in mid-2017, against 10.0% in summer 2016.

There are a number of uncertainties surrounding this scenario. First of all, the results of the various elections in Europe and the US seem to be reviving political uncertainties rather than calming them. At this stage, however, these uncertainties have not undermined confidence in the economic situation among business leaders and households. If that confidence should weaken, their investments may be lower than forecast. European households, meanwhile, have been increasing their propensity to save since the end of 2015 and this scenario is based on the assumption that they do not increase it further. The scenario will be different according to whether they increase their savings ratio further or start consuming more quickly. ■

General outlook

In Q3, world trade progressed more slowly than activity once again

No clear recovery yet in the emerging economies

Despite an improved business climate, there was not yet any clear recovery in the emerging economies in summer 2016. Activity slowed in China (+1.5% after +1.7%), in the Central and Eastern European countries and in Turkey, the latter being hit by severe internal tensions. In Brazil, gross domestic product (GDP) contracted sharply once again, while the recession came to an end in Russia where activity levelled out. Emerging countries' imports were therefore almost flat in Q3 2016 (+0.1%), after plummeting in Q1 (–1.9%) and showed a tentative rebound in Q2 (+1.3%).

The US economy has picked up

In Q3 2016, the advanced economies accelerated a little (+0.5% after +0.4%). This was more particularly the case of the United States (+0.8% after +0.4%), where corporate expenditure has stopped contracting. In Japan, GDP continued to progress (+0.3% after +0.5%). Likewise, despite the Brexit vote, activity remained robust in the United Kingdom (+0.5% after +0.7%). Consequently, the imports of the advanced economies picked up a little momentum (+0.4% after +0.3%). American imports in particular accelerated after almost stagnating for four quarters. All in all, world trade progressed moderately once again in the summer (+0.3% after +0.7% in Q2 and –0.5% in Q1).

Growth remained moderate in the Eurozone

In the Eurozone, growth remained moderate (+0.3%, as in Q2), as forecast in October's *Conjoncture* in France. It was driven mainly by consumption, while corporate investment remained sluggish. Activity slowed in Spain (+0.7% after +0.8%) and in Germany (+0.2% after +0.4%) but accelerated in Italy (+0.3% after +0.1%).

In France, activity rebounded slightly in Q3 2016 despite weak domestic demand

In France, activity recovered gently in Q3 (+0.2% after –0.1%), as forecast in October's *Conjoncture* in France. Manufacturing production showed an upturn (+0.6% after –1.0%) as activity recovered in those branches hit by the spring's social movements (chemicals, refineries). Construction rebounded significantly (+1.0% after –0.4%), both in civil engineering and home construction. On the demand side, exports accelerated a little, but domestic expenditure remained sluggish (+0.1% after +0.1%). Household consumption stagnated once again: while expenditure on services rebounded despite the consequences of the July terror attacks on tourist expenditure, spending on energy and manufactured goods fell back. Corporate investment fell back moderately for the second consecutive quarter (–0.4% after –0.2%).

Despite the recent rise in sovereign interest rates, the financial environment remains positive for France

Monetary policies are diverging, driving a further fall in the Euro and a moderate rise in interest rates

Across the Atlantic, inflation prospects and the labour market situation are likely to lead the Federal Reserve (Fed) to increase its base rates gradually. In the Eurozone, meanwhile, monetary policy is likely to remain very accommodating; as inflation remains low, the ECB is likely to continue its asset purchases beyond March 2017 when the programme was initially scheduled to end. In anticipation of the base rate hike and an expansionist economic policy in the United States after the election of Donald Trump, sovereign yields rose in November all over the world, and the US dollar firmed up, while the Euro fell to around $1.06 in early December, against $1.12 in the summer. The rise in French sovereign yields remained limited, however, at 0.8% for the 10-year yield, and they remain lower than at the start of the year.

Oil prices are not rising, despite prospects of a tighter physical market

After showing an upturn in spring 2016, oil prices have been stable on the whole, and were hovering around the $50 mark in early December. Through to mid-2017, the surplus supply on the physical market should be absorbed, provided that OPEC succeeds in stabilising its output after the agreement reached at the end of November, and US production continues to fall slightly. However, the particularly high levels of stocks should contain any upward pressure on prices.

Through to mid-2017, the advanced economies are likely to withstand political uncertainties and the upturn in inflation

The emerging economies likely to rouse themselves progressively from their torpor

The business climate showed a timid upturn over the summer in the emerging economies and it has remained almost stable since, at its highest in two years, although still below its level in the 2000s (*Graph 1*). As commodity prices have stabilised, the currencies of the countries that produce them have stopped sliding, thereby contributing to a fall in inflation. Losses of purchasing power should ease, allowing a tentative recovery in Russia and an easing of the recession in Brazil. In China, activity should continue to be driven by public support to boost investment in construction. All in all, the activity and imports of the emerging economies should progressively gain momentum through to mid-2017.

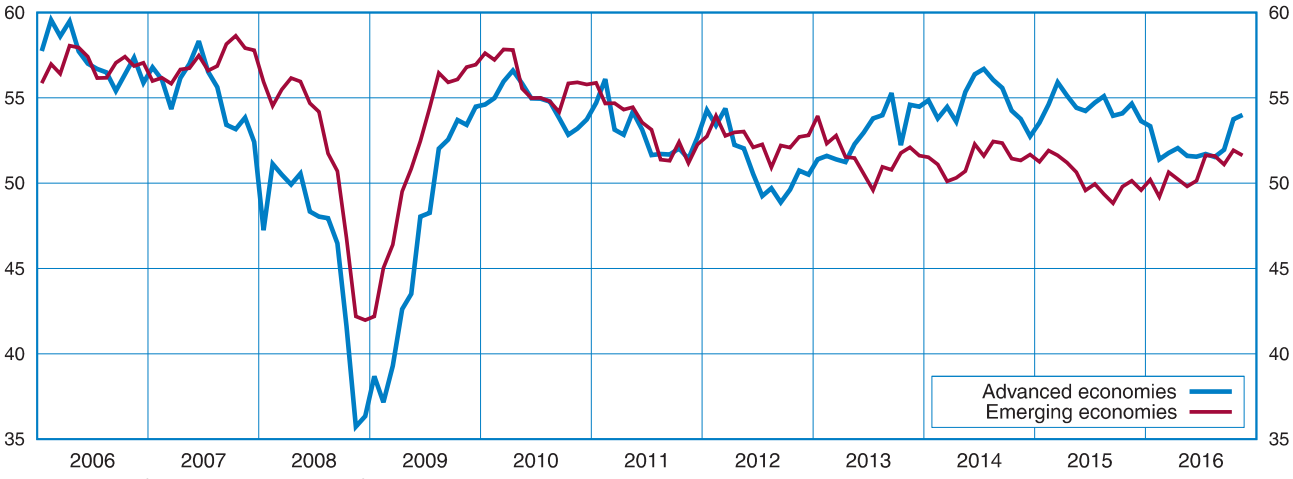
Activity in the advanced economies holds up amid political uncertainties and the upturn in inflation

In the advanced economies, the business climate continues to hold up amid growing political uncertainties. Through to mid-2017, as the effects of the past fall in oil prices on energy prices fade, inflation is set to continue rising in most of the advanced economies, damping the vigour of household purchasing power. Activity should barely slow down in the United States, however (+0.6% in Q4 2016 then +0.5% per quarter in H1 2017): consumption is likely to slow a little, but investment should pick up as the oil sector stops weighing down on growth. Household consumption in Japan is set to accelerate in line with household purchasing power, as the rise in the yen offsets the increase in energy prices. In the United Kingdom, however, inflation is likely to rise significantly with the sharp slide in sterling in the wake of the Brexit vote, and consumption should end up slowing. Corporate investment should also weaken, hit by a wait-and-see attitude pending more details about the terms of Brexit, and activity is likely to slow significantly.

World trade to accelerate finally in early 2017, without returning to its pre-2009 growth rate

In 2016, growth in world trade is likely to be at its weakest since 2009: +1.2% only, about three times slower than growth in activity, due to weak imports in the US and the emerging countries. Through to mid-2017, the US and emerging country powerhouses should recover a little and world trade should progress by 0.8% per quarter, much less slowly than between 2000 and 2007 (+1.5% per quarter).

1 - Since summer 2016, the business climate has been improving in the emerging and advanced economies alike



Sources: Markit, activity composite indicators

Through to mid-2017, growth should increase a little in the Eurozone

In the Eurozone, purchasing power is likely to slow slightly, but consumption should accelerate a little

In the Eurozone, headline inflation is set to increase while continuing to be contained at around +1.2% a year. Wages should accelerate slightly in its wake, especially as the labour market tightens a little. Employment is unlikely to weaken, with the result that purchasing power should progress overall at an annual rate of around +1.5% through to mid-2017, against +2.0% on average in 2016 (*Graph 2*). After being weak through the spring (+0.2%) and then summer (+0.3%), household consumption should accelerate to a rate that is in line with household purchasing power (+0.4% per quarter). It should be particularly dynamic in Germany, where households are benefitting from a marked increase in wages and benefits.

Investment in construction is currently progressing in all the Eurozone countries

After stalling in the summer, investment in equipment should rebound through to mid-2017 (+1.0% on average per quarter): activity prospects among business leaders are on a positive trend, production capacity utilisation rates at the end of 2016 are at an eight-year high and internal and external financing terms remain favourable, as shown by the expansion in corporate loans (+1.7% year on year in October, the strongest growth since 2011). Expenditure on construction, meanwhile, should continue to grow strongly (+0.6% on average per quarter) as suggested by the recent rise in building permits. This trend is likely to be common to all the major countries in the Eurozone: construction expenditure should return to growth in 2016 in Italy and France, after falling for several years, and should remain dynamic in Germany and Spain.

All in all, activity is likely to accelerate a little in the Eurozone, notably in Germany

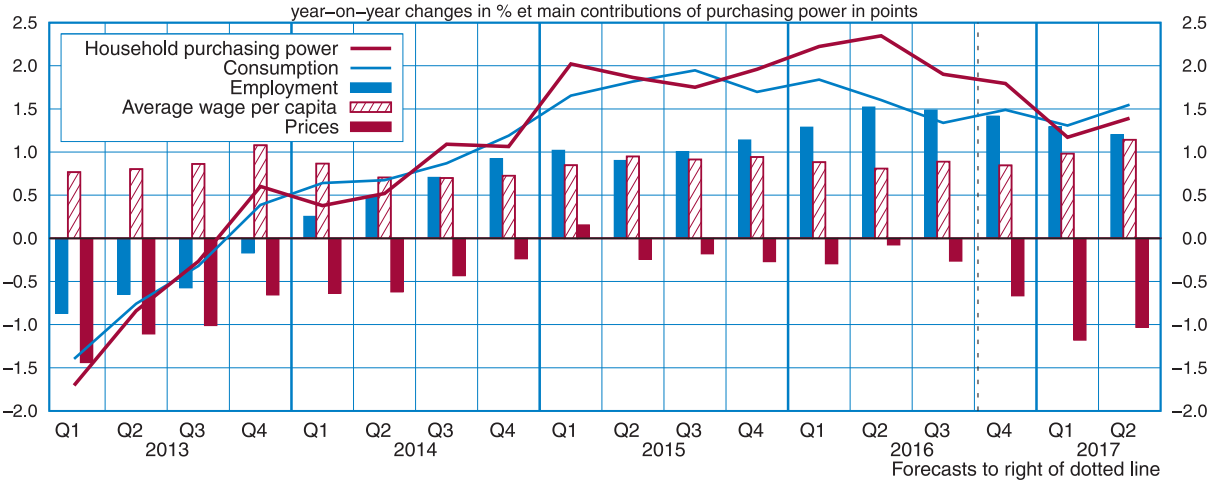
All in all, activity should accelerate slightly in the Eurozone to +0.4% per quarter, buoyed by household consumption and private investment. The acceleration should be driven essentially by Germany (+0.5% per quarter), thanks to dynamic household purchasing and public spending. In Spain, activity should slow progressively, as the catch-up process continues to fade out (+0.7% at the end of 2016 then +0.6% in Q1 2017 and +0.5% in Q2). In Italy, growth is likely to remain modest, held back in late 2016 by the general wait-and-see attitude caused by the constitutional referendum (+0.1%), and should barely progress any more quickly thereafter (+0.2% per quarter).

French exports to benefit from German dynamism and the catch-up effect in aeronautics deliveries

French exports to increase significantly in H1 2017

French exports accelerated a little in the summer (+0.5%) after a disappointing H1 (–0.5% in Q1 then +0.1% in Q2). In Q4, the progression in exports should remain moderate (+0.3%): after collapsing in the summer (–17.5%) as a result of poor harvests, agricultural exports should fall once again (–2.0%) and

2 - Households' purchasing power to slow down in the Eurozone, but not their consumption



Sources: Eurostat, INSEE forecast

maintenance shutdowns of several nuclear reactors are set to trigger a sharp fall in electricity exports. In H1 2017, total exports should accelerate significantly (+1.1%) as the effect of the past fall in the Euro almost fades out. Demand for French exporters should be relatively strong, notably that from Germany and Spain. They should also be buoyed by the delivery of several major naval and aeronautics contracts.

Despite dynamic imports, foreign trade should almost stop weighing down on activity

After progressing sharply in the summer, imports should slow down at the end of 2016 (+0.2%). In H1 2017, they should increase more significantly in response to continuing strong domestic demand. However, thanks to the acceleration in exports, the contribution of foreign trade should be neutral through to mid-2017. All in all, after making a negative contribution to growth in 2015 (–0.3 points) and in 2016 (–0.7 points), foreign trade should make almost no contribution to the growth overhang for 2017 in mid-year (–0.1 points).

The French economy set to accelerate a little

The business climate in France has been above its average level for a year and is improving significantly in building

The business climate in France has been almost stable for a year, at a level that is slightly above its long-term average: it stood at 102 in November, a level that corresponds to a quarterly growth rate of around +0.3% to +0.4%. More specifically, it remains above its long-term average in industry (103) and services (102). It has also improved in building, gaining 8 points in a year in November, although it is still a little below its average level (99; *Graph 3*).

Manufacturing production should increase again moderately through to mid-2017

In manufacturing, the majority of business leaders report a rise in their past production and remain optimistic as to their activity prospects. Manufacturing production should therefore progress again moderately through to mid-2017. Nevertheless, the quarterly profile should be affected by ups and downs in refinery activity (+0.1% in Q4 2016 then –0.2% in Q1 2017 and +0.7% in Q2).

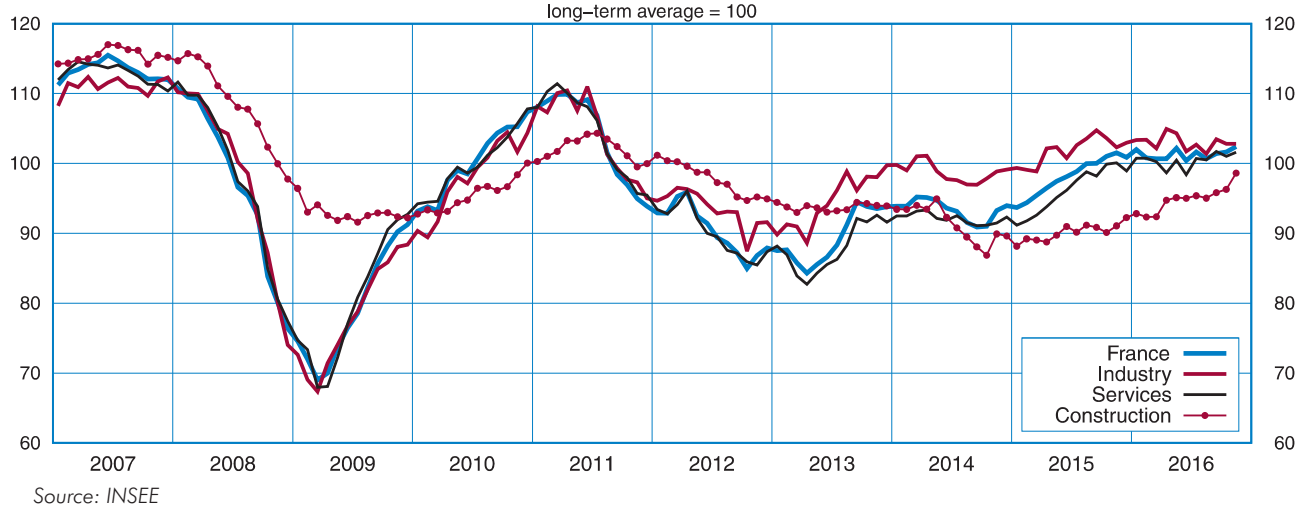
Agricultural production set to rebound, contributing to the acceleration in activity in 2017

In 2016, agricultural production should fall back significantly: cereals and winegrowing revenues were hit hard by the exceptionally bad climate conditions. Through to mid-2017, if weather conditions return to normal, agricultural production should return to a level that is close to its average, thereby contributing to the overall acceleration.

Construction to increase robustly

After falling sharply for two years in 2014 and 2015, activity picked up in construction in 2016: expenditure on civil engineering is recovering and construction of new housing is improving progressively and having a delayed impact on the clear recovery in new home sales. Through to mid-2017, activity in the branch is set to remain robust (+0.4% per quarter on average). The growth overhang should therefore be clearly in positive territory for 2017 at the end of Q2 (+1.4%), after a rise in 2016 (+0.8%), the first since 2013.

3 - In France, the business climate has held up at above its long-term average for a year



Source: INSEE

General outlook

All in all, growth in GDP should increase slightly

All in all, GDP should accelerate in late 2016 (+0.4%) and then barely weaken in H1 2017 (+0.3% in Q1 then +0.4% in Q2). Growth is set to reach +1.2% on average in 2016, and the growth overhang for 2017 should stand at +1.0% in mid-year, as one year earlier.

Market-sector employment to progress and unemployment to fall slightly through to mid-2017

Measures to cut the cost of labour should continue to boost the employment intensity of growth, but a little less strongly

Market-sector payroll employment progressed markedly in Q3 2016 (+51,000 after +29,000 in Q2), driven by temporary employment. In the business tendency surveys, workforce prospects remain high, although slipping a little in temporary employment, and market-sector payroll employment should return to its H1 rate through to mid-2017 (+30,000 per quarter on average). The effect of the Tax Credit for Encouraging Competitiveness and Jobs (CICE), the Responsibility and Solidarity Pact (PRS) and the Recruitment Incentive for SMEs on the number of jobs created by growth is likely to weaken a little, although the three measures are still likely to create or save 40,000 jobs in H1 2017.

Total employment to slow down a little

In the non-market branches, employment should increase again moderately in H1 2017 (+8,000, as in H2 2016), essentially thanks to its private component: the number of beneficiaries of subsidised contracts should almost level out, while the number of civil servants should fall slightly again, notably in local authorities. In addition, self-employment and agricultural employment should be almost stable (+2,000 cumulatively over the half-year), with the result that total employment should progress by 70,000 jobs in H1 2017 after +88,000 in H2 2016.

Unemployment to fall again slightly through to mid-2017

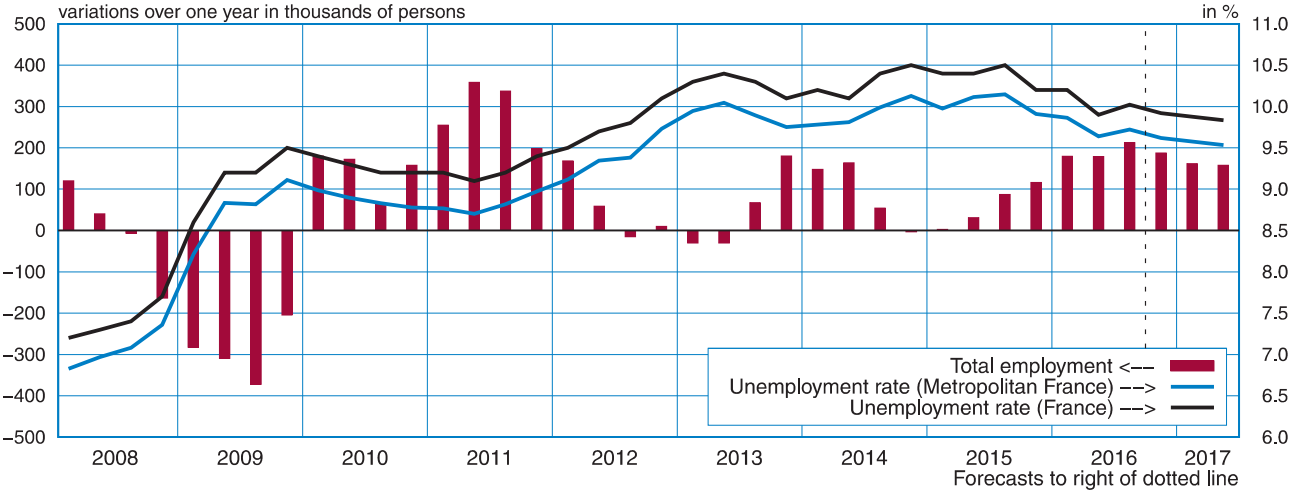
With dynamic employment, the unemployment rate fell slightly between Q1 and Q3 (by –0.2 points to 10.0%). In the following quarters, the expected rise in employment should be slightly greater than that in the labour force, and the number of unemployed should fall again progressively (*Graph 4*). The unemployment rate should stand at 9,8% in mid-2017 (9.5% in Metropolitan France).

Purchasing power set to slow down a little due to an upturn in inflation

Inflation to increase slightly through to mid-2017, due to its energy component

Since the spring, inflation has been increasing slightly: it stood at +0.5% year on year in November 2016, against –0.2% in April. It should continue to increase to +1.0% in June 2017, essentially due to its energy component, as the past fall in oil prices fades out, taxes on oil products and tobacco increase at the start of

4 - The French economy is likely to create 70,000 jobs in H1 2017 and unemployment to fall slightly to 9.8% in mid-2017



Source: INSEE

2017 and doctors' rates are increased in May. Core inflation should remain almost stable, however (+0.7% in June 2017 against +0.5% in October), as the past fall in in commodity prices continues to work through.

Nominal wages should increase only barely more quickly in early 2017 than in late 2016

In 2016 on an annual average basis, nominal wages in the market-sector branches should increase almost as they did in 2015 (+1.5% after +1.6%). In H1 2017, they should increase only barely more quickly (+0.8%) than in H2 2016 (+0.7%), as only a part of the slight upturn in inflation is passed on.

Purchasing power to slow down due to the slight upturn in inflation

In 2016, the purchasing power of household income should progress again strongly, at +1.8% as an annual average, after +1.6% in 2015, thanks to the acceleration in market-sector employment and stable prices. Through to mid-2017, nominal income should slow a little, as the upturn in inflation erodes purchasing power: its growth overhang for 2017 should stand at +0.6% in mid-year, against +1.5% one year earlier.

Household consumption to rebound and the savings ratio to fall slightly

Household consumption should rebound after being flat for two quarters

After progressing sharply in Q1 (+1.1%), buoyed notably by the change in the television broadcasting standard and ticket sales for the Euro football championship, household consumption has stagnated for two quarters. Through to mid-2017, it should recover and return to a growth rate that is closer to that in purchasing power (+0.5% in Q4 2016 then +0.3% per quarter in H1 2017). In mid-2017, the growth overhang in consumption should stand at +1.0% after +1.5% on average in 2016.

In mid-2017, the savings ratio should almost return to its mid-2016 level

Strong purchasing power of households has buoyed their consumption, but also driven their savings: in 2016 on average, the savings ratio should stand at 14.7%, 0.2 points up on 2015, after increasing notably in the spring and summer. Through to mid-2017, households should stop increasing their savings and the ratio should return to its mid-2016 level almost by mid-2017 (14.5%).

Investment to step up

Corporate investment to recover

After progressing sharply in late 2015 and early 2016, corporate investment fell back over the last two quarters. Conditions remain favourable, however: internal and external demand prospects have improved, margin rates and self-financing ratios have been restored thanks to the CICE, the PRS and the fall in oil prices, and borrowing costs remain very low. The one-off additional depreciation allowance measure has been extended until April 2017. In the business tendency surveys, investment intentions remain relatively high, in industry and services alike. The recent fall in corporate investment is therefore likely to be just a reaction to the strong growth recorded in late 2015 and early 2016. Investment should pick up a little through to mid-2017: +0.5% in Q4 2016 then +0.8% in Q1 2017 and +0.5% in Q2.

Household investment should continue to progress strongly

Household investment has been progressing regularly for a year, at a rate of +0.4% on average per quarter. The recent rise in building permits suggests that this trend is likely to continue and even increase a little through to mid-2017, with growth of around +0.6% per quarter (*Graph 5*).

Uncertainties: political uncertainties and savings behaviour in Europe

Political uncertainties remain great and could hit the business climate

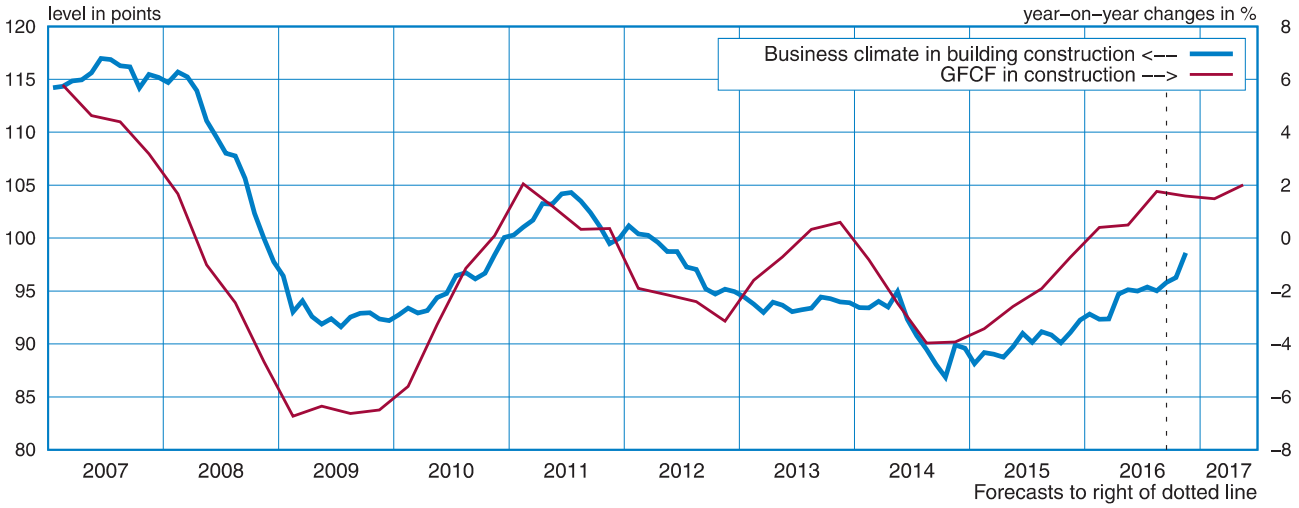
After the "No" vote in the Italian referendum, Brexit in the United Kingdom and the election of Donald Trump in the US presidential election, and pending the upcoming elections in France and Germany in 2017, the uncertainties surrounding fiscal policies and the political situation are great as the year draws to a close. For the moment, these uncertainties do not seem to be affecting the business climate, but depending on how they evolve, they could increase the

wait-and-see attitude among investors and cause instability on the currency and interest rate markets.

European households may reduce their savings

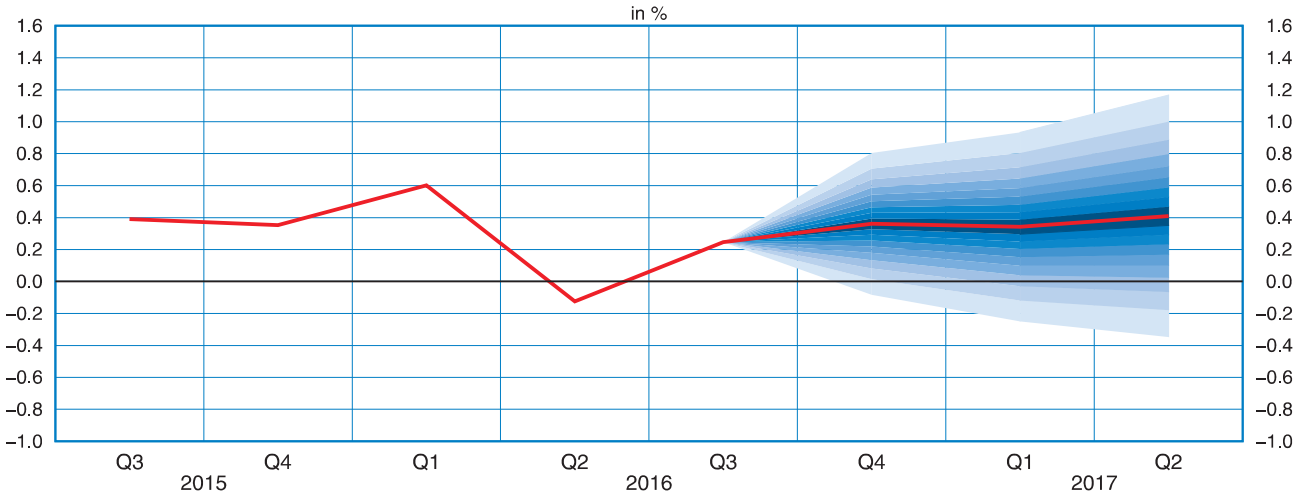
Since the end of 2015, European households have continued to increase their savings more quickly than their income, despite falling unemployment, rising confidence and increasing purchasing power. Through to mid-2017, the scenario presented here is based on a stabilisation of the savings ratio and a slight acceleration in consumption to a rate that is in line with the recent gains in purchasing power. However, households might dip into their savings to spend even more, thereby stimulating activity more. Conversely, savings ratios could continue to increase, and thus limit the scale of the growth expected in the scenario. ■

5 - Construction investment has risen again, making a positive contribution to activity



Source: INSEE

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 estimate that will be published in the quarterly accounts for Q4 2016 has a 50% chance of being between +0.2% (lower limit of the fifth band from the bottom) and +0.6% (upper limit of the fifth band from the top). Likewise, it has a 90% chance of being between 0.0% and +0.8%.

Source: INSEE

Key figures: France and its international environment

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
International environment													
Advanced economy GDP	0.7	0.4	0.4	0.3	0.4	0.4	0.5	0.5	0.4	0.4	2.1	1.6	1.4
Eurozone GDP[1]	0.4	0.4	0.3	0.5	0.5	0.3	0.3	0.4	0.4	0.4	1.5	1.6	1.3
Barrel of Brent oil (in dollars)	55	63	51	45	35	47	47	50	50	50	53	45	50
Euro-dollar exchange rate	1.13	1.10	1.11	1.10	1.10	1.13	1.12	1.08	1.06	1.06	1.11	1.11	1.06
World demand for French products	1.1	0.1	0.6	0.9	–0.1	1.2	–0.1	0.8	0.8	0.8	3.4	2.0	2.2
France - supply and uses													
GDP	**0.6**	**0.0**	**0.4**	**0.4**	**0.6**	**–0.1**	**0.2**	**0.4**	**0.3**	**0.4**	**1.2**	**1.2**	**1.0**
Imports	2.2	0.4	1.5	2.3	0.3	–1.7	2.5	0.2	0.9	1.1	6.4	2.8	2.7
Household consumption	0.5	0.1	0.5	–0.1	1.1	0.0	0.0	0.5	0.3	0.3	1.5	1.5	1.0
Public and NPISH consumption	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4	1.5	1.5	1.1
Total GFCF	0.5	–0.2	0.9	1.2	1.2	0.0	0.2	0.5	0.7	0.5	0.9	2.7	1.5
of which: NFEs	*1.1*	*0.7*	*0.7*	*1.5*	*1.9*	*–0.2*	*–0.4*	*0.5*	*0.8*	*0.5*	*2.7*	*3.4*	*1.4*
Households	*0.0*	*0.1*	*0.1*	*0.4*	*0.3*	*0.4*	*0.6*	*0.6*	*0.6*	*0.6*	*–0.8*	*1.4*	*1.9*
General government	*–0.8*	*–3.6*	*2.6*	*1.5*	*–0.1*	*0.4*	*1.1*	*0.3*	*0.1*	*0.2*	*–3.9*	*2.3*	*1.1*
Exports	1.7	1.7	–0.3	0.7	–0.5	–0.1	0.5	0.3	1.1	1.1	6.0	0.6	2.4
Contributions (in point)													
Domestic demand excluding changes in inventories[2]	0.4	0.1	0.6	0.3	0.9	0.1	0.1	0.5	0.4	0.4	1.4	1.8	1.1
Changes in inventories[2]	0.3	–0.5	0.4	0.5	–0.1	–0.7	0.7	–0.1	–0.1	0.0	0.1	0.1	0.0
Net foreign trade	–0.2	0.4	–0.6	–0.5	–0.2	0.5	–0.6	0.0	0.0	0.0	–0.3	–0.7	–0.1
France - situation of households													
Total employment	–3	40	20	59	60	39	54	34	34	36	116	188	70
Non-agricultural market sector employment	–10	32	26	51	47	29	51	29	29	30	99	157	60
ILO unemployment rate Metropolitan France[3]	10.0	10.1	10.1	9.9	9.9	9.6	9.7	9.6	9.6	9.5	9.9	9.6	9.5
ILO unemployment rate France[3]	10.4	10.4	10.5	10.2	10.2	9.9	10.0	9.9	9.9	9.8	10.2	9.9	9.8
Consumer price index[4]	–0.1	0.3	0.0	0.2	–0.1	0.2	0.4	0.7	1.2	1.0	0.0	0.2	1.2
Core inflation[4]	0.2	0.6	0.6	0.9	0.6	0.7	0.7	0.5	0.7	0.7	0.5	0.6	0.7
Household purchasing power	0.7	0.0	0.8	0.5	0.6	0.2	0.6	0.1	0.0	0.3	1.6	1.8	0.6

Forecast

1. Eurozone excluding Ireland, as this country's accounts present a break in series in Q1 2015.
2. Changes in inventories include acquisitions net of sales of valuable
3. For annual data, unemployment rate is that of the last quarter of the year
4. Year-on-year on the last month of the quarter and annual averages

GDP: gross domestic product
GFCF: gross fixed capital formation
NFE: non-financial enterprise
NPISH: non-profit institutions serving households
ILO unemployment: unemployment as defined by the International Labour Organisation

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

Special Analysis

After two years of turbulence, the French aeronautical sector is ready to take off again

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France is the world's second largest exporter of aeronautical equipment after the United States: in 2015, it supplied almost a quarter of the world's exports of these products. Over the course of the last twenty years, French exports have become more specialised in aeronautical goods, much more so than those of the other main producer countries. In addition, the knock-on effect of the aeronautical branch on national activity is greater in France than for its partners. All in all, the French economy has proven to be the most sensitive of the large world producers to fluctuations in world demand for aircraft.

And yet, the French aeronautical sector does not seem to have benefited as much as it might have from the tremendous surge in air traffic over the last few years. Indeed air traffic has risen sharply since 1995, and even more markedly since 2010, driven by the rise in passenger numbers in Asia. However, although the aeronautical industry boosted French growth between 2000 and 2013, it fell back in 2014 and 2015. The trade surplus in aeronautical equipment has eroded since 2014 and is expected to fall again on average in 2016. This erosion is due to problems on both supply and demand sides. Producers of business aircraft and helicopters are suffering from a sharp fall in demand, particularly from the oil producing countries. In the commercial airliner industry, manufacturers and equipment manufacturers are struggling to keep up with new demand as they are at the limit of their production capacity. Thus, French manufacturers have been faced with particularly acute procurement issues since 2014, and this has interfered with production and delayed deliveries. Finally, recent aircraft contain more and more foreign technology, in particular for the engines, which mechanically erodes the trade balance of French aeronautics, due to increased importation of parts and equipment.

However, in 2016 these supply and demand problems seem to be resolving themselves. Production capacity is expected to expand, as the recovery in investment in the aeronautical sector has been confirmed in 2016. The business climate remains favourable and the order books are still full, in particular for a new generation of engines partly produced in France, which went into service in summer 2016. The aeronautical branch's production and exports are therefore expected to rise sharply by mid 2017, if only to catch up on delayed deliveries.

Acknowledgments: the authors would like to thank the teams at the INSEE Nouvelle-Aquitaine and Occitanie regional offices, in particular for their help in exploiting the files from the survey on the aerospace industry in the South-West of France.

After two years of turbulence, the French aeronautical sector is ready to take off again

Aeronautics: a sector that is benefiting from strong growth in air passenger traffic

World air traffic has seen momentum build since 2010, particularly in Asia

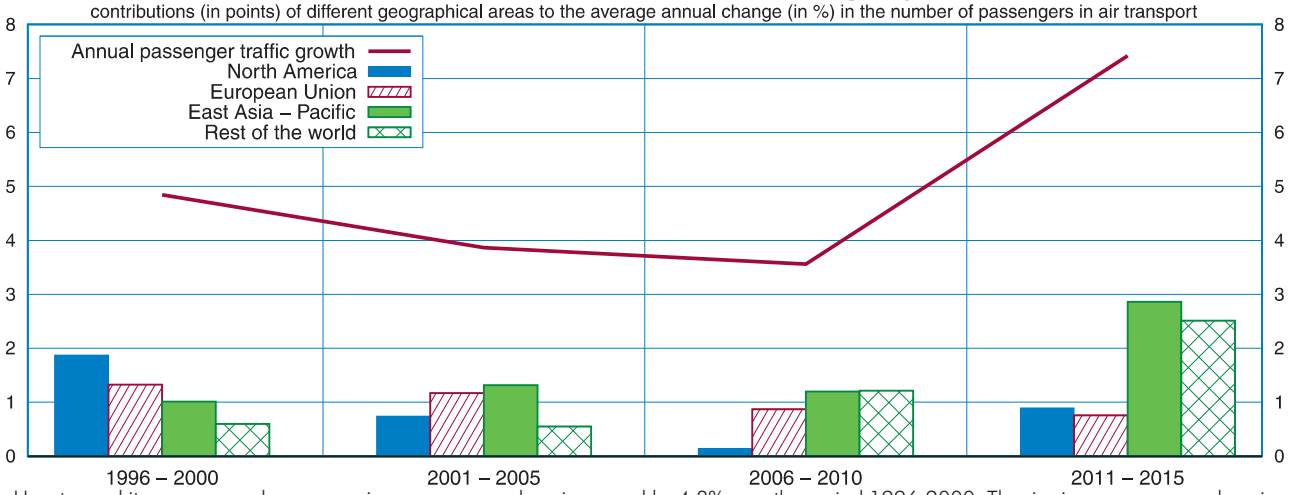
Final demand for the aerospace industry corresponds mainly to purchases of civilian aircraft and airlines' maintenance expenditure; these two items far outweigh purchases of military equipment and other civilian equipment. The industry has thus benefited from the strong growth in air traffic, which has grown faster (+5.0% a year on average since 1995) than overall world growth (+3.8% a year). The momentum in air traffic even accelerated between 2010 and 2015: +7.4% a year on average (*Graph 1*), compared to a global growth rate of +3.5%. This boom has been largely sustained by the development of air traffic in Asia-Pacific region: since 1995, air traffic in this region of the world has increased by 7.2% a year on average (+11.6% between 2010 and 2015). Air traffic has also increased considerably in Latin America, the Middle East and North Africa. In Europe on the other hand it slowed until 2005; since then it has been growing steadily, by 3.7% a year. Similarly, in North America, air traffic slowed between 1995 and 2010, and has been growing since 2010 at a rate of 2.7% a year. All in all, Europe and America are no longer the main zones driving the growth in air traffic and their share of global air traffic fell from 62% in 1995 to 45% twenty years later.

The aeronautical industry remains concentrated in North America and Europe, with contrasting trade balances

Although a first twin-engine jet airliner has just been entirely assembled in China (Chinese manufacturer AECC's C919) and Airbus is building an assembly plant there, the aeronautical industry has actually relocated very little in response to changes in demand. Indeed, the development costs of these new programmes are very high, which limits the appearance of new players in the industry; furthermore, the construction of new production units requires massive investments while the costs of transporting the finished products are relatively low. This is why aeronautical production remains essentially concentrated in North America and Europe, both for commercial airliners — with the dominance of the Airbus/Boeing duopoly — and engines, which represent up to 30% of the total price of a plane. The engine market is dominated by a small number of American firms (GE Aviation, Pratt & Whitney) and European companies (Rolls-Royce, Safran Aircraft Engines). This situation explains the recent changes in the balance of trade (*Graph 2*): the large Asian countries are the main net importers of aircraft and their trade deficit in aerospace goods has widened considerably over the last few years in favour of the six main producing countries.

1 - Asia has become the main contributor to the vitality of global air traffic

contributions (in points) of different geographical areas to the average annual change (in %) in the number of passengers in air transport



How to read it: as an annual average, air passenger numbers increased by 4.8% over the period 1996-2000. The rise in passenger numbers in North America contributed +1.9 points to this increase.

Source: International Civil Aviation Organization

After two years of turbulence, the French aeronautical sector is ready to take off again

The French economy is the most specialised in aeronautics

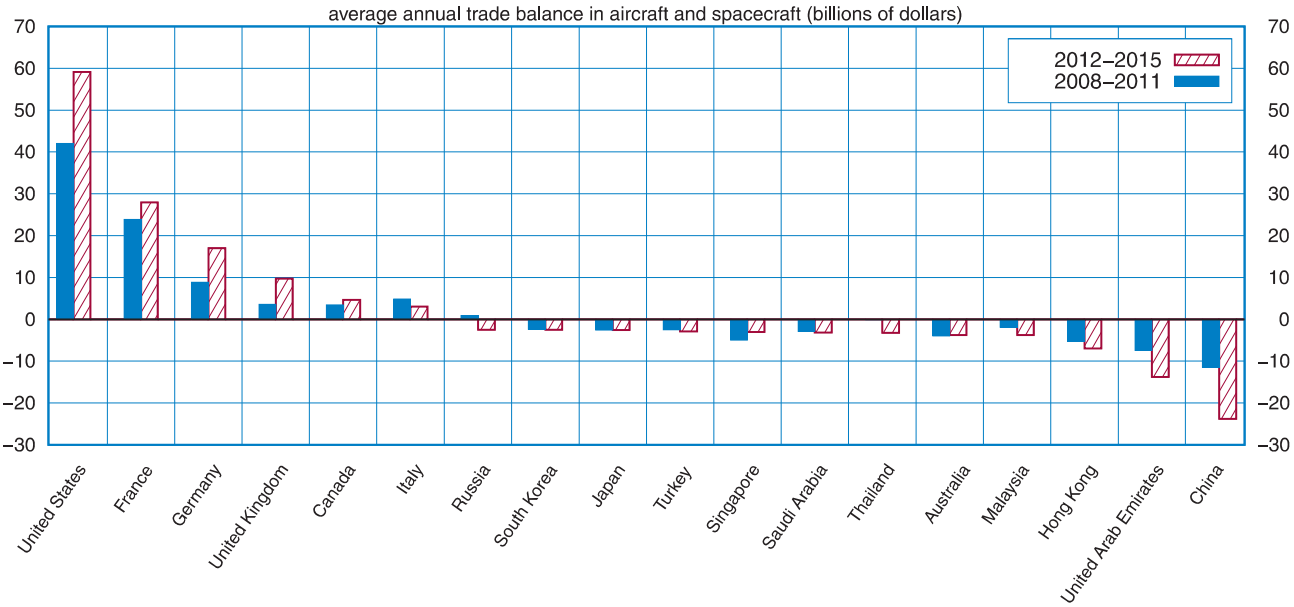
Aeronautical production is concentrated in six countries in North America and Europe, which account for almost 80% of world exports: the United States (29% of world exports in dollars in 2015), France (22%), Germany (12%), the United Kingdom (9%), Canada (4%) and Italy (2%). These countries are distinguished from each other both by the level of their aeronautical trade balance and their industrial specialisation in the sector.

Aeronautical manufacturing accounts for a large part of French exports

In export terms, the French economy has become more and more specialised in aeronautics: in 1995 the weight of the sector in total exports was already 60% higher than the average in the main producing countries (*Graph 3*); in 2015, it was 130% higher: the difference with the average of the main producer countries has therefore more than doubled in twenty years. The United States remains the word's largest exporter, but aeronautics has become less predominant in its exports: in 1995, the weight of the sector in total American exports was 60% higher than it was on average in the main producer countries, as it was in France at the time; by 2015, it was only 40% higher. In Germany, Canada and Italy, the relative importance of aeronautics in total exports has remained stable: since 1995 its share has remained at a level 40% below the average of the main producer countries in Germany and Canada and 80% lower in Italy. These relative differences in exports are accompanied by differences of a comparable scale in terms of activity, that is, in terms of the relative share of aeronautics in the value added of industry.

Thus aeronautical exports represented 3.2% of GDP in France in 2015, or a proportion four times higher than twenty years ago, compared to 1.3% in Germany and around 0.7% in the United States, the United Kingdom and Canada.

2 - Six exporting countries are meeting the increased demand from Asia and the Middle East



Note: annual average trade balance for the years 2008-2011 and 2012-2015, the twelve biggest deficits and six biggest surpluses over the second period are shown.

Sources: US Census Bureau for the United States, UNComtrade and International Trade Center for the other countries

After two years of turbulence, the French aeronautical sector is ready to take off again

The French economy is the most sensitive to foreign final demand in aeronautics

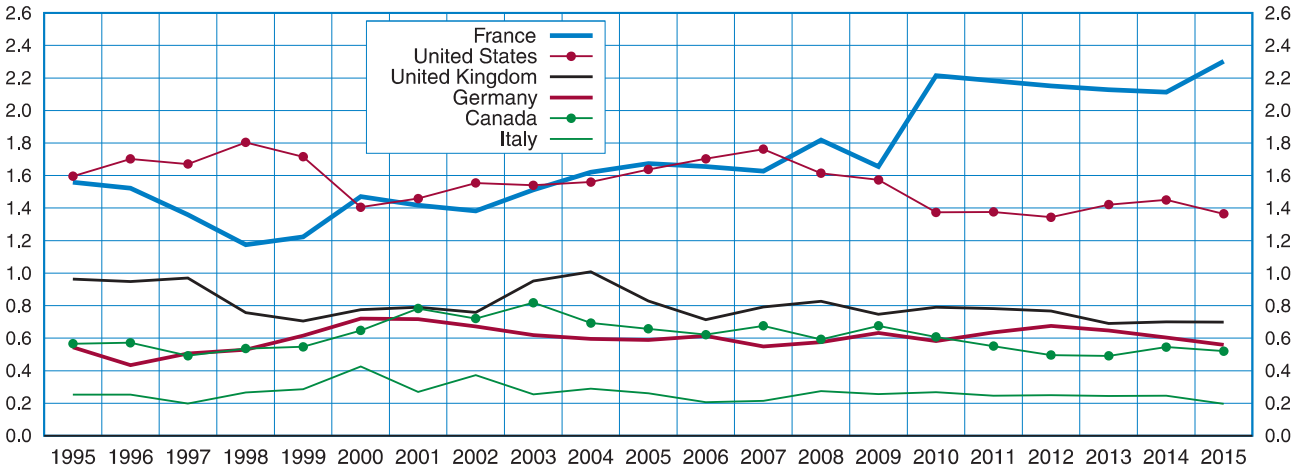
As well as its economic weight, the aeronautical branch[1] also produces very substantial knock-on effects. Indeed, the aircraft production process involves not only plane manufacturers, engine builders, equipment manufacturers and subcontractors but also service providers ranging from the financing or aeroplanes to design and research services. Thus a shock affecting the aeronautical industry in a country will have an impact amplified by the knock-on effects on other sectors of the economy. These effects are measured by the "value added multiplier". This is a ratio that provides, for one unit of extra aeronautical value added, the number of units of value added produced overall in the economy.[2] It is all the higher as production uses a large quantity of intermediate consumptions and as the content of the latter represents more domestic activity than imports. The input-output tables provided for each country by the OECD allow the multipliers to be calculated for different years.

The knock-on effects on aeronautical manufacturing are greater in France than in other countries

It is in France that the knock-on effects of the aeronautical branch are the greatest: in 2011, €1 of value added generated by the aeronautical branch was translated into €3.6 of value added generated in the rest of the economy (*Table 1*). This is explained by the sector's high level of vertical specialisation in France and therefore the large share in the production of intermediate consumptions, mainly produced domestically. The knock-on effects are also very high in Italy, in spite of its limited specialisation: here the value added multiplier was 3.4 in 2011. In the other countries, the multiplier has generally been stable at around 2.

1. For reasons of simplification, in this part, the aeronautical branch is included in the "other transport equipment" branch, which covers other branches including car, boat and train building and military land vehicles. This is because some data are only available at this aggregate level. In France, aerospace manufacturing represents approximately 80% of the branch, whether in value or employment terms (see *box 1*).
2. For details of the method, see *appendix 1*.

3 - Development of trade specialisation in the aerospace branch for the main producer countries



How to read it: the specialisations indices used are Hoover-Balassa indices, which compare the ratios of one country (in this case exports) with average observations across a reference sample (in this case the six main producer countries in the aeronautical sector). These indicators have the advantage of being easier to exploit than direct comparisons of national ratios, which can mask very significant differences in absolute value (Le Blanc, 2007). A company's trade specialisation corresponds to the ratio of its aerospace exports to its total exports, compared to the average ratio calculated for all the countries in the sample. A high specialisation index means that aerospace exports account for a larger portion of the country's exports than the average for the six producer countries. For example, a value of 1.6 for the French index means that in France the aeronautical sector accounts for a share of exports that is 60% higher than that represented by the the entire branch in the total exports of the six countries.

Sources: US Census Bureau, UNComtrade and International Trade Center, INSEE calculations

The French economy is the most dependent on world final demand for aeronautical goods

The knock-on effects, greater than elsewhere, and the higher degree of specialisation of the aeronautical branch in exports make France the country most sensitive to foreign final demand in this sector (*Appendix 2*). The OECD's international input-output tables allow a calculation of the sensitivity of countries' activity to a shock in global demand in the aeronautical sector. Thus in 2011, the weight of value added (all sectors combined) generated by world demand for aeronautical goods in total value added was higher in France than in the other producer countries. With unchanged partnerships and market shares, a 10% increase in global aeronautical demand would contribute +0.11 points of growth to French GDP. The effect would be approximately 30% less on United States GDP, approximately 20% less on German GDP and 50% less on Italian growth (*Graph 4*).

French activity is more specifically dependent on demand from the emerging countries

The French economy depends more than other exporting economies on aeronautical demand from other countries, in particular the emerging countries, including China: 0.53% of its value added in 2011, compared to 0.43% in Germany and 0.23% in the United States. Furthermore, it is also particularly dependent on final aeronautical demand from Germany and the United States: in 2011, demand from these two countries generated 0.30% of total French value added (0.17% from German demand and 0.13% from American demand). By comparison, final domestic aeronautical demand — mainly orders from French airlines — represented 0.22% of French value added.

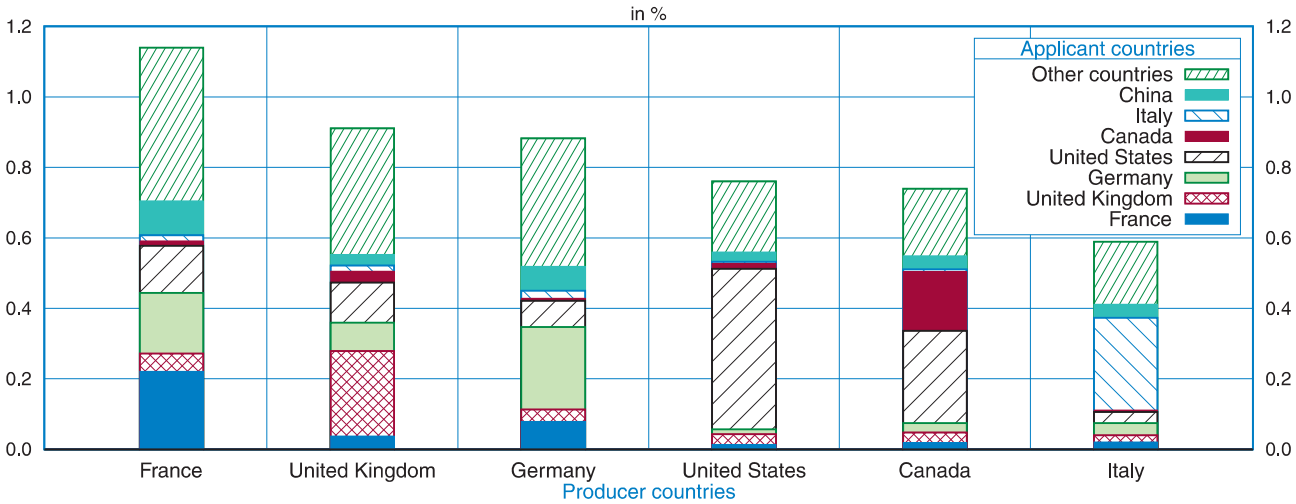
Table 1 - Value added multiplier for the "other transport equipment" branch in the main producer countries

Year	France	Italy	United Kingdom	United States	Germany	Canada
1995	3.4	2.9	2.0	2.3	2.4	1.5
2000	3.1	2.6	2.0	1.9	2.1	1.5
2005	3.4	3.1	2.1	2.1	2.0	1.7
2011	3.6	3.4	2.4	2.1	2.1	1.8

How to read it: in France in 2011, when the "other transport equipment" produces €1 of value added, it generates €3.6 of value added in the total general economy through the intermediate consumptions produced domestically. For France, these figures are close to those calculated for the aerospace sector using "symmetrical" IOTs estimated at a detailed level by INSEE. The difference with the aerospace multiplier calculated in the *Conjoncture in France* of March 2012 (4.8 based on the IOT for the year 2009) is explained in particular by the change in the national accounts base made since this publication and by the level of detail in the IOT used.

Sources : OECD, input-output tables (IOT) by countries and INSEE calculations (see appendix 1)

4 - For each producer country, weight in the value added of the activity generated by final demand for "other transport equipment" from the demanding countries



How to read it: in France, over 0.2% of total national production in value added is connected to final domestic demand for aeronautical goods. In Germany, 0.1% of national activity is connected to this French final demand for aeronautical goods.

Sources: OECD, international input-output table (IIOT) of 2011 and INSEE calculations (see appendix 2)

After two years of turbulence, the French aeronautical sector is ready to take off again

Box 1 - The largest part of the fluctuations in "other transport equipment" stems from aeronautical manufacturing

Several factors (volatility of results, significance of trends, statistical confidentiality) prevent the publication of all the short-term indicators at a sufficiently detailed level to analyse the trends in aerospace manufacturing industry alone.

In particular, the quarterly national accounting results are published grouping together all the sectors manufacturing transport equipment (level "A17" in the aggregate classification 2008),that is to say the automotive industry included. Today the latter only represents half of transport equipment: 49% of production in 2014 (compared to 70% in 1999); 49% of value added (63% in 1999) and 58% of employment (67% in 1999).

In the annual national accounts for production by branch and the business tendency survey in industry, results are published at a more detailed level, that of "other transport equipment". However, this remains a relatively broad category as it includes, as well as aerospace manufacturing, shipbuilding, railway equipment, military combat vehicles and finally the manufacturing of other vehicles (in particular two-wheeled vehicles). According to the weighting used for the industrial production indices (IPI, *Table*), aerospace manufacturing represents 82% of production of "other transport equipment" whereas according to the detailed administrative employment data ("DADS", administrative and social data) it represents 75% of salaried jobs and 79% of pay.

As for customs data and the industrial production index (IPI), these are short-term sources that enable sub-sectors of "other transport equipment" to be separated out. However, at all events, no short-term statistics are published for aeronautical manufacturing as the construction of spacecraft is systematically included, without being identified separately.

These sources show that the weight of aerospace manufacturing is such that its contribution explains the great majority of the variations in the production indices for other transport equipment: since 2000 it has accounted for 93% of its monthly volatility. The heterogeneity of "other transport equipment" does not mean that the trends in its production (*Graph*) do not share some common characteristics: these are all sectors that have seen strong growth since 1990 (unlike manufacturing industry overall), with current production substantially exceeding the pre-crisis levels.

Finally, aerospace manufacturing represents an even greater share of the foreign trade of the "other transport equipment" sector overall (in the customs data by value, 95% of exports and 89% of imports in 2015). ■

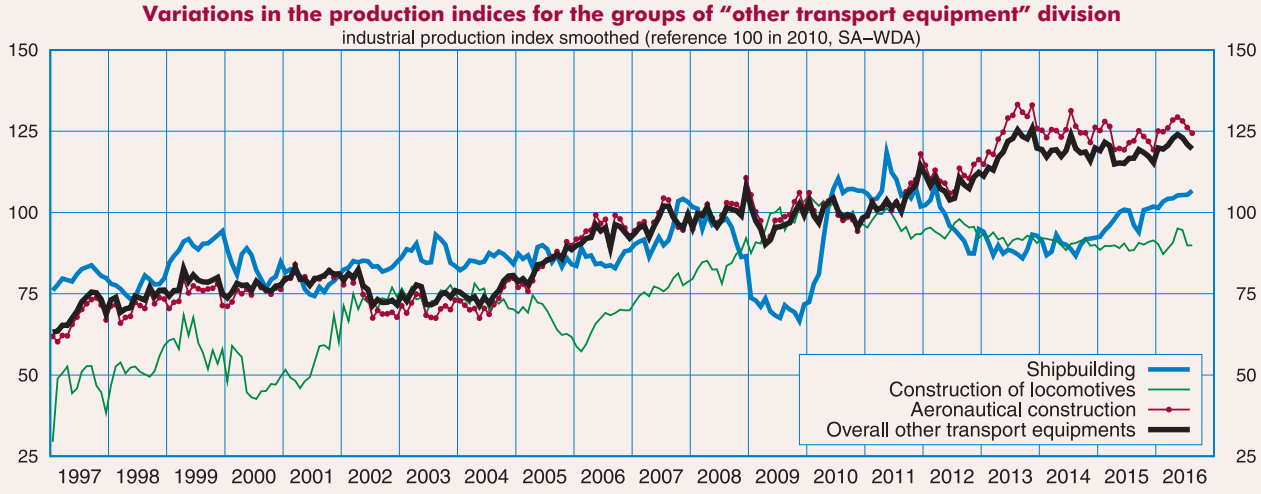
Weight of different groups in the "other transport equipment" division

in %

	Shipbuilding	Railway equipment	Aerospace manufacturing	Manufacturing of other vehicles
Production measurements (weighting IPI, 2010 base)	8	8	82	2
Employment (DADS base, 2013)	13	9	75	2
Wage (DADS base, 2013)	10	9	79	1
Exports (2015, in value)	2	1	95	1

Sources: INSEE, General Directorate for Customs and Indirect Taxes

Variations in the production indices for the groups of "other transport equipment" division



Source: INSEE

Reciprocally, Germany profits more from final demand for aeronautical goods from France and the United States than from each of the other countries, but it depends less than France on its two main partners. In the United Kingdom, national valued added depends more on American final aeronautical demand than that of its European partners. Furthermore, Canada's total valued added benefits much more from final aeronautical demand from the United States than from its own demand. The United States and Italy, on the other hand, are much more closed: the weight of their own final demand for aeronautical goods far outstrips that of the demand from each of the other countries.

The aeronautical industry contributed to French growth until 2013, but fell back in 2014 and 2015

Aeronautical activity more buoyant than the rest of industry until 2013

In France from 2000 to 2013, the aerospace industry was substantially more buoyant than the rest of manufacturing industry. Over this period, the production index of the aerospace industry increased at an annual rate of 4.4% compared to an average drop of 1.3% a year for the rest of manufacturing industry (*Graph 5*). Thus the weight of the manufacture of "other transport equipment" in the valued added of industry increased over the same period, reaching 5.0% in 2013 compared to 3.1% in 2000. At the same time "other transport equipment" represents a growing share of exports of industrial goods (13.1% in 2013, or an increase of 4.5 points since 2000). Given the knock-on effects, the sector's average contribution to GDP growth was +0.1 points a year over the period 2003-2013.

Aeronautical activity fell back in 2014 and 2015

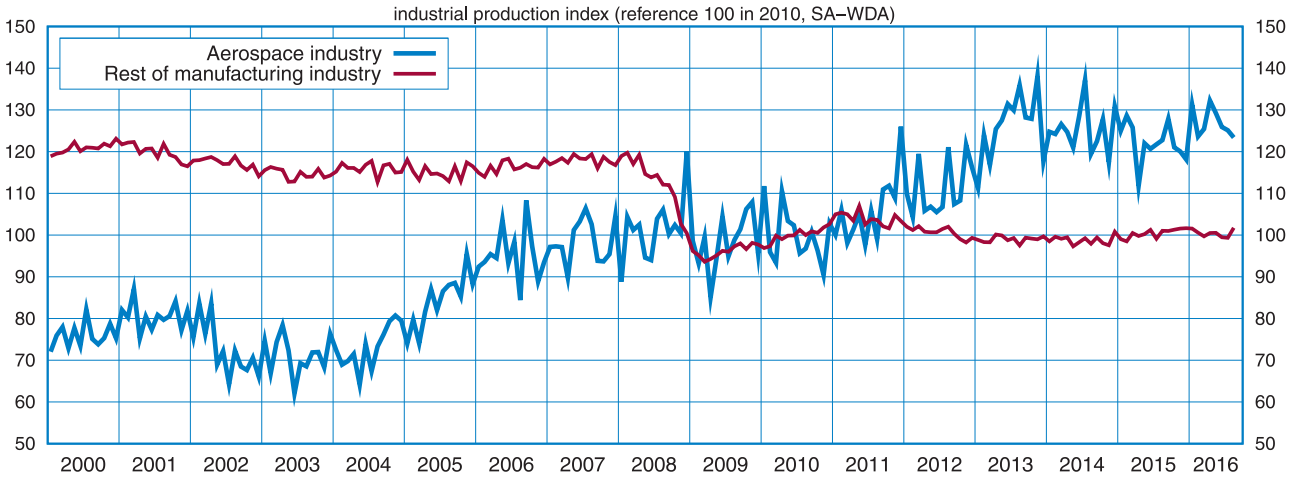
However, in 2014 and 2015, activity in the aerospace sector decreased by 3.2% overall over these two years. This drop is in contrast to industry overall, which picked up by 1.2% between 2013 and 2015. At the beginning of 2016, activity in the aerospace sector began to recover, but its average level over the first three quarters was barely any higher than its 2013 level.

The trade balance has deteriorated since 2014

The trade balance of the aeronautical industry has shown a surplus of about $25bn[3] a year since 2010. It climbed regularly, reaching a peak of $32.5bn in 2013. Since then, the trade surplus has fallen to $26.0bn in 2015; it is expected to fall again in 2016, to $20.8bn (*Graph 6*). All in all, the trade surplus is thought to have eroded by approximately $11.7bn in three years.

3. According to the customs service, 85% of commercial contracts and foreign trade in the French aeronautical sector are in dollars (see Études et éclairages issue n°. 62, published by the General Directorate for Customs and Indirect Taxes, December 2015). For international comparisons, it is therefore more appropriate to express trade flows and balances in dollars.

5 - Aerospace activity was very buoyant until 2013, but fell back in 2014 and 2015



Source: INSEE

However, the United States' trade surplus has not dipped since 2013 and reached a record level of $63.5bn in 2015. Over the same period, the German trade balance fell from 2012 to 2014, but recovered in 2015, limiting the overall drop to $3.6bn since its peak in 2012.

The reduction in the French trade balance is due to specific difficulties in different sectors of the French aircraft construction industry, on both the supply and the demand side, which led to lower exports and pushed up imports.

The recent erosion of the aeronautical trade balance stems from specific issues with supply and demand

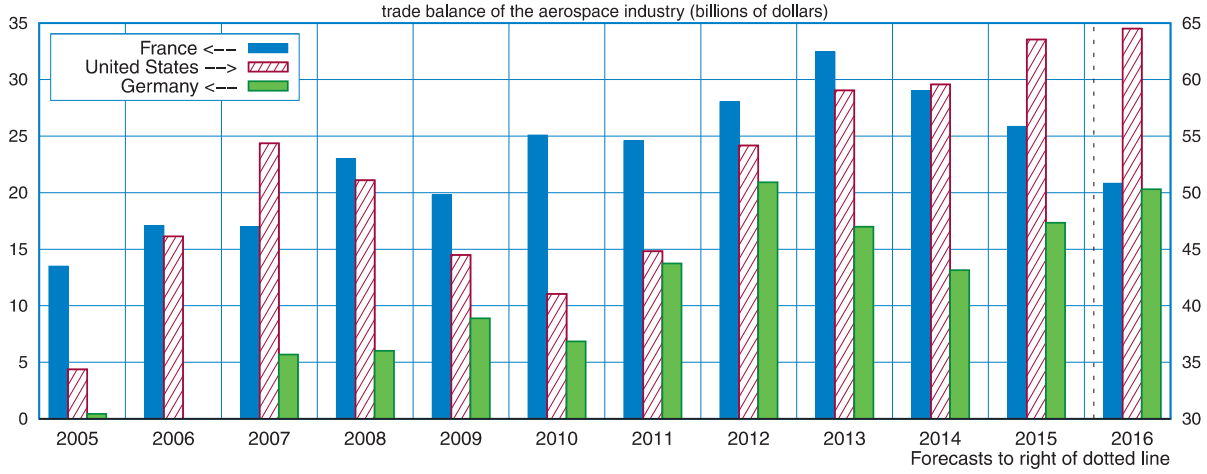
Exports of commercial airliners fell markedly from 2014 onwards

Deliveries of planes and helicopters account for the majority of French aerospace exports (almost 65%). Indeed, in the global aeronautical industry, France's role is that of an assembler. It is a net exporter of planes and helicopters, but an importer of components and equipment. In civil aviation, there are three main markets: commercial airliners, business aircraft and helicopters. These three markets have followed very different trajectories. First of all, in spite of growth in global air traffic that remains strong (+6.5% in 2015), French exports of airliners slowed in 2014 and in 2015, contributing –1.6 points on average to the fall in exports of civilian aircraft over those two years, compared to +7.5 points on average between 2008 and 2013 (*Graph 7*). In 2016, sales are expected to recover on average over the year, with a contrast between a clear decline in the first half of the year, which is probably attributable mainly to delivery delays concerning components and equipment entering into the manufacturing of new models of aircraft (see below), and a distinct recovery in the second half-year.

Sales of helicopters and business planes have suffered from the sharp fall in oil prices

Next, the business aircraft and helicopter markets have a specific business cycle which can differ from that of commercial airliners. First of all, the almost 60% fall in oil prices since mid-2014 has led to a sharp fall in investments in business helicopters on the part of the hydrocarbon extraction sector, which normally has a very high level of demand. The slump in helicopter sales also had a negative effect on aeronautical deliveries in 2015 (contribution of –1.5 points to the overall variation in the sector) and will likely continue to do so in 2016 (–1.2 points). Secondly, the slowdown in world demand, in particular from emerging countries, has hit sales of business planes (contributions of –1.5 points in 2014 and –0.8 points in 2015). However, deliveries are expected to improve in 2016 (+1.5 points).

6 - The trade surplus of the aeronautical sector has eroded since 2014



Sources: General Directorate for Customs and Indirect Taxes, INSEE calculations

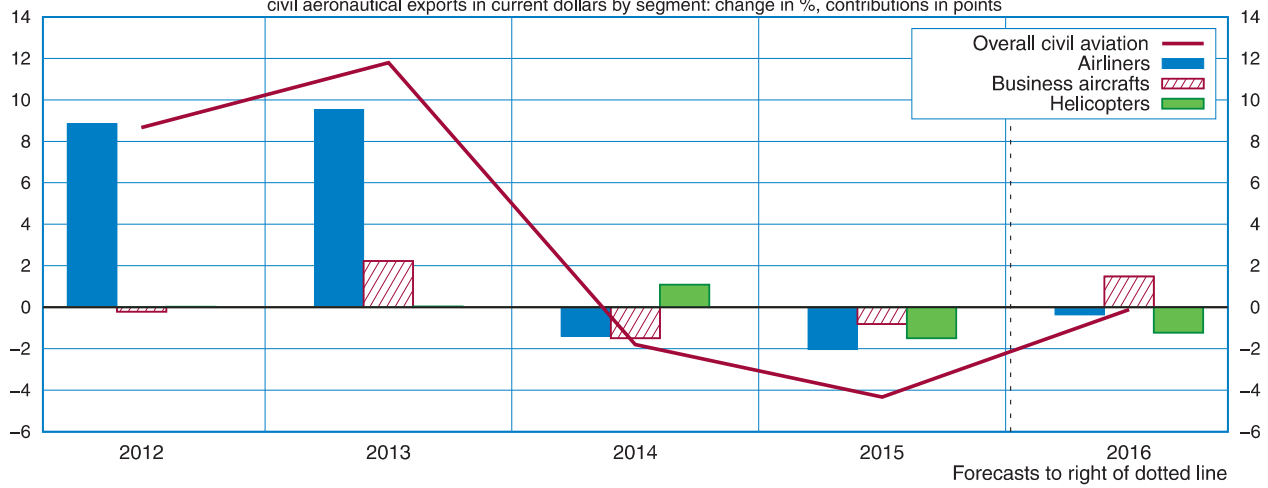
The lower demand for business planes and helicopters has resulted in a sharp fall in production for the main companies concerned (Airbus Helicopter, Dassault's civil aviation branch and indirectly the equipment manufacturers that supply engines and various parts). This decline has had a negative effect on the entire French aerospace industry, contributing approximately –4.2 points in 2014 and 2015 to the overall decline (–3.4% in total over these two years). In 2016, the total production of these two sectors is expected to fall again, negatively contributing to the overall development of the aerospace sector by about –3.0 points.

Imports have been buoyant since 2014, mainly parts and equipment imports

In 2014, aeronautical imports gathered pace substantially (+12.7% in dollar value, after an increase of 1.6% in 2013 and an average of +4.8% since 2008, *Graph 8*). Purchases of parts and equipment were particularly vigorous in 2014, contributing +17.6 points overall; they were consolidated slightly in 2015, but they are expected to grow sharply in 2016 (+13.8%). Technological choices concerning models of engines explain this buoyancy to a large extent, as new models of planes are using foreign engine technologies more and more. This therefore means that there is a growing trend towards planes equipped with a

7 - Since 2014, exports of commercial airliners have fallen considerably, whilst sales of helicopters and business planes are also down

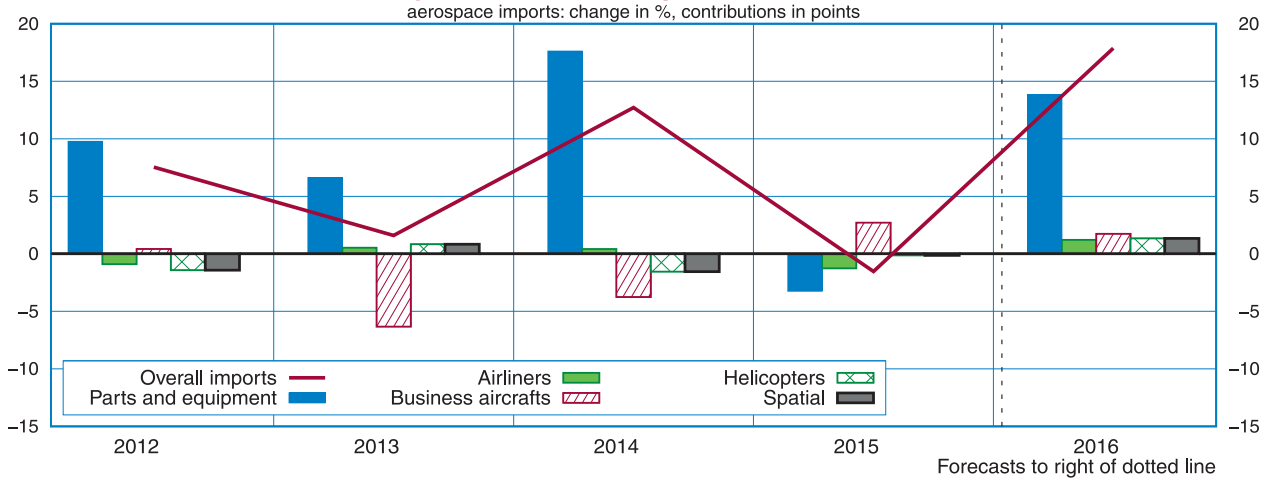
civil aeronautical exports in current dollars by segment: change in %, contributions in points



How to read it: in 2015, civilian aeronautical exports fell 4.4%. Business and short-haul regional airliners contributed –0.9 points to this fall, helicopters –1.5 points, airliners –2.0 points.
Sources: General Directorate for Customs and Indirect Taxes, INSEE calculations

8 - Imports of parts and equipment have contributed to vigorous aeronautical purchase since 2014

aerospace imports: change in %, contributions in points



Sources: General Directorate for Customs and Indirect Taxes, INSEE calculations

foreign engine in Airbus's deliveries: 85% in 2015 compared to 82% in 2013 and 75% in 2007 (*Graph 9*), to the detriment of French engine manufacturers.

This increase in imports of aeronautical equipment mainly benefits engine manufacturers in the United Kingdom and the United States, which account for 6 percentage points in the increase in aeronautical imports between 2013 and 2015. A large proportion of these engines concerns both new models of plane and engine replacements in existing aircraft; they are engines that are more and more fuel-efficient. Above all, no French new-generation engine was approved by the aircraft safety authorities for entry into service before 2016. This loss of domestic market by French engine manufacturers has not been offset on foreign markets, and exports of engines and equipment fell sharply in 2015.

Furthermore, purchases of commercial airliners also contributed to the increase in imports in 2015 (+2.7 points) and again in 2016 (+1.7 points), whereas it contributed negatively between 2008 and 2014 (–6.2 points per year on average). These purchases correspond to investments by French airlines, which are acquiring foreign planes, from the United States in particular.

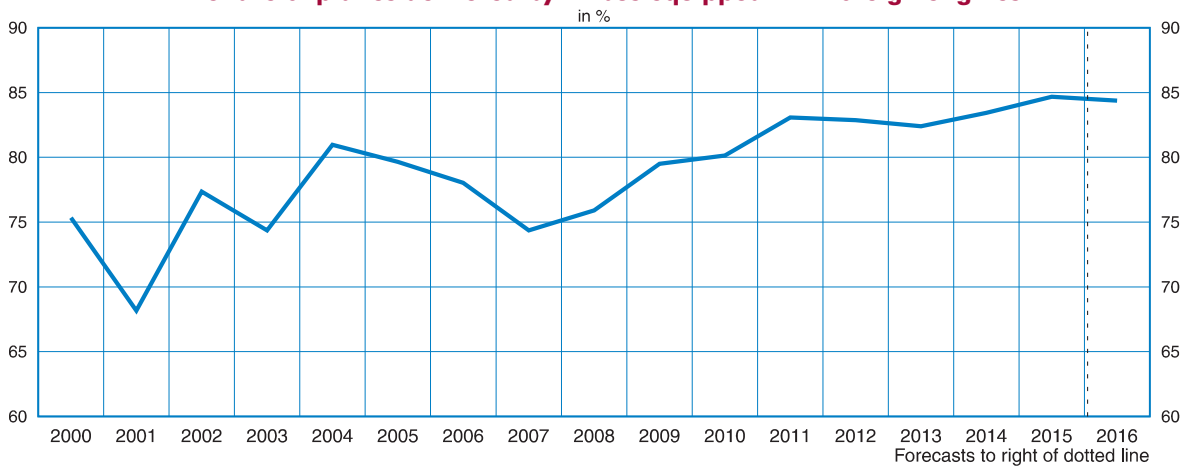
Constraints on production, capacity issues in particular, have affected production by both equipment and aircraft manufacturers

Demand-side difficulties encountered by the manufacturers of business planes and helicopters therefore do not seem to be representative of the economic situation of the "other transport equipment" sector overall. In fact business tendency survey indicate rather that it is supply-side issues that explain the dip in aeronautical activity since 2014.

Production in the sector seems to be limited by equipment shortages

The aeronautical sector seems to be suffering from a lack of production capacity. Since 2012 the production capacity utilisation rate (CUR) in the "other transport equipment" industry has indeed remained considerably higher than its average between 1994 and 2007 (84.7%; *Graph 10*). In 2016, the CUR has increased again (to 92.1% on average) coming close to the maximum level reached in 2007 (94.1%), which leaves little room for extra production. The situation is similar for the supply chain of South-West France's aerospace industry in general. For these manufacturers that include subcontractors, suppliers and service providers as well as aircraft and engine manufacturers (*Box 2*), the CUR also reached a very high level in 2015 (88.2%). It is equivalent to its pre-crisis level, whereas it has remained below this level in the rest of manufacturing industry.

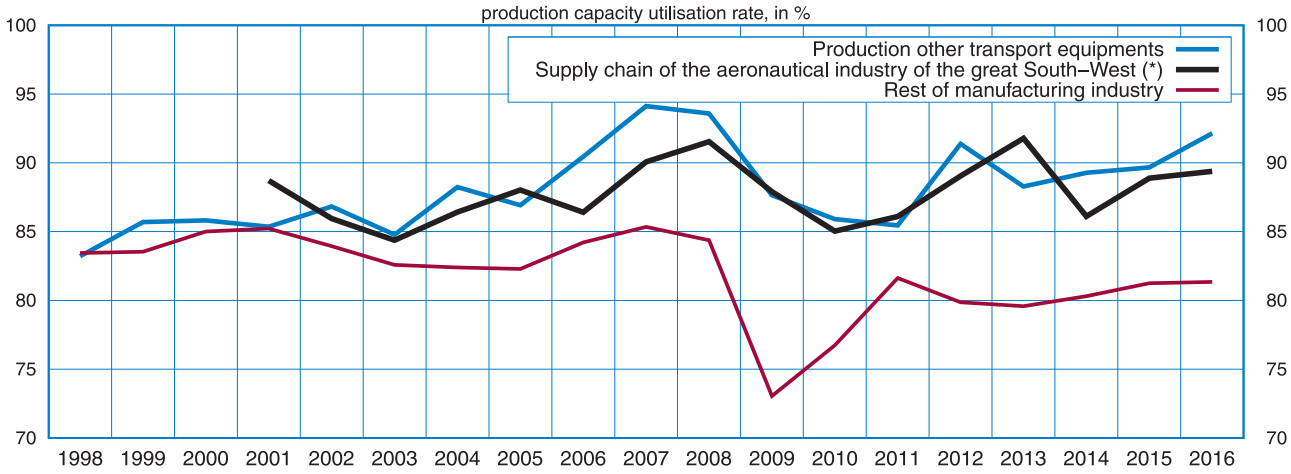
9 - Share of planes delivered by Airbus equipped with foreign engines



Note: this ratio was constructed using the number of annual deliveries of planes by type, and for each type, Airbus's technological choice regarding the engine (supplied by a resident firm or not), taking into account the market share of the different models of engine when several engines could equip the same aircraft. Only Airbus deliveries from France were counted, and not the company's total sales.
Sources: manufacturers, General Directorate for Customs and Indirect Taxes, INSEE calculations

Production therefore seems to be limited by shortages of equipment to meet demand. In fact, among the factors that have limited their production, firms in the "other transport equipment" sector mention supply-side more often than demand problems compared to companies in the rest of industry (*Table 2*): since 2013, the proportion of companies considering that they have insufficient orders has been below its long-term average; conversely, equipment bottleneck problems have been mentioned more frequently than on average since 2014. Subcontractors, and suppliers in the aeronautical industry are also faced with lower demand problems than normal; however, the proportion of them reporting equipment bottlenecks has fallen back below its average in 2016.

10 - Spare capacity are small in aeronautics



* Indicator calculated from the responses to surveys of the aeronautical industry in South-West France; the calculation includes the responses from industrial firms and service providers.

Sources: INSEE, quarterly business survey in industry, Space-Aeronautical surveys (2001 to 2012) and Aerospace industry surveys in Aquitaine and Midi-Pyrénées (2013 to 2015)

Table 2 - Supply difficulties are easing, but some equipment bottlenecks persist

Proportion of companies concerned by different factors limiting their production (annual averages in %)

Sector	Average 1994-2016	2013	2014	2015	2016
Manufacture of "other transport equipment"					
Insufficient orders	54	26	29	25	30
Difficulties of demand only	49	22	22	18	23
Equipment bottlenecks	9	18	28	24	34
Difficulties of sourcing	10	28	28	9	12
Recruitment difficulties	30	42	27	25	34
Supply chain of South-West France's aerospace industry					
Insufficient orders	33	23	37	29	20
Difficulties of demand only	25	11	23	19	14
Equipment bottlenecks	13	7	10	20	10
Difficulties of sourcing	9	19	16	21	3
Recruitment difficulties	27	49	44	26	21
Rest of manufacturing industry					
Insufficient orders	52	63	60	53	49
Difficulties of demand only	43	51	48	42	40
Equipment bottlenecks	7	4	5	4	4
Difficulties of sourcing	9	7	6	6	5
Recruitment difficulties	28	26	26	28	31

Forecast

* Statistics calculated from the responses of industrial companies in the aeronautical industry in the South-West of France to the industry business tendency survey.

Sources: INSEE, quarterly business survey in industry and Aerospace industry surveys in Aquitaine and Midi-Pyrénées linked to the quarterly business survey in industry

After two years of turbulence, the French aeronautical sector is ready to take off again

Box 2 - How is aeronautical production measured in France and what is its impact on inventory volatility

One of the industrial production indices (IPI) is dedicated to tracking the trend in "manufacture of air and spacecraft". This branch covers, in accordance with the Statistical classification of economic activities in the European Community (NACE), the manufacturing of aeroplanes, helicopters, spacecraft, launchers and satellites, etc.

This rather wide scope, representing approximately 5% of the value added of French manufacturing industry, is broken down for the purposes of constituting indices into four "sub-branches": engines for aircraft (22% of the index), helicopter airframes1 (9% of the index), aeroplane airframes (47% of the index) and finally launchers, spacecraft and ballistic missiles (21% of the index). Associated with each of these four sub-branches there are also "elementary" indices, i.e. indices based directly on the production data submitted on a monthly basis by the companies concerned, whose aggregation, via weightings corresponding to turnover in these, forms the "manufacture of air and spacecraft" index.

For the elementary index relating to aeroplane airframes, production is measured in "quantities produced", i.e. the number of finished planes coming off the different assembly lines in the world (France, Germany, China) in any given month. Simply counting the aircraft produced nonetheless would require supposing that only one type of plane is produced, and only in France. To get round the differences in production locations, in the quantity of work needed, in price or technology between the different models of plane, the planes are aggregated based on a reference model, the Airbus A320 to be specific, combined with equivalence tables. Equivalence factors are therefore defined by Airbus for all the other models; these correspond to the ratio of the value added created in France in the production of the model in question to that created on France on production of an A320.

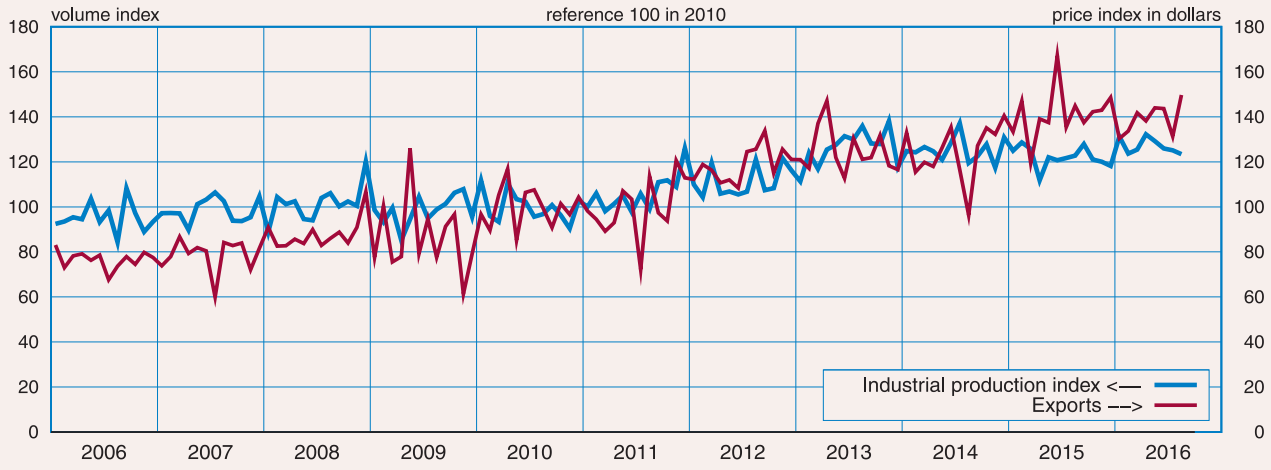
A similar method is used to produce the index for helicopter airframes and aircraft engines. However, trends in the production of spacecraft and ballistic missiles are determined based on those in the hours worked (hours actually worked by personnel directly attached to production) declared on a monthly basis by companies in the branch. The volumes of hours declared are then corrected for the changes in productivity to produce the elementary production index for "spacecraft and ballistic missiles".

The production measurements are marked by fits and starts due to the irregular pattern of planes coming off the assembly line. However, final demand for the aeronautical industry, and exports in particular (which in 2013 represented approximately 60% of final uses), is even more volatile: this is the case at aerospace manufacturing level (*Graph*) with customs data that are much more volatile than the IPI at the "other transport equipment" level of aggregation. In the quarterly accounts, the volatility of exports is three times greater than that of production over the period 1990-2015. A first factor of this difference in volatility may be due to the fact that, whereas production counts finished planes, exports are counted at the time of delivery. In addition, unlike production, exports do not only count assembled planes, but also planes in the course of manufacturing once they have crossed the border, with these flows of unfinished planes also occurring in fits and starts. Finally, if only the part of the finished plane attributable to French production is counted, the production measured is necessarily lower than counting an entire plane exported, as long as it is delivered in France, and whatever the share of domestic value added; this difference can amplify the irregularity in the patterns of production.

For the national accounts, the differences between patterns of production and exports show up mainly in changes in inventories. Over the period 1990-2015, these changes accounted for a little under a third of the volatility in the variations in inventory of all goods and services, which is substantially higher than the weight of the sector in production (8% on average over this period). ■

The term «airframes» refers to all the fuselage and wing structures.

Production indice in the "manufacture of air and spacecraft" and exports



Sources: INSEE (for Industrial Production Indice, ref. 100 in 2010, SA-WDA), customs service for the exports in products of manufacture of air and spacecraft

Business leaders report a reduction in supply difficulties in 2016

Aeronautical activity has also been limited by supply difficulties: companies judged them serious in 2014 and 2015, in the aeronautical sector as well as in the rest of the industry. However, manufacturers consider that they have been less so in 2016.

In concrete terms, final aircraft assembly, as well as the aeronautical industry, have been faced with serious supply difficulties. Airbus in particular has spoken publicly about the issues it has faced in order to justify certain delivery delays. The effect on the industrial production index (IPI) is all the greater as this statistic corresponds to a number of "finished" planes (*Box 2*).

However, supply-side issues do not seem to be connected to the problem with finding qualified personnel, as hiring difficulties are not considered substantially greater than in the rest of manufacturing industry; in 2016, this criterion was mentioned by 34% of industrial companies in the "other transport equipment" sector and by 31% of other firms in the manufacturing industry. In 2014, hiring difficulties were nevertheless often mentioned by subcontracting firms and suppliers in the aeronautical industry, but this problem seems to have become less pressing since 2015.

After being rather disappointing in 2014 and 2015, the recovery in investment in the aeronautical industry has been confirmed in 2016

To reduce production constraints, companies may choose to acquire new equipment. Over the last few years, investments have been forecasted to rise more often by companies in the aeronautical industry than in the rest of manufacturing industry (*Table 3*), but in hindsight the actual investments made in 2014 and 2015 have turned out to be lower than expected. In 2016, the balance of opinion on the expected trend in investments has increased considerably once again, both for large companies in the "other transport equipment" sector and for subcontractors in the aerospace sector in South-West France. For this group of companies, the provisional figures on growth in investments in 2016 seem to confirm a sharp increase. The new investments are being used not only to renew capital, but also to increase production capacities: the balance of opinion on growth in production capacity is substantially higher than its average for firms in the "other transport equipment" sector and for aerospace industry subcontractors.

Table 3 - Aeronautical industry subcontractors and suppliers confirm the acceleration in investment in 2016

Changes (in %) and balances of opinion (annual averages in %)

Sector	Average 2002-2016	2013	2014	2015	2016
Manufacture of "other transport equipment"					
Annual variation of investments in value	4	9	5	7	3
Expected half-year variation of investments	12	22	19	27	40
Past half-year variation of investments	4	9	9	14	
Observed and expected variation of capacities of production	36	55	32	56	56
Supply chain of South-West France's aerospace industry					
Annual variation of investments in value	5	3	9	6	17
Expected half-year variation of investments	18	21	8	25	47
Past half-year variation of investments	11	20	6	4	
Observed and expected variation of capacities of production	29	40	58	67	62
Rest of manufacturing industry					
Annual variation of investments in value	0	–5	3	2	4
Expected half-year variation of investments	3	–4	0	6	4
Past half-year variation of investments	5	2	4	10	
Observed and expected variation of capacities of production	31	19	12	22	28

Forecast

* Statistics calculated from the responses of industrial companies in the aeronautical industry in the South-West of France to the industry business tendency survey (investments).

Sources: INSEE, quarterly business survey in industry, Space-Aeronautical surveys (2004 to 2012) and Aerospace industry surveys in Aquitaine and Midi-Pyrénées (2013 to 2015)

After two years of turbulence, the French aeronautical sector is ready to take off again

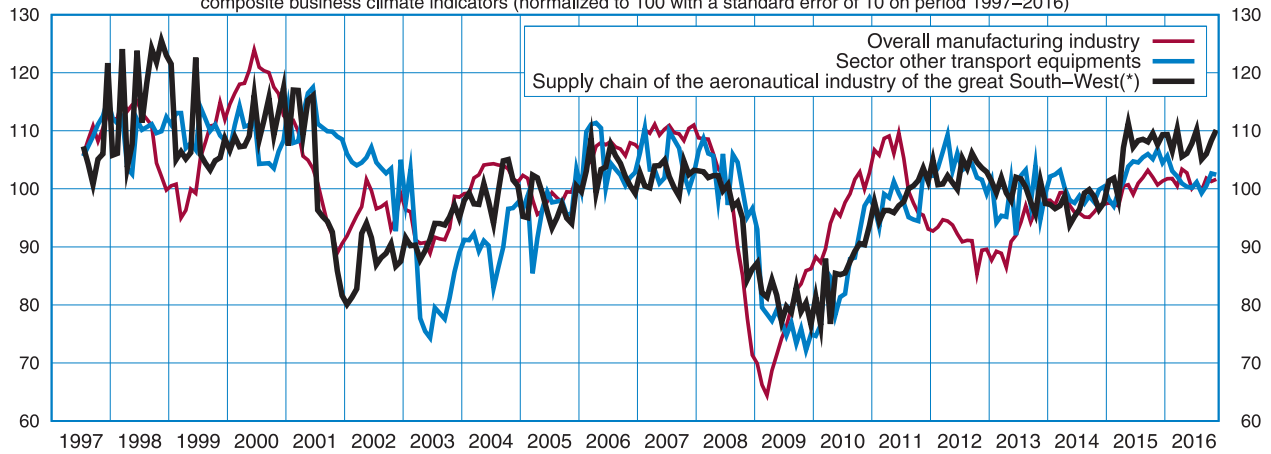
The prospects for demand remain optimistic

Over recent years, the business climate has been more positive in the aeronautical industry than in the rest of industry; over the whole of 2016, this indicator has seen a dip, but remains above its long-term average (*Graph 11*). The outlook for industrial companies in the supply chain has remained higher than its average since mid-2015. The outlook is also very favourable for the service companies in this sector (*Box 3*). The dip in the outlook for aeronautics is due to the fall in the balance of opinion on order books and more particularly on foreign orders, although these balances remain above their long-term average. Nonetheless, this fall in the order books must be put into perspective as the two main players in the French aeronautical industry both have particularly large order backlogs. For airframes, Airbus recorded 279 new orders with a value of €35bn at the Farnborough air show in 2016: at the end of October 2016, Airbus therefore has a total of 6,700 orders to deliver over the next twenty years. Although its rate of production of A380s (assembled in Toulouse) is to be reduced because of a lack of demand, the company seems to be enjoying considerable success with its new models in the A320 Néo family. It is precisely for this type of single-aisle plane that Safran Aircraft Engines developed with GE Aviation (within the company CFM international) a new engine (the "Leap") which passed the 10,000 order mark even before it went into service in summer 2016. However, production of this engine is not entirely located in France: it also involves factories in the United States.

Finally, for military aeronautics, the difficulties encountered by Airbus Helicopters (which lost out on a contract for Poland) must also be put into perspective given the export successes of Dassault Aviation, which has just doubled the size of its order book by signing a contract for the sale of Rafale planes to India, after the contracts with Qatar and Egypt.

11 - The business climate for "other transport equipment" has slowed, but remains favourable for other firms in the aeronautical industry

composite business climate indicators (normalized to 100 with a standard error of 10 on period 1997–2016)



* Statistics calculated from the responses of industrial companies in the aeronautical industry in the South-West of France to the industry business tendency survey.

Sources : INSEE, quarterly business survey in industry and Aerospace industry surveys in Aquitaine and Midi-Pyrénées linked to the quarterly business survey in industry

Box 3 - Survey of the aerospace industry in South-West France and the business tendency surveys

The survey of the aerospace industry in South-West France is an annual survey conducted by INSEE in conjunction with the Aerospace Valley competitiveness cluster. It measures the economic weight of the industry in the former Aquitaine and Midi-Pyrénées regions: these two regions account for 45% of the jobs in establishments in the aerospace manufacturing sector. The aerospace industry encompasses all the companies whose activity is partly or totally dedicated to the manufacturing of aeroplanes, engines, spacecraft, whatever their use (civilian, military, etc.).

The survey covers almost 1,700 firms in the aerospace manufacturing sector, but also in the sectors partially involved in the industry (*Table 1*): for example, sectors such as explosives manufacturing (used for rockets), mechanical engineering, the manufacturing of navigational equipment or the repair and maintenance of air and spacecraft.

Table 1 - Sector of activity of firms in the aeronautical industry in South-West France

in %

	Whole survey	Enterprises in the "business survey in industry"	Enterprises in the "business survey in services"
Basic metals and manufacturing of other metal products	18	15	0
Manufacturing of computer and electronical products	13	20	0
Manufacturing of electrical equipments	8	13	0
Manufacturing of transport equipments	25	37	1
Repair and installation of machinery	7	6	1
Rest of industry	3	4	0
Trade - Repair of motor vehicles and motorcycles	4	0	0
Computer activities and information services	4	0	22
Other activities (including engineering)	16	4	72
Research and scientific development	1	0	0
Rest of trade and services	2	1	3

Note: distribution obtained by weighting their turnover eventually destined for aerospace manufacturing.
Sources: INSEE, Aerospace industry survey in the South-West of France (2015) and business tendency surveys in industry and services

The results of the industry survey presented in this report do not concern the aircraft manufacturers themselves, nor project managers and engine manufacturers, which are not in the scope of the survey. It only concerns suppliers, subcontractors and service providers who work for these large companies. For the industry side, the survey questions mainly subcontractors and equipment manufacturers, whilst in services, most of the activity concerns engineering firms and technology consultancies (*Table 2*).

Table 2 - Functions of firms in the aeronautical industry in South-West France

in %

	Whole survey	Enterprises in the "business survey in industry"	Enterprises in the "business survey in services"
System integrator	9	13	0
Component supplier	24	36	2
Engineering and technology consultancy	13	7	49
Industrial subcontractor	31	33	3
Design subcontractor	3	0	12
Hardware and software component supplier	3	2	1
Hardware and software tool supplier	4	1	12
Maintenance company	7	5	4
Service provider	6	3	16

Note: distribution obtained by weighting their turnover eventually destined for aerospace manufacturing.
Sources: INSEE, Aerospace industry survey in the South-West of France (2015) and business tendency surveys in industry and services

After two years of turbulence, the French aeronautical sector is ready to take off again

The business tendency surveys on activity and investments in the industry and the survey on activity in services cover the entire scope of the survey on the industry. Pairing these two types of surveys provides, in the business tendency surveys, a sample of subcontractors, suppliers and service providers in the aeronautical sector, some 70 firms for the industry survey and 55 for the services survey on average each quarter. Across this precise scope, the usual estimates resulting from the business tendency surveys were made, in particular the calculation of a business climate and a production capacity utilisation rate.

In the service companies connected with the aeronautical sector, in 2016 many more business leaders than in 2015 announced an increase in their activity and demand (*Table 3*). Numerous balances of opinion reached levels unseen since 2005. This optimism on the current and future level of activity also makes them more optimistic about recruiting new people and correlatively, the proportion of companies stating that they are experiencing recruitment difficulties has once again gone above its long-term average. A survey was also done in 2014 to measure the weight of the aerospace industry in the Provence-Alpes-Côte d'Azur region: it is concentrated around the Airbus Helicopters and Thales Alenia Space sites in Marignane and Cannes respectively (Artaud & Ettouati, 2015). ■

Table 3 - Dynamic service companies

balances of opinion (annual averages in %)

	Average 2005-2016	2013	2014	2015	2016
Supply chain of South-West France's aerospace industry					
Turnover expected in the next three months	17	11	24	14	34
Expected demand	12	6	18	12	18
Expected investments	3	5	2	9	4
Situation of the enterprise	12	4	7	10	35
Exploitation result expected	11	16	13	1	9
Difficulties of accounts	1	–10	–6	–9	1
Demand limiting production	37	45	42	42	38
Workforce limiting production	12	4	2	16	25
Expected employment	22	3	27	38	57
Recruitment difficulties	34	6	5	26	36

Forecast

Note: statistics calculated from the responses of companies in the aeronautical industry supply chain in the South-West of France to the industry business tendency survey.

Sources: INSEE, Monthly business survey in services, Space-Aeronautical surveys (2004 to 2012) and Aerospace industry surveys in Aquitaine and Midi-Pyrénées (2013 to 2015)

By mid-2017, production and exports could make up for the delays accumulated since the beginning of the year

The demand prospects still look favourable for commercial airliners and could be less negative than they seemed for business planes and helicopters, given the stabilisation of oil prices since spring 2016. In addition, both the business tendency surveys and the announcements made by manufacturers suggest that the supply-side problems are gradually easing; vigorous imports of aeronautical equipment also confirm this diagnosis and seem to indicate that activity will be sustained in the coming months (*Box 4*).

All these factors combine to suggest that the aeronautical branch's production and exports will probably rise sharply by mid-2017, if only to catch up on delays accumulated since the beginning of the year.

As regards production, after a year 2016 which is expected to see production bounce back (+3.9% expected on average over the whole of the year) and to exceed its 2013 level, the carry-over effect into 2017 is expected to reach +2.7% by mid-year. On the export front, after seeing a substantial recovery from summer 2016 onwards, exports are expected to remain vigorous until mid-2017. Thus the carry-over effect to the middle of 2017 is expected to be +5.6%, after +0.5% over the whole of 2016. ■

Box 4 - Predicting production from imports of components and equipment

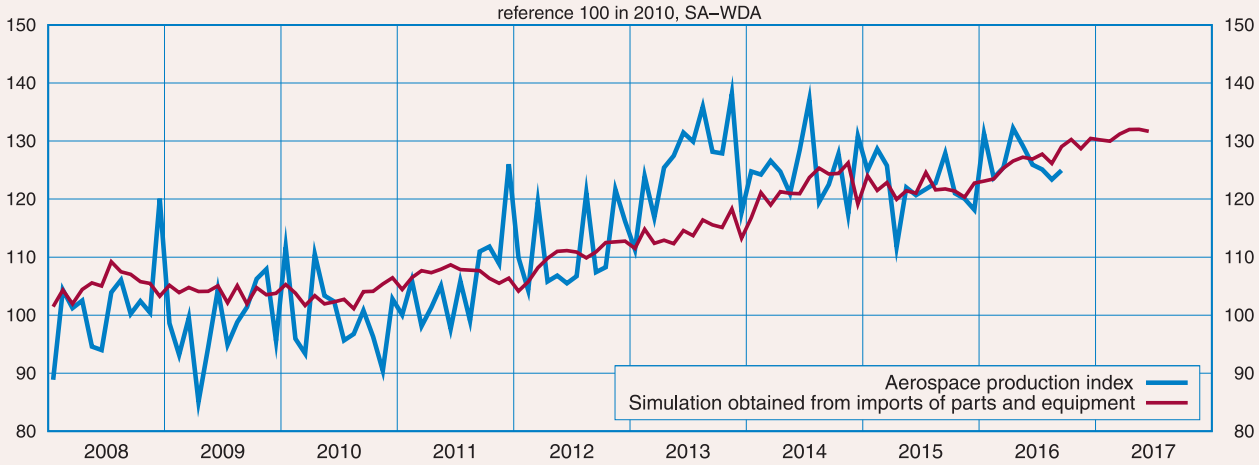
The business tendency surveys make it possible to estimate production in "other transport equipment" for Q4 of 2016, but they do not provide enough information to predict production through to mid-2017.

To make such forecasts, it is possible to use a simple relationship between recent imports of aeronautical components and equipment (i.e. engines, propellers, rotors, seats and other aeroplane parts) and aerospace production measured using the industrial production index (IPI). The model based on monthly production data is the given by this equation:

$$\Delta\log(IPI_t) = \underset{(4.5)}{0.8} - \underset{(-4.5)}{0.4}(\log(IPI_{t-1}) - \underset{(4.5)}{0.4}\log(import_{t-1})) - \underset{(3.0)}{0.3}\Delta\log(IPI_{t-1}) + \varepsilon_t$$

(in brackets Student's t-distribution)
Period of estimation 2006Q1-2015Q1
R^2 adjusted in the model: 38%

Estimation of the trend in aeronautical production based on imports of components and equipment



Sources: INSEE (for the industrial production index), use of data from the Directorate-General for Customs and Excise, adjusted by INSEE to calculate the limited data series

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Appendix 1 - Calculation of the value-added multipliers

The value-added multiplier for aeronautical production can be estimated from the input-output tables provided by the national accounts. For each branch of the economy, the "intermediate inputs table" part of the input-put table details the intermediate consumptions used (imported or produced domestically) and the valued added of the branch. The supply and use balance provides for each product its total offer, its domestic production and the volume imported.

Let n be the number of products in the economy. Let IC be the square matrix size $n*n$ that details for each product unit (columns) its consumption of intermediate products (rows). Let IC_{imp} and IC_{dom} be the square matrices size $n*n$ that detail for each production unit (columns) its consumption of imported and domestically produced intermediate products (rows). Finally, let row vector size n consisting of 1, e be the column vector size n whose component corresponding ro the aeronautical sector equals 1 and the others 0 and Id be the identity matrix.

A production unit in the aeronautical sector can be broken down as follows:

$$1 = \underbrace{a \times IC \times e}_{\text{Intermediate consumption}} + \underbrace{VA_1}_{\text{Value added at the 1st step of production}}$$

$$1 = \underbrace{a \times IC_{imp} \times e}_{\text{Part of imported IC}} + \underbrace{a \times IC_{dom} \times e}_{\text{Part of IC domestically produced}} + \underbrace{VA_1}_{\text{Value added at the 1st step of production}}$$

The breakdown of domestic production into value added and intermediate consumption, then into intermediate consumptions produced in the country and imported, is repeated at every stage of production. The value-added content of a production unit in the aeronautical sector, in other words the sum of the value added for each of the production stages, is therefore:

$$1 - a \times IC_{imp}\left[Id - IC_{dom}\right]^{-1} \times e$$

The value-added multiplier is obtained by dividing the value-added content of a production unit by the share of value added in the first production stage (VA_1). This multiplier is all the greater when the production involves intermediate consumptions with high valued added and few imports. ■

Appendix 2 - Calculation of the origin of the value added contained in final demand

The OECD's inter-country input-output (ICIO) tables describe the intermediate consumption necessary for production for 62 countries and 34 industries. There are therefore 2108 different industry-country pairs. The sum of the items in column *j* is the sum of the intermediate consumptions to produce $Prod_j$, the production of the j^{-th} industry-country pair.
By dividing each item in column *j* by $Prod_j$, we obtain the share of $Prod_j$ in the intermediate consumption of each industry-country pair. We obtain the matrix *IC* where:

$$IC_{ij} = \frac{ICIO_{ij}}{Prod_j}$$

To obtain the final production, there has been a succession of production stages. In fact, final production, at the final stage, $Prod_0$ is equal to:

$Prod_0 = VA_0 + IC_0$

Where VA_0 is the value added in the final stage and IC_0 the intermediate consumption in the final stage.

Now, IC_0 is also production:
$IC_0 = Prod_1 = IC \times Prod_0$

Likewise, in the second production stage:
$Prod_2 = IC_1 = IC \times Prod_1 = IC^2 \times Prod_0$
$Prod_\infty = 0$ (because $IC^\infty = 0$)

Thus, $Prod_{tot}$, the total production produced to produce $Prod_0$ is the sum of the $Prod_i$ productions produced at each stage *i*:

$$Prod_{tot} = \sum_{i=0}^{\infty}(Prod_i) = Prod_0 + Prod_1 + ... + Prod_\infty = (\sum_{i=0}^{\infty} IC^i) \times Prod_0 = (Id - IC)^{-1} \times Prod_0$$

To calculate VA_{tot}, the total value added generated by the production of $Prod_0$, we multiply $Prod_{tot}$ by the diagonal matrix *V* where the γ_j items are the share of valued added in the production of the j^{-th} pair.

Thus:

$$\gamma_j = \frac{VA_j}{Prod_j} = 1 - \sum_{i=1}^{i=2108}(IC_{ij}) = \frac{Prod_j - \sum_{i=1}^{i=2108}(ICIO_{ij})}{Prod_j}$$

$$VA_{tot} = V \times (Id - IC)^{-1} \times Prod_0$$

At each production stage *i*, we have:
$VA_0 = Prod_1 - Prod_0 = (IC - Id) \times Prod_0$
$VA_1 = Prod_1 - Prod_2 = IC \times (Id - IC) \times Prod_0$
$VA_2 = Prod_3 - Prod_2 = IC^2 \times (Id - IC) \times Prod_0$
$VA_n = IC^n \times (Id - IC) \times Prod_0$

Hence:

$$VA_{tot} = \sum_{i=0}^{\infty} VA_i = (\sum_{i=0}^{\infty} IC^i) \times (Id - IC) \times Prod_0 = (Id - IC)^{-1} \times (Id - IC) \times Prod_0 = Prod_0$$

Finally, with *i* the line number of the vectors:

$$\sum_{i=1}^{i=2108}(VA_{tot})_i = \sum_{i=1}^{i=2108}(V \times (Id - IC)^{-1} \times Prod_0)_i = \sum_{i=1}^{i=2108}(Prod_0)_i$$

The sum of the items in the vector $Prod_0$ is equal to the sum of the value added generated by production $Prod_0$.

In this study, the centre of interest is global final demand in the aeronautical sector. By constructing a vector with 2108 lines where all the items are nil except those corresponding to the aeronautical sector which are equal to the final demand of each country in the aeronautical sector, and by multiplying this vector by the matrix $V \times (Id - CI)^{-1}$, we obtain the details of the origin of the value added produced to meet this final demand. ■

Why have French exporters lost market share?

Bertrand Marc
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Département de la conjoncture

France's balance of trade has crumbled since 2000. The goods trade deficit stood at 2.1% of GDP in summer of 2016 compared with 0.6% in 2000. It widened mainly between 2000 and 2010, and then stabilised overall.

The reason for this erosion is first the loss of market share by French exports. Although France has maintained its position as the fifth largest exporter since 2004, its exports of manufactured goods dropped from 5.1% of world trade to 3.1% in 2015. This loss of 2.0 points was especially pronounced through to 2010; since then France has more or less conserved its global market share.

The main cause of the decline in the French position is the growing share of the emerging economies in world exports, especially China. This development of the emerging economies in world trade has affected all the advanced countries, but France has lost more market share than its main Eurozone partners. The 2.0 point drop in France's share of the global market is the result of two trends combining: first, a loss in each of the major markets, whether the Eurozone, the rest of the European Union or the rest of the world; second, a structural effect which reflects an unfavourable geographic orientation since the region towards which France most naturally exports, the Eurozone, is also the least dynamic.

The decline in market share was more the result of poor export performances in the various markets than poor geographic orientation. In order to understand this under-performance of exports, the export model presented here differentiates the European Union from the rest of the world. It shows that for sales to the European Union, the drop in France's export performance between 2000 and 2010 was mainly due to the growing weight of the emerging countries and more buoyant wage costs in France than in the rest of the Eurozone. The slight improvement in export performances since that time is the result of a small upturn in cost competitiveness and a depreciation of the Euro. For sales to non-European countries, the main determinants of the decline in performance over fifteen years are the rise in the share of emerging countries and the real effective exchange rate of the Euro. The lower level of fragmentation of the value-added chains of French foreign trade accounts for only a small proportion of the poor export performance.

In the coming quarters, the expected acceleration in world demand for French products bodes well for a sustained dynamism in exports to the European Union and a strong upswing in exports to other countries.

Why have French exporters lost market share?

France's balance of trade crumbled between 2000 and 2010 and has scarcely recovered since

France's balance of trade, defined as the difference between the value of exported and imported goods, fell from –0.6 GDP points in 2000 to –2.7 points in 2010 (*Graph 1*). It has risen slightly since then and stood at around –2.1 GDP points in Q3 2016.

This recent improvement is mainly due to the sharp decline in oil prices since mid-2014, which brought down France's energy bill. The balance of trade for manufactured goods alone deteriorated between 2000 (+0.8 GDP points) and 2010 (–1.0 GDP point) but has not recovered during the recent period: it has hovered around –1 GDP point since 2010 and was at –1.0 point in Q3 2016 (*Box 1*).

French enterprises have lost export market share since 2000

The erosion of the balance of trade since 2000 is due mainly to losses in export market share by French enterprises. Their market share for goods fell from 5.1% of world trade in 2000 to 3.1% in 2015 (*Graph 2*).

However, several other advanced countries also lost market share, notably the majority of EU countries, and France has remained the world's fifth largest exporter since 2004, behind Germany, the United States, China and Japan, coming just ahead of South Korea and the United Kingdom in 2015.

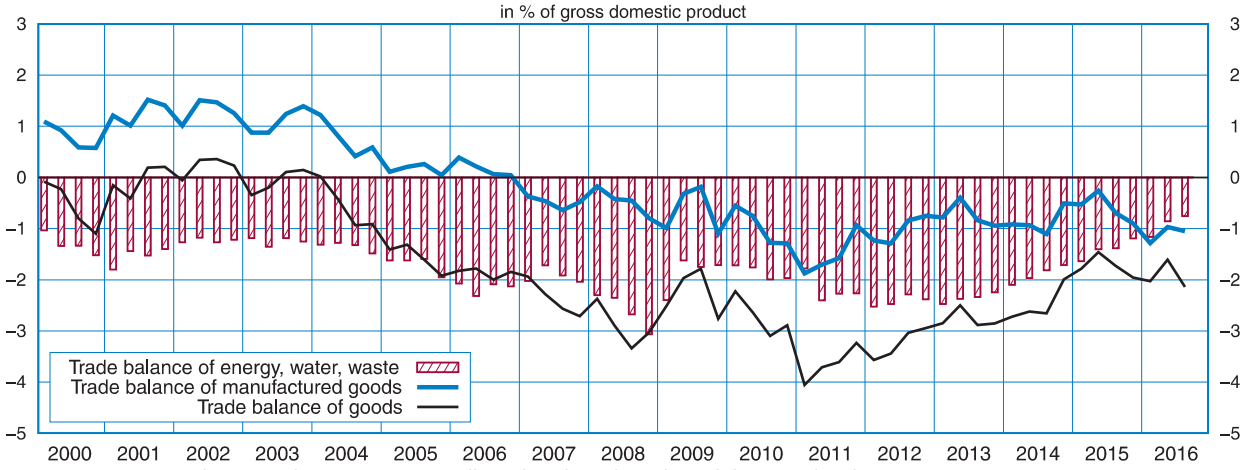
The advanced countries have lost market share, especially to emerging Asia

Between 2000 and 2015, the export market share of the advanced economies fell back from 69.2% to 54.9%, in favour of the emerging economies, especially those in Asia (*Graph 3*; see *Appendix 1* for the perimeter definitions). Consequently, if French exports had behaved in the same way as the exports of the advanced economies as a whole, then market share would have dropped from 5.1% in 2000 to 4.0% in 2015. In other words, the loss of market share experienced by France is due in part to the catch-up by the emerging economies and the strong growth in their exports.

Between 2000 and 2015, the emerging economies did indeed gradually become part of the global economic fabric. China in particular has steadily gained market share since joining the World Trade Organisation (WTO) at the end of 2001: in 2015, its exports represented 13.8% of global exports, around 3.5 times more than in 2000 (3.9%). The enlargement of the European Union in 2004 to include the Central and Eastern European Countries (CEEC) also contributed to this overall trend. Elsewhere in the world, free trade zones were created or extended: the Free Trade Area (AFTA) for the Association of South East

1 - Trade balance of France

in % of gross domestic product



Source: INSEE, Quarterly National Accounts, seasonally and working day adjusted data in value, base 2010

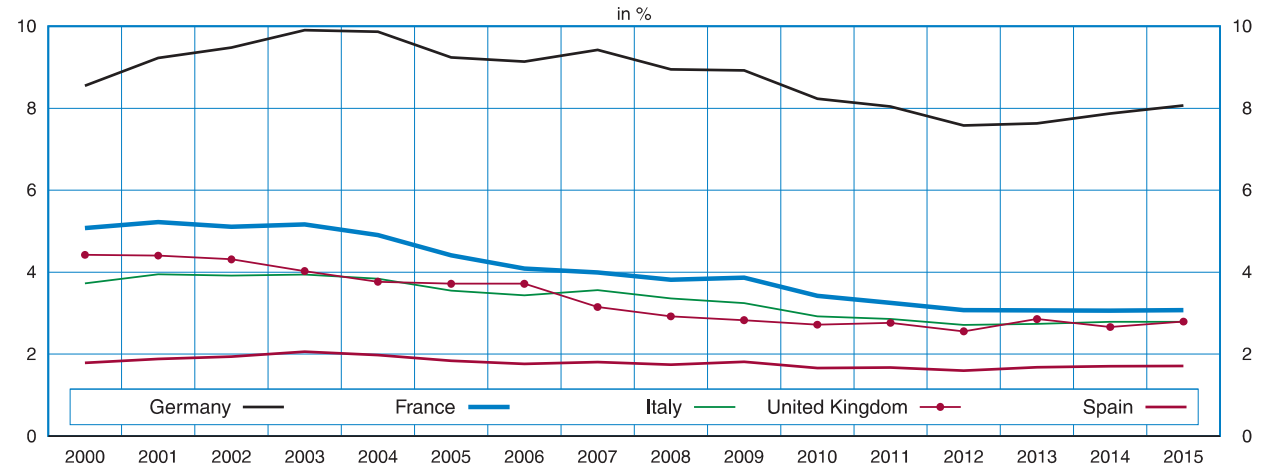
Asian Nations (ASEAN) came into force in 2003, and a succession of enlargements of MERCOSUR in the 2000s. All in all, the emerging economies increased their market shares of world trade significantly, from 30.8% in 2000 to around 45.1% in 2015.

The decline in France's market share is due to a poorer export performance rather than to the geographic orientation of its sales

France lost more than the other Eurozone countries

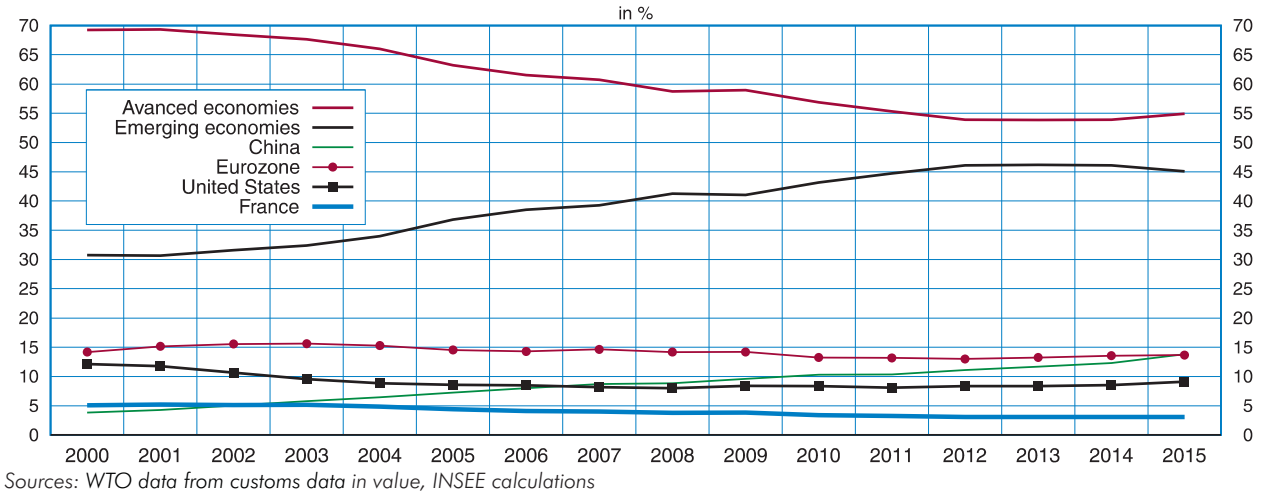
France lost more market share from 2000 to 2015 (–2.0 points) than other advanced economies. Among the major European exporters, only the United Kingdom made losses on a similar scale (–1.6 points), while the market share of French exports declined far more than that of Italian (–1.0 point), German (–0.5 points) or Spanish (–0.1 points) exports. In fact, the other major Eurozone countries currently have a trade surplus.

2 - World export market share of goods by value for the main EU members



Source: WTO data from customs data in value

3 - World export market share of goods by value



Sources: WTO data from customs data in value, INSEE calculations

Why have French exporters lost market share?

France lost share in each of the major markets

If the world is divided into three main markets (Eurozone, EU countries outside the Eurozone, the rest of the world), French exports to these markets all made a negative contribution to the overall decline of 2.0 percentage points of global market share (*Table 1* and *Appendix 2*). France lost market share in each of these markets, with fairly similar contributions: –0.6 points for the Eurozone, –0.4 points for the rest of the EU and –0.6 points for the rest of the world, or a cumulative contribution of 1.6 points. In addition, France suffers from an unfavourable geographic orientation (which contributed –0.4 points in all) since the market towards which it naturally exports the most, the Eurozone, is also the least dynamic. Additionally, the dynamism effect of trade with third countries does not make up for the loss of market share in these destinations - which means that even the contribution of this market is negative overall (–0.3 points).

In comparison, exports by Germany, Spain and Italy to these third countries were not contributing factors to the decline in their respective global market shares. For Germany, the opening up of the Central and Eastern European countries probably benefitted its exporters more than French exporters.

More generally, German exports gained some share and Spanish exports kept their share in each of these markets. For Germany and Spain, the overall downturn was simply the result of a structural effect, the reduced weight of the European market in world trade. As with French exports, Italian exports lost market share in each of the major markets, but in a less pronounced manner, so that their total loss since 2000 is half that of France.

Compared with other Eurozone members, France's exports lost share in all markets

At a more detailed level, French exports have lost market share relative to the other Eurozone Member States in each of the geographic areas since 2000 (*Graph 4*), but these losses have not been uniform. In fifteen years, French exports have been more resilient in Asia (–1.2 points since 2000) than in the Eurozone (–3.0 points); the decline has been even greater in the rest of the European Union (–5.1 points) or the North American market (NAFTA, –4.5 points). Market share in the OPEC countries was unusual in that it fell sharply in 2012, against a backdrop of sanctions against Iran.

Market share dropped mainly between 2000 and 2010

Like the balance of trade, market share declined above all from 2000 to 2010, for France and for its main European partners (*Table 2*). Since then, market share has stabilised, or almost stabilised, for Germany, Spain and Italy; for France, losses have diminished.

Table 1 - Changes in export market share, contributions by geographic destination zone

in points

from 2000 to 2015	France	Germany	Italy	Spain
Contribution to the Eurozone	**–1.4**	**–1.2**	**–0.9**	**–0.4**
of which effect of change in market share in the zone	–0.6	0.1	–0.2	0.1
of which effect of change in weight of the zone in world trade	–0.8	–1.3	–0.6	–0.5
Contribution to non-eurozone countries in the European Union	**–0.4**	**0.1**	**–0.1**	**0.0**
of which effect of change in market share in the zone	–0.4	0.2	–0.1	0.0
of which effect of change in weight of the zone in world trade	0.0	–0.1	0.0	0.0
Contribution to other countries	**–0.3**	**0.6**	**0.0**	**0.3**
of which effect of change in market share in the zone	–0.6	0.2	–0.3	0.1
of which effect of change in weight of the zone in world trade	0.3	0.4	0.3	0.3
Total loss of market share	**–2.0**	**–0.5**	**–1.0**	**–0.1**

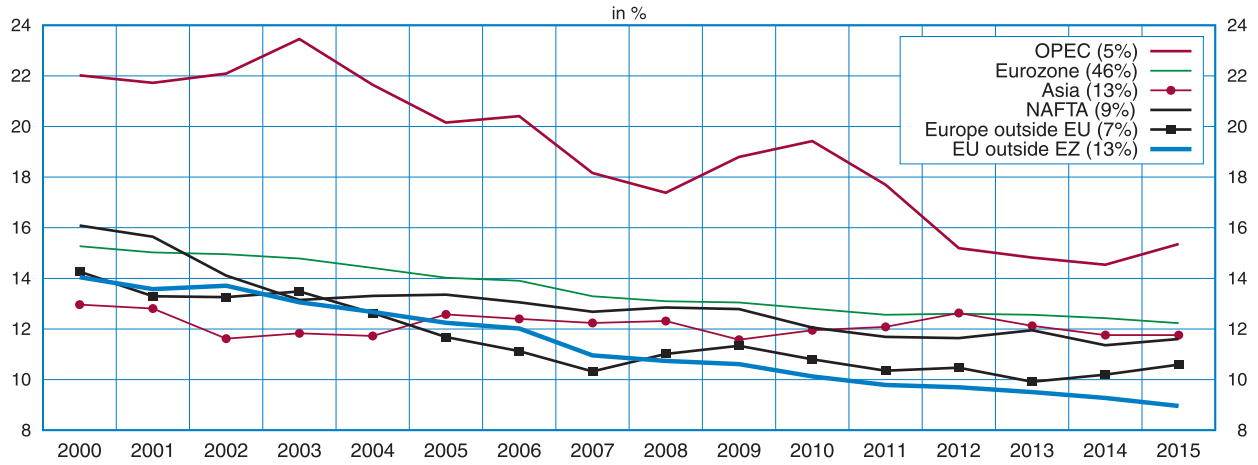
How to read the graph: between 2000 and 2015, French exports lost 2.0 points of world market share, with sales in the Eurozone accounting for –1.4 points; this contribution can be broken down on the one hand into an effect related to loss of market share in the zone and on the other hand a structural effect due to the fact that the Eurozone lost some of its weight in world trade (*Appendix 2*).

Sources: WTO data from customs data, INSEE calculations

The decline in market share for French exports is concentrated on certain products

UNCTAD data (*Appendix 1*), which are available over a shorter period, can specify in which products the decline is concentrated: from 2001 to 2014, the 1.7 point fall in market share of French exports was due mainly to vehicles and parts and accessories thereof (contribution of –0.4 points to the total loss), electrical machinery and equipment (–0.3 points) and nuclear reactors, boilers, machinery, appliances and mechanical equipment (–0.3 points). These three items from the manufacturing industry accounted for 40% of French exports but also for almost two thirds of overall market share loss between 2001 and 2014 (*Table 3*).

4 - Market share of French exports in relation to the rest of the Eurozone according to destination



Note: the market share of a group of countries is defined here as the ratio of French exports of goods to these countries to total imports of goods by these countries from the Eurozone.
How to read the graph: in 2000, France's export market share in the OPEC countries' market in relation to the Eurozone was 22.0%; it dropped to 15.4% in 2015.
Source: WTO data from customs data

Table 2 - Changes in export market share by sub-period

in points

	France	Germany	Italy	Spain
2000 to 2010	–1.7	–0.4	–0.9	–0.1
2010 to 2015	–0.3	–0.1	–0.1	0.0
2000 to 2015	**–2.0**	**–0.5**	**–1.0**	**–0.1**

Sources: WTO data from customs data, INSEE calculations

Table 3 - Changes in export market share by product from 2001 to 2014

in points

Change in share of French exports in the World	**–1.7**
of which main negative contributions (<–0.1 points)	
Motor vehicles (13% of French exports in 2001)	–0.4
Electrical machinery and equipment (12% in 2001)	–0.3
Nuclear reactors, boilers, machinery and mechanical appliances (13% in 2001)	–0.3
Organic chemical products (3% in 2001)	–0.1
Paper and paperboard (2% in 2001)	–0.1
of which main positive contributions (>+0.1 points)	
Aircraft and spacecraft (6% in 2001)	0.1

Sources: CNUCED data from customs data, INSEE calculations

Why have French exporters lost market share?

Box 1 - The specific features of trade in services

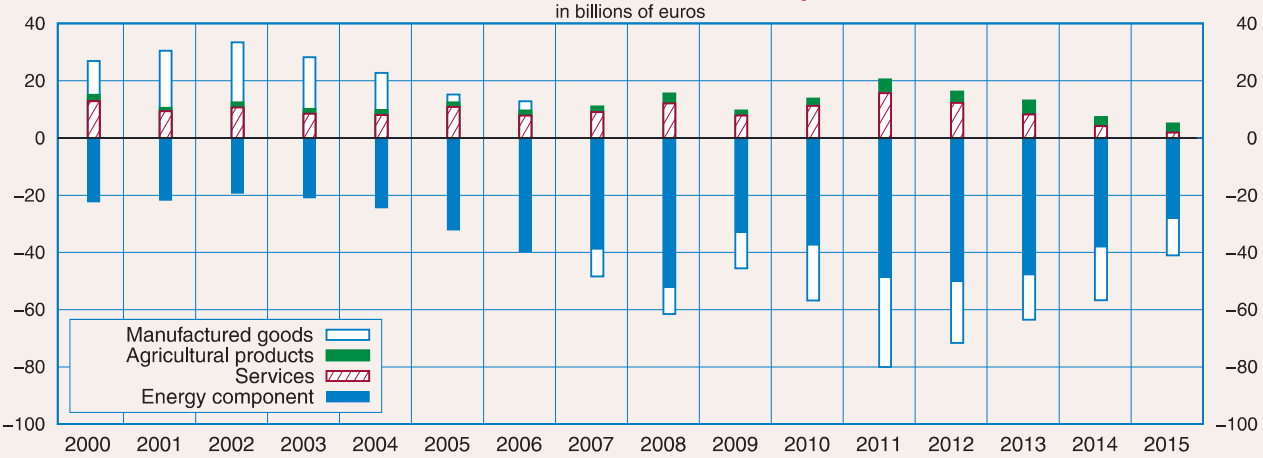
The scope of products under consideration is limited only to goods

The scope of traded products considered in this study is limited only to goods for international comparisons of market shares and only to manufactured goods for estimates of export performance and econometric models. In 2015, manufactured goods represented 69% of exports and 68% of imports, and were responsible for a large share of fluctuations in the overall balance of trade (*Graph 1*). Hydrocarbons and agricultural products do not fall within the scope, as the energy component is very closely linked to fluctuations in the price of oil and does not always respond to the same determinants as other goods. The same is true for agricultural products where the balance of trade shows a surplus but the determinants seem very specific as they are very much linked to climate conditions.

In addition, trade in services is not closely linked to the economic cycle and international comparisons of these types of trade are tenuous, hence trade in services has been excluded from the scope.

1 - Annual balance of trade, main component

in billions of euros



Source : INSEE, National Accounts, in value, base 2010

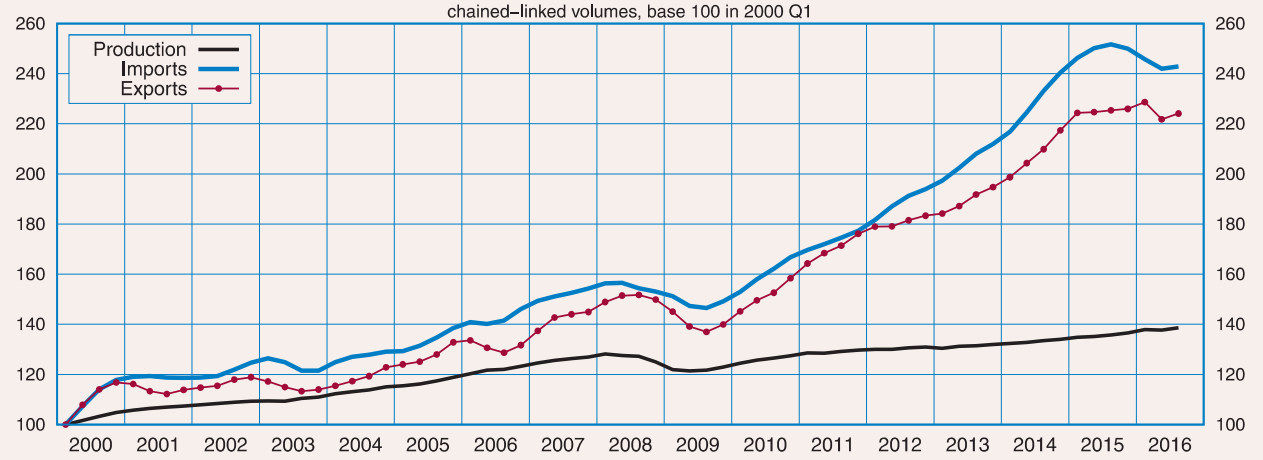
Growth in trade in services is not closely linked to the economic cycle

Trade in services measured in the French national accounts derives mainly from balance of payments data, produced by the Banque de France. This trade has increased very strongly over the last fifteen years: exports and imports of services by volume more than doubled between 2000 and 2015, while production of market services increased only 40% over the same period (*Graph 2*).

Above all, the 2008-2009 crisis marked an interruption: while exports increased on average 1.5 times faster than production from 2000 to 2009, they have increased almost 5 times faster since 2010. And finally their downward trend since 2015 does not seem to be echoed in the growth in activity of market services.

2 - Production, exports and imports of trade services

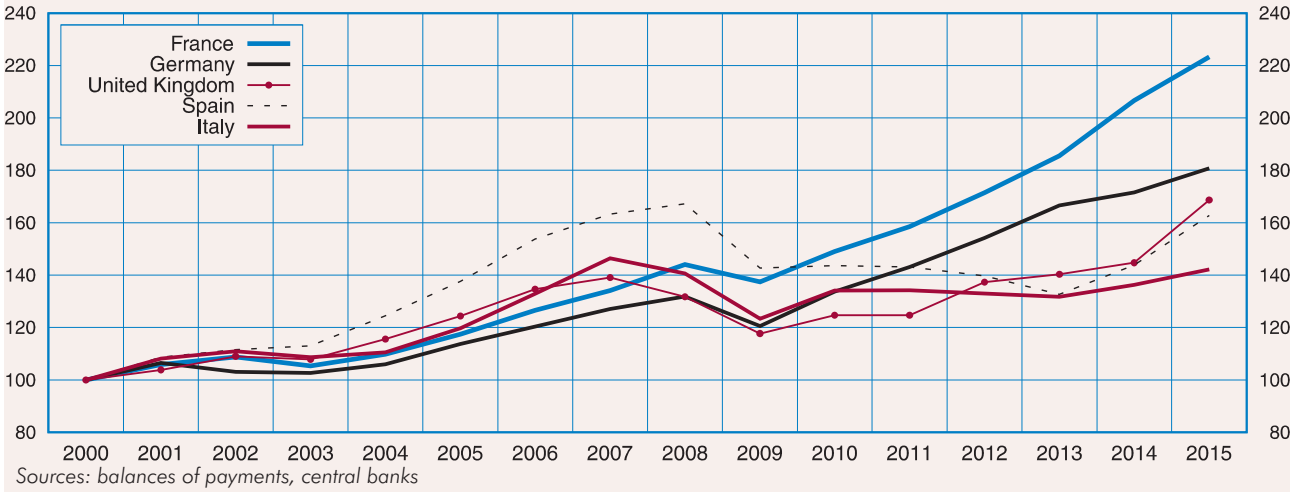
chained–linked volumes, base 100 in 2000 Q1



Source : INSEE, Quarterly National Accounts, base 2010

An international comparison of annual balance of payment data shows that German and British imports have also increased sharply since 2010 (*Graph 3*). ■

3 - Annual imports of services in the balance of payments for the main EU member states



Sources: balances of payments, central banks

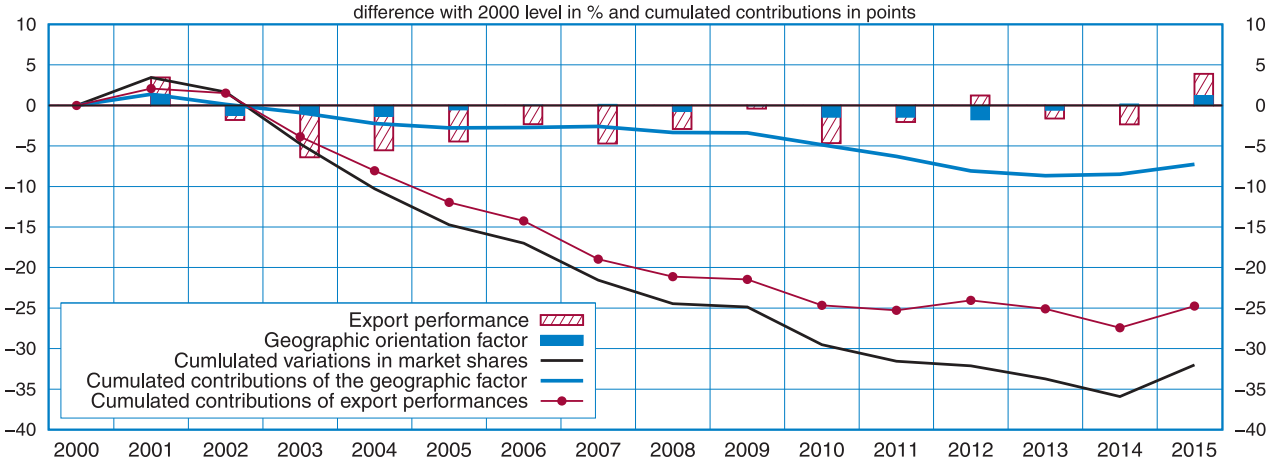
Declines in market share since 2010 are mainly due to a volume effect

The fall in market share of French exports by value between 2000 and 2015 reflects both fluctuations in volumes of trade and relative price variations. Market share of French exports in volume also declined substantially between 2000 and 2015, although a little more moderately than in value (*Appendix 2*).

The decline in market share by volume is more the result of poor export performance than poor geographic orientation

In the variation in French global market share by volume, there is a geographic orientation factor relating to exports (*Graph 5* and *Appendix 2*). This term is measured as the gap between variation in world demand for French goods (i.e. French exports if market share in each of the partners remained constant compared to the previous year) and variation in world trade. Export performance is the residual factor of change in market share by volume, once the effect of the geographic orientation of exports is removed.

5 - Change in market share in volume terms, contributions of export performance and geographic orientation



Scope: manufactured goods
Sources: INSEE, national quarterly accounts chain-linked volumes, base 2010, DG Trésor (world demand and world trade)

Why have French exporters lost market share?

From 2000 to 2010, poor export performances contributed significantly to France's substantial losses of market share, then became neutral overall until 2015. Geographic orientation, on the other hand, has contributed little to the drop in market share since 2000, although more markedly from 2010. This observation confirms both microeconomic analysis (Fontagné, Gaullier, 2009) and macroeconomic analysis (Bas *et al.*, 2015) according to which the geographic positioning of French exports barely accounts for the decline. To understand the losses of market share since 2000 means analysing the dynamics of export performance, adjusted for the effects of exchange rate, commodity prices and geographical orientation. Two sub-periods can be clearly distinguished: a dramatic fall in export performances from 2000 to 2010 (–25%), then near stabilisation from 2011 to 2015.

Since 2010, export performances have deteriorated more in the non-European market

Between 2000 and 2010, losses in performance were broadly parallel in the European market and outside the European Union. On the other hand, the modest improvement since 2010 is mainly due to a better performance on the European market, while the performance outside the EU continued to decline (*Graph 6*).

Equations for exports by zone to understand the drop in export performance since 2000

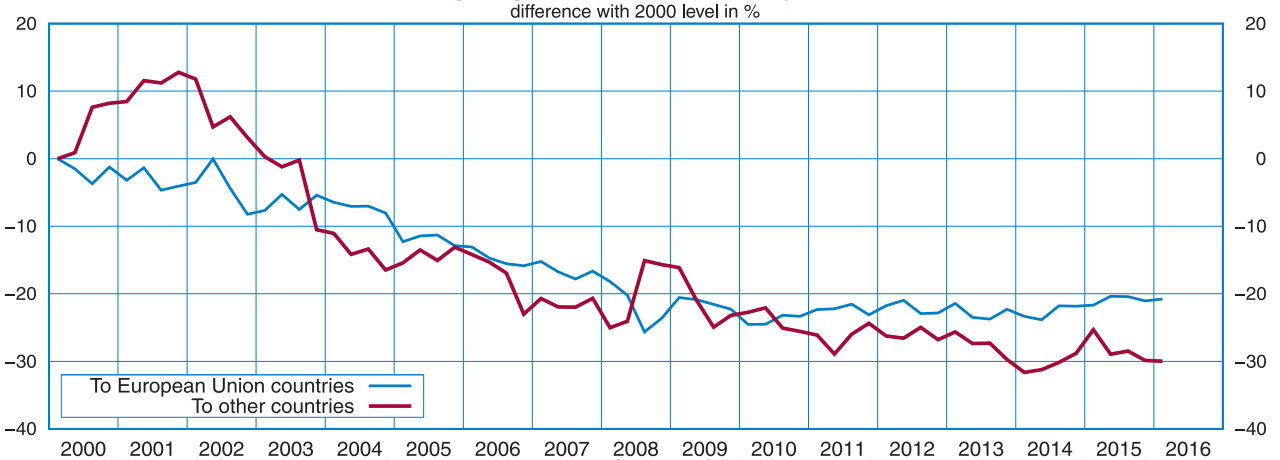
Models by major geographic zone to refine the diagnosis

The determinants commonly used to analyse and predict a country's exports in the short term are mainly world demand for that country's products and price competitiveness or cost competitiveness variables. Models also include events that alter the world balance of trade, like the upsurge of the emerging economies. While these events are common to all the markets concerned, they have not necessarily affected the different zones with the same intensity. To refine the diagnosis, two econometric models differentiate between export destinations (*Appendix 3*): on the one hand the European Union countries (around two thirds of France's total exports), and on the other hand the rest of the world.

After trimming their margins, French exporting companies have rebuilt them since 2010

A decrease in export prices means that the volume of exports can be increased or that new stakeholders can enter the export markets. France's price competitiveness is often measured by indicators that relate export prices to the prices of competitor countries in foreign markets. Variations in relative prices can then be broken down into exchange rate, relative costs (especially wage costs) and margin effort by enterprises. In the case of France, this breakdown highlights the existence of margin behaviour from 2000 to 2010: enterprises limited the effect of the appreciating Euro and the rise in costs on their selling price by

6 - French export performance according to destination



How to read the graph: between 2000 and 2015, French export performance fell back 21% on the European Union market and 29% against non-EU countries.
Scope: manufactured goods
Sources: INSEE, national quarterly accounts base 2010 (exports by area), DG Trésor (world demand and world trade)

trimming their margins; conversely, since 2015 they have tended to use the depreciation of the Euro, lower labour costs and the drop in commodity prices to build them up again (*Graph 7*).

Relative costs reflect companies' economic environment, more so than prices

The relative prices of exports only measure prices for companies that succeed in exporting. Relative costs, however, are a better reflection of companies' economic environment. On the one hand, in large global groups, the decision to establish a production chain does not depend on the final price, but rather on the economic environment, and especially on cost relative to productivity. On the other hand, for an exporting enterprise that has to adapt to market prices ("price taker"), any drop in price has to be endured, to the detriment of its margins if its costs do not come down to the same extent, or if productivity does not increase to offset it: any prolonged reduction in margins can harm its investment capacity, and hence its future competitiveness.

Depending on the product, prices or costs determine market share dynamics

Depending on the product, it tends to be relative prices, or rather relative costs, that mainly determine the dynamics of market share. The aeronautics market, for example, is dominated by two players, one American and the other European, which both manufacture most of their production on their own territory; it is therefore to be expected that their export performance depends primarily on relative prices, and especially currency fluctuations. Conversely, in the automotive industry, where firms are established in many countries and can more easily reallocate production, the relative costs of production are assumed to be better for determining place of manufacture and hence export performance.

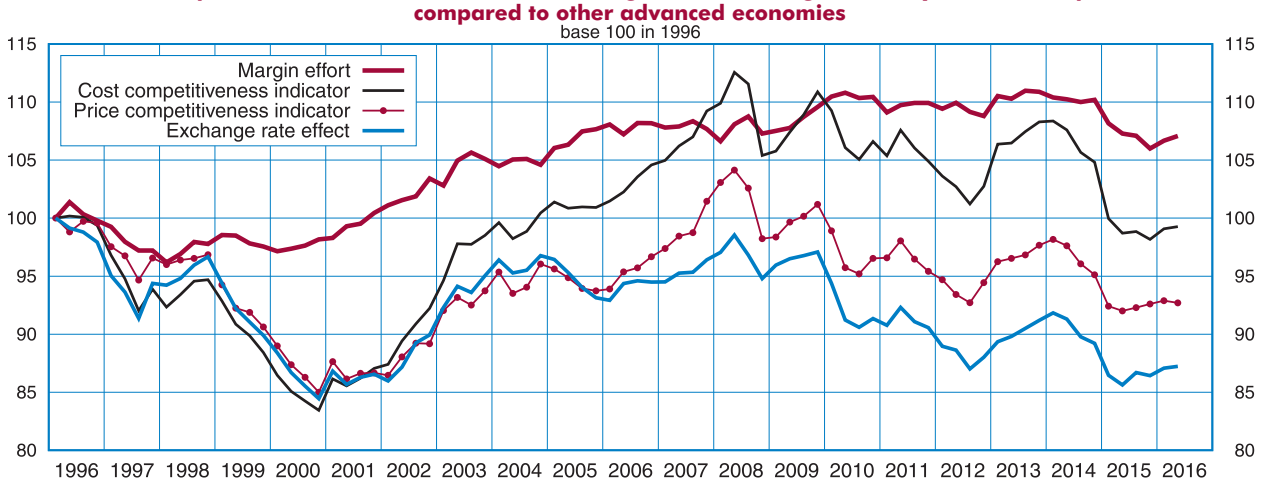
Several price competitiveness and cost competitiveness variables were tested

To differentiate these factors in the model, several variables were tested: the real effective exchange rate of the national currency (Franc, then Euro), relative export prices taken from different national accounts, unit wage costs relative to other advanced countries (or only to other Eurozone countries), and combinations of these variables.

In non-European markets, the most satisfactory model is the one that introduces only the exchange rate. In the EU market, on the other hand, a combination of two variables is preferred: first, the real effective exchange rate of the Euro, which reflects the intensity of competition from countries outside the Eurozone, and second, relative wage costs vis-à-vis countries in this zone.

As these are relative price indicators, the fragility of international data means that estimates with this variable are significantly less effective than those with the real effective exchange rate.

7 - Competitiveness indicators, effective exchange rate and margin effort by French enterprises compared to other advanced economies



Note: the effects of the CICE have been incorporated into the calculation of French wage costs.
How to read the graph: since 2014, the real effective exchange rate has decreased; the decline in the cost competitiveness indicator for French enterprises corresponds to this improvement; these two indicators contributed to an improvement in price competitiveness, although this was less substantial than that in cost competitiveness as enterprises reduced their margins less than before 2014.
Source: INSEE, national quarterly accounts base 2010, OECD

Why have French exporters lost market share?

The exchange rate can account to some extent for French market share losses between 2000 and 2010, especially in the non-European market

In the economic literature (Ducoudré and Heyer, 2014) French exports appear to be sensitive to fluctuations in the real effective exchange rate: median elasticity of exports to the REER comes out at around 0.6. In the models used here, elasticity appeared stronger towards the non-European Union markets (1.4) but weaker for goods coming into the European Union (0.3): in this market the real effective exchange rate contributes considerably less to changes in exports than in the model for the non-European Union countries since French exporters are for the most part in competition with Eurozone countries.

With the model selected for the non-European market, the exchange rate contributed –8 points to loss of market share between 2000 and 2010 (*Table 4* and *Graph 9*). Since then, the Euro has depreciated generally, with a favourable effect on market share (+9 points). In the European Union market, contributions were on a smaller scale: –1 point between 2000 and 2010, and +2 points thereafter.

Fluctuations in relative costs also partly account for the export performance profile

In addition to the exchange rate effect, fluctuations in relative costs vis-à-vis the other Eurozone countries also contributed to the marked deterioration in market share between 2000 and 2010 and then to the slight upturn. Over the first period wage costs in France increased more quickly than in the partner countries in the zone, contributing as much as –12 points to the deterioration in performance in this market. Since then, wages have increased substantially in Germany while in France several measures have been put in place to bring labour costs down: tax credit for encouraging competitiveness and jobs (CICE), the Responsibility and Solidarity Pact (PRS), and the hiring bonus as part of the emergency plan for employment. Thus wage costs have fallen relatively in France and the cost competitiveness indicator has improved. This improvement would have been even more marked if wage costs had not taken a sharp downturn in Spain. In the model, the variable has contributed +1 point to export performance on the European Union market since 2010.

Growth in the emerging economies accounted for the greatest share of performance losses between 2000 and 2015

The accounting contribution made by the growing share of emerging economies in world trade to the poorer French performance can be calculated by assuming a similar change in French performance to that in all the advanced economies. The share of the emerging countries by volume is measured by comparing exports by volume in the emerging economies with world trade (*Appendix 2*). The contribution of this variable is thus calculated beforehand, outside the model, taking into account the emerging economies' share of each market (54% outside the European Union and 24% inside in 2010 for a 44% share of world trade). In the European Union market, the contribution of competition from the emerging countries to French export performance is therefore –10 points (–7 points between 2000 and 2010, and –3 points since then). In the non-European market, the growth of the emerging economies accounted for –28 points between 2000 and 2015 (–24 points between 2000 and 2010, and –5 points since then) out of the total 29% loss.

Table 4 - Contributions to French export performance, according to period and destination

	2000-2015		2000-2010		2010-2015	
	non-European Union	European Union	non-European Union	European Union	non-European Union	European Union
Share of emerging countries	–28	–10	–24	–7	–5	–3
Real effective exchange rate of the Euro	2	1	–8	–1	9	2
Unit wage cost relatively to Eurozone		–11		–12		1
Residue	–3	–1	8	–3	–10	2
Total	**–29**	**–21**	**–24**	**–23**	**–6**	**2**

How to read the graph: between 2000 and 2010, French export performance declined by 24% on the non-European market; the econometric contribution of the emerging countries to world trade was –23 points, that of the Euro exchange rate –7 points.
Source: INSEE

Box 2 – Non-price competitiveness, the other component of competitiveness

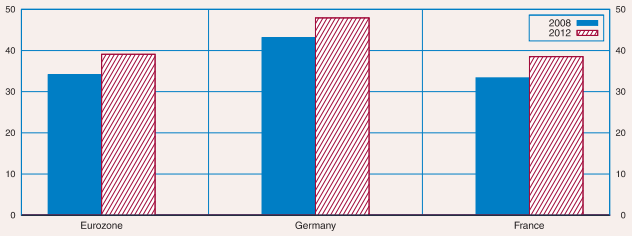
When considering variations in a country's exports, determinants other than world demand for products and prices are grouped together under the term "non-price competitiveness". The economic literature suggests many non-price competitiveness factors. First, the economic environment influences companies' ability to innovate and export. Among other things, the legislative environment, the weight of standards and also the protection of intellectual property can facilitate or, on the contrary, hinder the production or export process. Next, the characteristics of the good or the seller may also influence the purchasing decision: thus quality, range or the acquired or assumed reputation must be taken into consideration. This reputation can be improved through innovation and research and development, but also, for example, through the quality of after-sales service. In general, the confidence established with foreign importers over the long term is a favourable factor of export performance.

However, non-price competitiveness is a concept that is difficult to quantify, since it covers a multitude of distinct factors, influencing the purchase decision, and unrelated to price competitiveness. In addition, the impact on exports of an improvement in non-price competitiveness is probably more diffuse over time than that of a price variation.

However, several studies conclude that non-price competitiveness can be an important factor in differences in export performance. According to the European Commission (2010), price competitiveness accounted for less than 40% of the change in export performance by Eurozone countries over the period 1998-2008. Price elasticity varies according to the type, the range or the quality of goods exchanged, i.e. the quantities sold are affected to varying degrees by a price variation. Sautard *et al.* (2014) propose a method for classifying goods according to their price elasticity: high- and very high-technology goods (e.g. maritime, space or air navigation products) appear to be least sensitive to price variations, whereas goods such as furniture, textiles and plastic products are classified as being the most sensitive. Next they classify countries according to their market position for products that are sensitive to prices or for high-technology. France is one of the countries where exports are only moderately sensitive to prices. It is present both in the market for goods that are sensitive to prices, where price competitiveness is an important determinant, and in the high-technology and luxury product markets, where non-price factors predominate. As a result, France's median positioning puts its companies in competition over prices, for example with Spain, which has drastically reduced its labour costs in recent years, but also over non-price factors, with countries where exports are less price-sensitive, such as Switzerland, Japan or Germany in sectors where research effort and productive investment are essential. For Sautard *et al.* the deterioration in the French balance of trade during the 2000s appears to be largely attributable to products with a high price component, and France's good positioning in goods for which the quality component predominates has apparently not been enough to compensate for this decline.

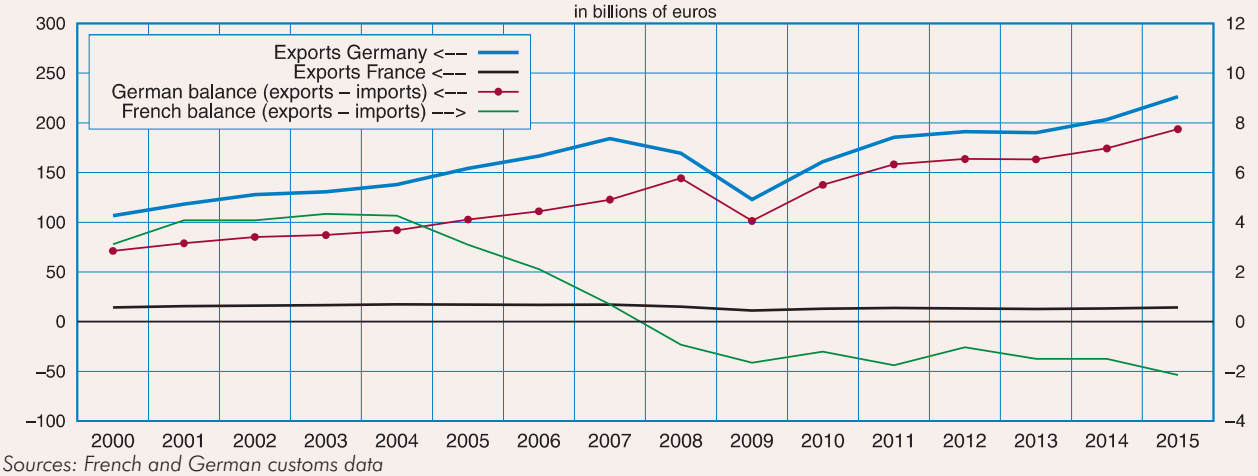
Ferrero *et al.* (2014) concluded that French industry was suffering from a deficit of non-price competitiveness, especially when set against its German counterpart whose better positioning contributed to a lower vulnerability during times when the Euro appreciated. The comparison of the automotive industry in France and Germany illustrates these differences in non-price competitiveness: while the hourly labour cost is higher in the German automotive industry than in its French competitors (*Graph 1*), German automobile exports were both very much higher and considerably more dynamic than French exports between 2000 and 2015 (*Graph 2*). In addition to differences in non-price competitiveness, factors other than the cost of labour in industry could have contributed, especially differences of dynamics in the cost of inputs. ■

1 - Hourly labour cost in the automotive industry



Sources: labour cost survey, INSEE, Destatis

2 - Motor vehicle exports (vehicles and equipment) in current Euros



Sources: French and German customs data

Why have French exporters lost market share?

The model gives a good account of the slight upturn in export performance on the European market since 2010...

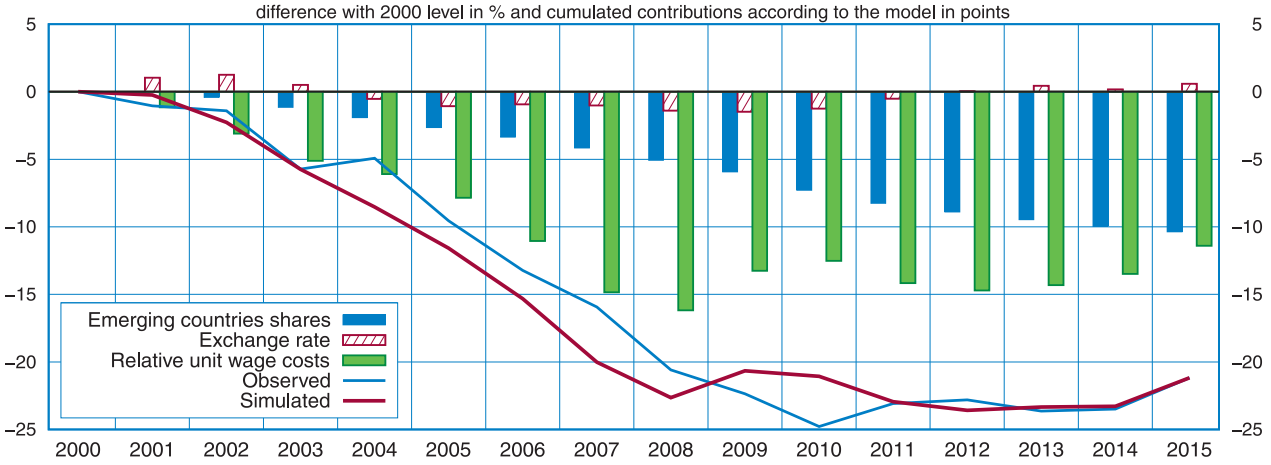
All in all, the model reflects the sharp drop in performance between 2000 and 2010 in the EU, and the slight upturn since then. While the share of the emerging countries continued to increase, albeit at a slower pace than between 2000 and 2010, the reason for this improvement is the slight decline in labour costs (compared with the other Eurozone countries) and the depreciation of the Euro (*Graph 8*).

...but not the further non-European deterioration

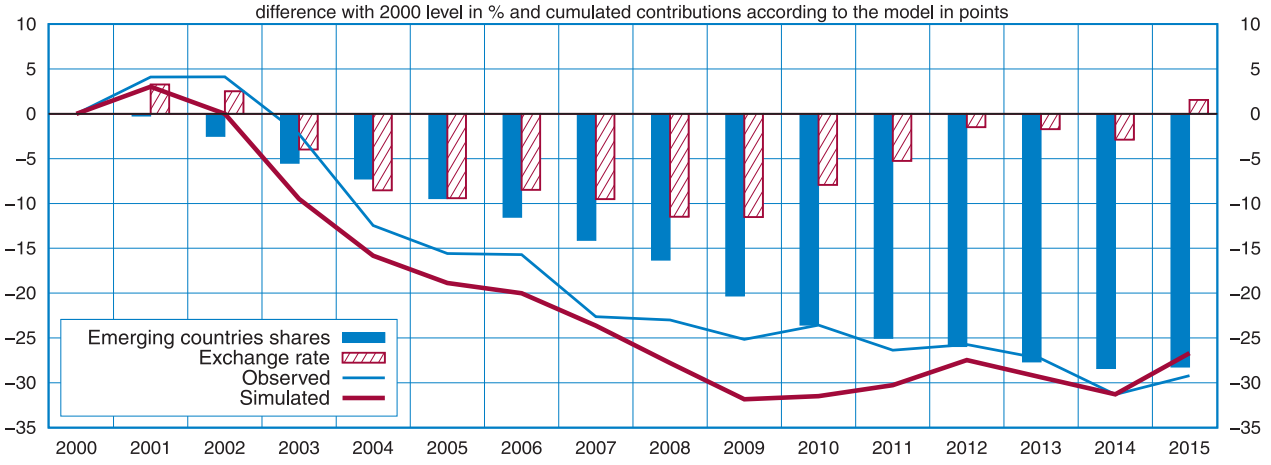
On the non-European markets, performance losses between 2000 and 2010 were the result of the powerful upswing in the emerging economies over this period. However, export performances have continued to deteriorate since then despite the favourable contribution from exchange rate depreciation (*Graph 9*). In addition to a possible loss of non-price competitiveness (*Box 2*), several additional explanations can be put forward. The weakness of aeronautical exports since 2014 has certainly had its effect: this is due both to problems in demand in the business aircraft and helicopter markets, and to problems with supply, especially with procurement. In addition, the introduction of sanctions against Iran in 2012 and Russia in 2015 could also have had an effect, as France previously held strong positions in the products affected by these embargos (*Focus* in *Conjoncture* in France, March 2016, p. 75-76).

8 and 9 - Export performance

European Union



non-European Union



Source: INSEE

Market share losses resulted in the fragmentation of production chains only marginally

Another factor behind the decline in French performance, which could not be used in the econometric simulation, is the growing fragmentation of production chains. The great buoyancy of world exports at the beginning of the 2000s has resulted in part, and in varying degrees in different countries, in an ever-growing fragmentation of production between countries. China's rise to power in world trade has been accompanied by a breakdown of value-added chains which has resulted in an increase in the trade flow content of each unit produced. Conversely, the slowdown in this form of production in recent years is a factor of the marked slowdown in world trade (CEPII, 2015).

The increase in exports for custom work may therefore be a factor, in accounting terms, behind the poor relative performance of French exporters since 2000. On the one hand, the growth in custom work has boosted trade flows in the emerging economies, thus increasing their share of world trade. On the other hand, this phenomenon has also increased in the Eurozone, but to varying degrees according to the country: thus the fragmentation of value chains has increased much more in Germany than in France, probably due to the different business strategies in these two countries. Broadly speaking, French carmakers have chosen to produce vehicles abroad directly, while the competing German brands import spare parts that were previously produced locally, and continue to assemble vehicles in Germany (Bechler et al., 2014 and Buigues and Lacoste, 2016); as a result, the German automotive industry imports a larger share of its intermediate consumptions; it generates more imports of spare parts and exports of vehicles but the value-added content of these exports has increased less rapidly than sales.

To appreciate to what extent this has an effect from a macroeconomic point of view, the domestic value-added content of exports of goods must be analysed. It appears that the French economy has been less involved in this process of fragmentation of production chains than the rest of the Eurozone (*Box 3*). Taking into account the domestic value-added content of exports of manufactured goods rather than exports directly, the decline in the export performance of French enterprises since 2000 compared to its Eurozone partners is a little less pronounced; however, this effect accounts for only a small part (around –3 points) of the overall decline (–22%).

Box 3 – The effect of the growing fragmentation of production chains on measuring export performance

Since the 1990s, world trade has seen the effects of the growing fragmentation of production chains: as highlighted by P. Krugman (1995), the outsourcing of production and the use of contract manufacturers abroad have resulted in a greater sharing of value added between several countries, and an additional increase in the openness of participating countries. This process has led to an increase in exports and imports, and may therefore have had an effect on export market share.

There have been several initiatives, notably at the OECD and the WTO, to better take into account the outsourcing of intermediate consumption production, i.e. to neutralise this process in trade flows. The concept of the value-added content of exports makes it possible to neutralise the effect of the growing integration of production chains in international comparisons, by excluding the import content from exports. Using this concept is generally neutral from the point of view of the current balance: if a country's imports increase by the same amount as the exports, then the current balance is unchanged.

One way of measuring this value-added content of exports is to use the international symmetric input-output tables produced by the OECD, based on data from the national accounts of the different member countries. No estimate can be made for the recent period, as data are only available for 1995, 2000, 2005 and 2008 to 2011.

Why have French exporters lost market share?

An alternative is to estimate the domestic value-added content of exports of manufactured goods using the following approximation:

$$\frac{VAX_i^{manuf}}{X_i^{manuf}} = \frac{VA_i^{manuf}}{Prod_i^{manuf}} + \left(1 - \frac{VA_i^{manuf}}{Prod_i^{manuf}}\right)\left(\frac{PIB_i}{PIB_i + M_i} + \frac{M_i}{PIB_i + M_i}\frac{VAX_i}{X_i}\left(\sum_j a_{ij}a_{ji}\frac{M_j}{PIB_j + M_j}\right)\right)$$

Where we denote:

$a_{ij} = \frac{M_{i \leftarrow i}}{M_i}$, the share of country i in the imports of country j;

$\frac{VAX_i}{X_i}$ the domestic value added content of all exports of country i;

M_i imports of country i;

X_i exports of country i.

In this formula, the first term includes the share of manufacturing value added in manufacturing production and the second reflects the domestic value-added content of intermediate consumptions in the manufacturing sector. The assumption is that the domestic value-added content of all resources is a good approximation of this second term. Local value added $\frac{PIB_i}{PIB_i + M_i}$ must be included for all resources, but also the domestic value added content of imports, $\frac{VAX_i}{X_i}\left(\sum_j a_{ij}a_{ji}\frac{M_j}{PIB_j + M_j}\right)$ i.e. the domestic value-added content of all exports multiplied by the content in French exports of imports from partner countries.

Using the same notations, the value-added content of all exports is expressed as follows: $\frac{VAX_i}{X_i} = \frac{PIB_i}{PIB_i + M_i - M_i(\sum_j a_{ij}a_{ji}\frac{M_j}{PIB_j + M_j})}$

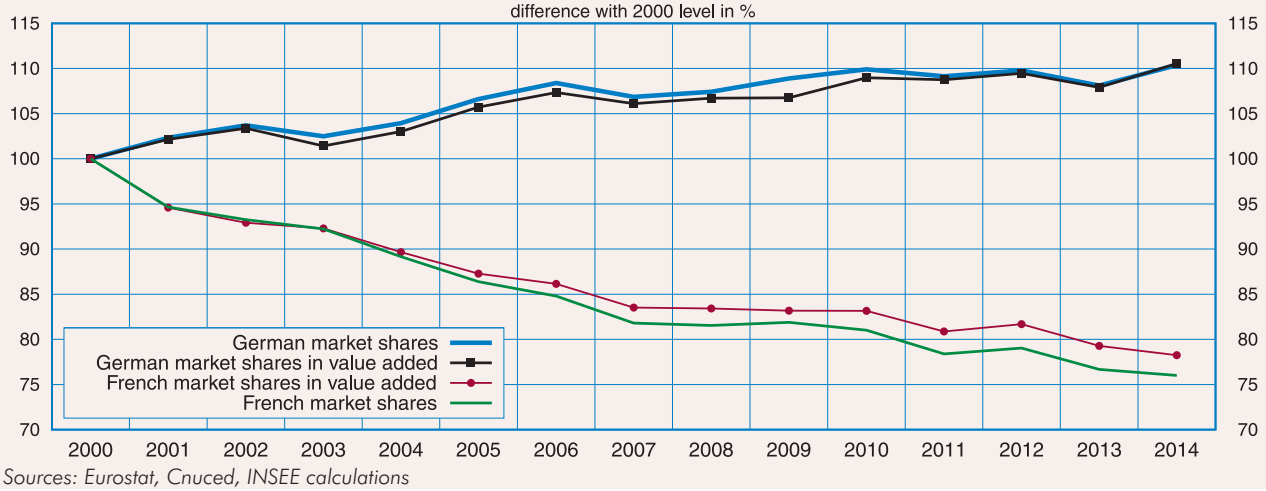
This measure complements the degree of openness, adjusted from the domestic value added which is exported then reimported after processing.

In this calculation, the import content of intermediate consumptions in the manufacturing sector is assumed to be the same as the import content of the whole economy, which is a strong assumption and not generally verified empirically in level form. However, the assumption that these two quantities evolve in parallel is much less strong. In practice, therefore, the change in a country's exports is compared with the value-added content of these exports. In addition, the exact calculation of the value-added content of manufacturing exports, based on the OECD's international input-output tables for the available years, gives a coherent result, along the lines of the approximation method presented in this Box, which supports the original assumption.

For each Eurozone country, change in market share vis-à-vis the zone is calculated in the accounting sense, but also their market share in value added.

From this it can be seen that France has participated in the fragmentation of value chains to a lesser extent than Germany (*Graph*), thus confirming the notion of the "Bazaar Economy" introduced by H. W. Sinn (2009): the increase in German exports led to more imports than was the case in France. On the other hand, the impact on the balance of trade of losses of market share to export was rather less than expected initially. All in all, considering the value-added content of manufacturing exports rather than exports directly, the decline in export performance by French enterprises since 2000 was less pronounced (–19%, against –22%); however, this effect explains only a small part of this decline (3 points). ■

Change in export market share in the Eurozone for France and Germany in the accounting sense and in value added



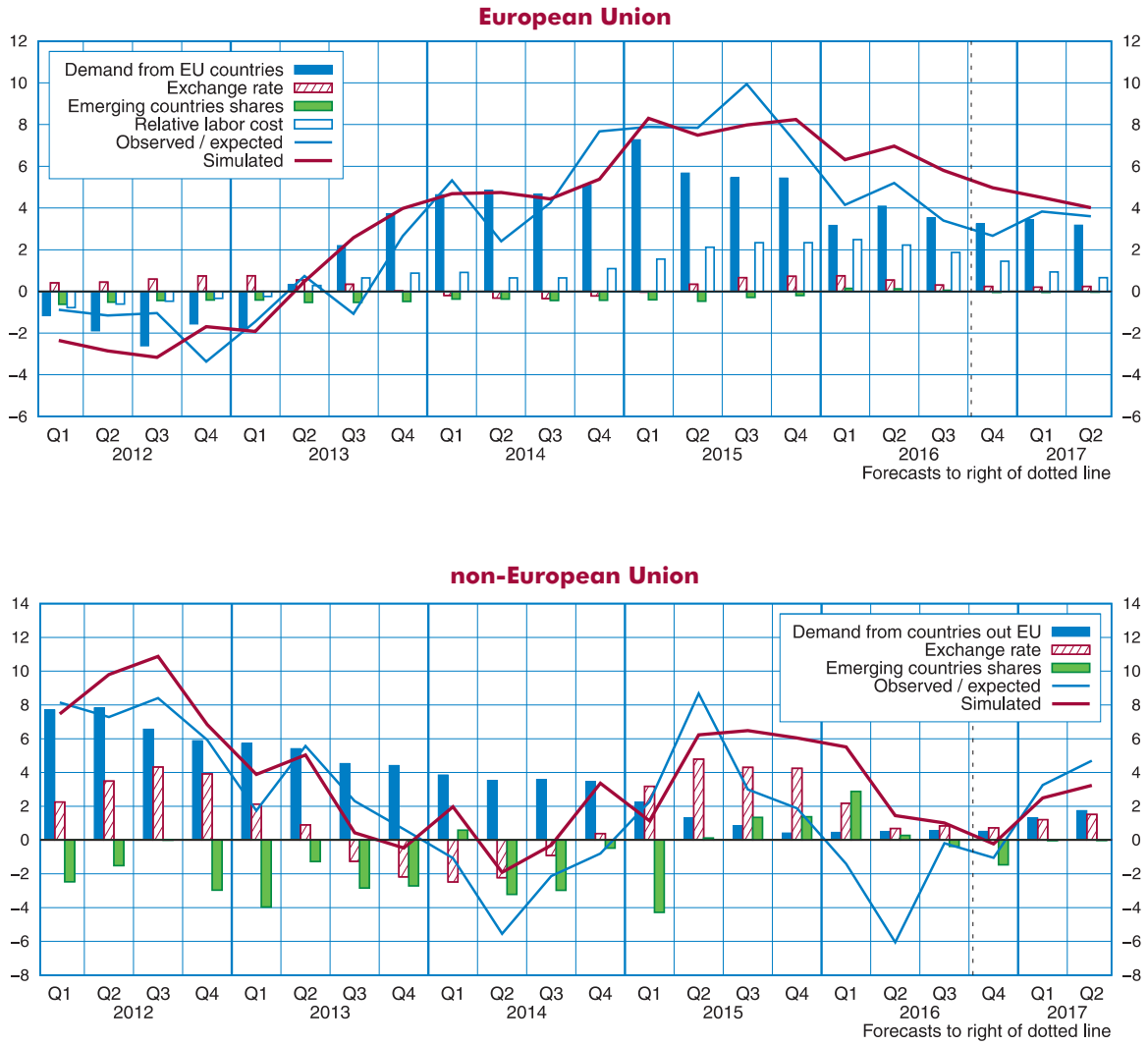
Sources: Eurostat, Cnuced, INSEE calculations

Why have French exporters lost market share?

By mid-2017 exports should resume their growth, especially towards the non-European market

By using models designed for each major geographic area, the forecasts made each quarter in *Conjoncture* in France can be refined. Indeed, the forecasts by country differentiate between demand from EU countries and demand from the rest of the world. EU demand for French products is likely to maintain its present buoyancy, around +4% per year. In addition, demand from the rest of the world looks set to accelerate sharply (*Graphs 10 and 11*). Lastly, the contributions made by exchange rates and labour costs should still be slightly favourable through to mid-2017. As a result, exports to the European market should remain sustained, and exports to the rest of the world are likely to bounce back substantially; this rebound should be boosted by large deliveries expected in the aeronautics and naval sector, even if this is simply catching up with delays in delivery from the beginning of 2016 (*Foreign trade* sheet and *Special analysis* "After two years of turbulence, the French aeronautical sector is ready to take off again" p.19). ■

10 and 11 - Manufacturing exports by zone (year-on-year change in %) and contributions by main economic determinants in points



Source: INSEE

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Appendix 1 – Sources used to calculate market share

For trade in goods, the two national sources used for this report are customs data and the national accounts (annual accounts at a detailed level; quarterly accounts at a more aggregated level). As customs data are the main source used by the national accounts for flows of goods and the concepts and scope are very similar, there is little difference in data in value terms between these two sources. The national accounts also provide data in volume terms at the previous year's chain-linked prices which neutralise any price fluctuations, by product and by major area (Eurozone, rest of the European Union, rest of the world).

To calculate world market shares and market shares by area, several international bodies collect national data, taken from national customs data or the national accounts. For this study, we used the customs database by value provided by the World Trade Organisation (WTO).

The United Nations Conference on Trade and Development (UNCTAD) collects much more detailed customs data over a shorter period, so that contributions can be calculated by product at a very detailed level. The classification used, the Harmonised Commodity Description and Coding System (HS 2012), is a multipurpose international product nomenclature developed by the World Customs Organisation (WCO). In its most detailed version it identifies around 5,000 products. In this report, the data used refer to the classification into 100 product groups.

Perimeter of groups of countries

In the "advanced" economies, according to the OECD definition, the following were used: Germany, Australia, Austria, Barbados, Belgium, Canada, Cyprus, South Korea, Denmark, Spain, Estonia, United States, Finland, France, Greece, Ireland, Israel, Italy, Japan, Liechtenstein, Luxembourg, Malta, Norway, New Zealand, Netherlands, Portugal, Czech Republic, United Kingdom, Singapore, Slovakia, Slovenia, Sweden, Switzerland.

All other countries are considered as "emerging", which is a much broader scope than that defined by the IMF, for example.

The gap between market share in terms of volume and values is stable

Market share in terms of value varies not only according to variations in the volumes traded, but also according to variations in the relative price of the goods sold. While the data available for world trade by value coincide relatively well, data on trade by volume are more divergent. Two sources, available for sub-annual periods and relating to goods, are usually used for *Conjoncture* in France: the Centraal Plan Bureau (CPB, a Dutch body which provides monthly data, based on customs data), and the French Treasury General-Directorate (quarterly estimates of trade in goods, using data from the national accounts).

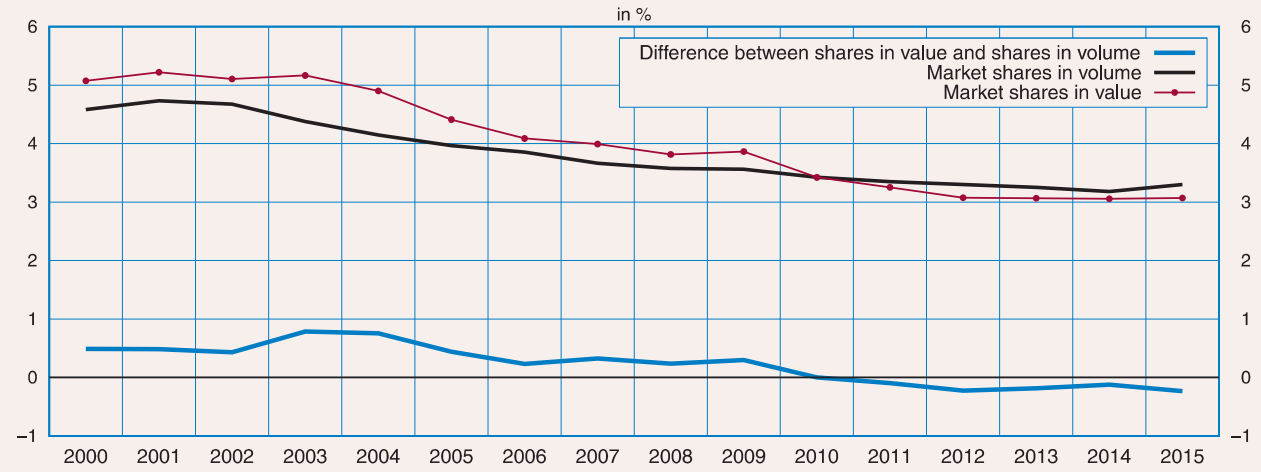
The CPB calculations are based on monthly customs data by value, deflated by price indices when supplied by statistical bodies or otherwise using unit values; they have the advantage of providing early data on a large number of countries, especially those where customs statistics exist but not the corresponding quarterly accounts. However, these calculations may give a different profile of world trade from that estimated from the national accounts. In particular, world trade in the CPB sense is slightly less dynamic over long periods than that calculated using the national accounts due to the deflators chosen (price indices for the national accounts and unit value indices for the CPB).

Since data for trade in goods by value were available for more countries, this justified the decision to make an international comparison of market share based on value, but the calculations for export performances and the econometric models for these exchanges are more relevant when applied to exports by volume.

In this report, France's market share by volume is calculated as the ratio of French manufacturing exports to world trade, as defined by the national accounts. For the period 2000-2015, the loss of market share was less strong in volume than in value due to a negative price effect.

Conversely, the market share of the emerging countries increased more in value than in volume in the 2000s, due to the rise in the price of commodities, of which these countries are overall exporters. In the model, the volume market share used for the emerging countries was calculated from the CPB data as the ratio of emerging economy exports by volume to world trade by volume, since the scope of the CPB was broader than the data from the national accounts of these countries. The volumes calculated by the CPB may differ slightly from those in the national accounts, but this ratio clearly reflects the distortion of trade in favour of the emerging countries as it neutralises the price effect, especially for commodities. ■

Market shares in value terms or in volume terms



Sources: DG Trésor for world imports by volume, INSEE for French exports and WTO for data by value

Appendix 2 – How to analyse and break down variations in market share

Breakdown into contributions by zone or product

Considering the case of the market share of a given country *k*, total market shares can be written in the form of a weighted average of market shares by zone:

$$ms_{total} = X_{k\to world} / X_{world}$$

$$= (X_{k\to EZ} / X_{world}) + (X_{k\to EUoutEZ} / X_{world}) + (X_{k\to ROW} / X_{world})$$

$$= (X_{k\to EZ} / X_{EZ}) * (X_{EZ} / X_{world}) + (X_{k\to EUoutEZ} / X_{EUoutEZ}) * (X_{EUoutEZ} / X_{world}) + (X_{k\to ROW} / X_{ROW}) * (X_{ROW} / X_{world})$$

$$= (ms_{EZ}) * (X_{EZ} / X_{world}) + (ms_{IntraEUoutEZ}) * (X_{EUoutEZ} / X_{world}) + (ms_{ROW}) * (X_{ROW} / X_{world})$$

Where:

- $X_{k\to i}$ represents the respective exports from country "*k*" to zone *i* (world, Eurozone only, EU outside Eurozone and rest of the world);

- X_{world} represents world trade (sum of imports or exports);

- X_{EZ} ($X_{EUoutEU}$, X_{ROW} respectively) represents the Eurozone market (EU outside the Eurozone and rest of the world respectively), i.e. the sum of all world exports to the Eurozone (EU outside the Eurozone and rest of the world respectively);

- ms_i represents market share of country *k* in zone *i*.

To analyse variations in the market share of a given country and calculate contributions according to the receiving country, the approach proposed by J.-P. Berthier (2002) was selected. This consists of a breakdown of the difference between two means which verifies a certain number of properties.

Let $R_j = \Sigma\, a_{i,date\ j}$ x $r_{i,date\ j}$ be the mean on date *j* of elements $r_{i,date\ j}$ weighted by $a_{i,date\ j}$..

with, for the given dates *j* in {1,2}, $\Sigma\, a_{i,date\ j} = 1$

Between two dates, we have the difference $E = R_{date\ 2} - R_{date\ 1}$

In the breakdown, the contribution C_i of component *i* to this difference is calculated in the form:

$$C_i = a_{i,date\ 2}\,[r_{i,date\ 2} - R] - a_{i,date\ 1}\,[r_{i,date\ 1} - R]$$

$$\text{avec } R = \tfrac{1}{2} * [R_{date\ 1} + R_{date\ 2}]$$

Which can be rewritten in the following form:

$$C_i = \tfrac{1}{2} * (a_{i,date\ 1} + a_{i,date\ 2})\,(r_{i,date\ 2} - r_{i,date\ 1}) + (a_{i,date\ 2} - a_{i,date\ 1})\,[r_i - R]$$

with $r_i = \tfrac{1}{2} * [r_{i,date\ 1} + r_{i,date\ 2}]$

The first term represents the effect specific to the variation in element r_i between the two dates. The second term is a structural effect, and all the more important when the weight of element *i*, a_i has varied between the two dates.

J.-P. Berthier shows that this breakdown is the only solution that satisfies the following required properties:

(1) exhaustivity: $E = \Sigma\, C_i$

(2) symmetry: $C_i\,(r_i\,(a_{i,date\ 1}), r_i\,(a_{i,date\ 2})) = -\,C_i\,(ri\,(a_{i,date\ 2}), r_i\,(a_{i,date\ 1}))$

(3) internal aggregation: for all (*i,j,k*) if $R_i = R_j + R_k$ so $C_i = C_j + C_k$

(4) scale invariance: $C_i\,(c.\ r_i\,(a_{i,date\ 1}), c.\ r_i\,(a_{i,date\ 2})) = c.\ C_i\,(r_i\,(a_{i,date\ 1}), r_i\,(a_{i,date\ 2}))$

(5) invariance under translation: $C_i\,(r_i\,(a_{i,date\ 1}) + c\ ,\ r_i\,(a_{i,date\ 2}) + c\ ) = C_i\,(\ r_i\,(a_{i,date\ 1}), r_i\,(a_{i,date\ 2}))$

Using Berthier's approach, the difference between two dates of these market shares can be broken down, with: a_i = share of zone i in world trade and $r_i = ms_i$, market share of country k in zone i, and finally R = total market share of country k.

The contribution of zone i to variation in market share between two dates (2000 and 2015) can then be written as the sum of:

- a "principal term" $1/2(a_{i,2015} + a_{i,2000})*(r_{i,2015} - r_{i,2000})$, which is interpreted as the contribution of the variation in market share in zone "i" between the two dates;

- a "structural term" $(a_{i,2015} - a_{i,2000})*(r_i - R)$, which represents the effect of the variations in weight of zone "i" in world trade; it is larger the more the average market share in this zone differs from the market share overall.

Breaking down the data in this way makes it clear why German exports, despite gaining market share in each of the major zones, declined overall between 2000 and 2015 (*Table 1*): the structural effect prevails, in other words, in fifteen years, the weight of the Eurozone, where Germany has some of the highest market shares, decreased in terms of world trade.

This breakdown is applied according to zones receiving exports, but it can also be applied in the same way to an analysis by product (*Table 1*).

Distinction between geographic orientation and export performance in changing market share

To distinguish a geographic orientation factor from a performance factor in variations in a country's market share, a breakdown of market share by volume can be used (*Graph 5*). We can then write:

$$ms = X_{k\rightarrow world} / X_{world}$$

$$= (X_{k\rightarrow world} / WD) * (WD / X_{world})$$

Where:

- as before ms are the market shares of country k, X_{world} is world trade (sum of imports or exports), and $X_{k\rightarrow world}$ the country's total exports;
- WD is world demand for French products, which measures what exports would be if the market share of each of its partners remained constant compared to the previous year.

As a result, a change in market shares between two dates can be broken down to a first order equation as:

$$evol\ (ms) = evol\ (X_{k\rightarrow world}/WD) + evol\ (WD/X_{world})$$

The first term is interpreted as change in export performance; change in (WD / X_{world}) is interpreted as a positive (or negative respectively) geographic orientation factor if the import dynamics of countries importing French goods are greater (or less respectively) than those of world trade. ■

Appendix 3 – Estimating equations for export by zone

Using econometric modelling, the main determinants of French exports of manufactured products can be identified, and from this, French export performances. The originality of the approach presented here is that it models exports to the European Union and those to the rest of the world separately. The impact of cost competitiveness can in fact differ in these two markets with their distinct characteristics; taking these into account gives a better understanding of French export performance.

The method chosen was that of the error correction model where it is easy to identify contributions from the various explanatory factors: demand for French products; price competitiveness or cost competitiveness variables; the contribution made by the increase in market shares of the emerging economies is calculated beforehand, outside the model. Equations are estimated in one step and the restoring force is significantly negative in the sense of the Ericsson MacKinnon test (2002).
The construction of the explanatory variables is described below.

Demand for French products

The demand for French products from the European Union is calculated in the same way as traditional world demand (see *Appendix 2*), but limited to EU member countries. Similarly, demand for French products from countries outside the EU is calculated as world demand limited to third countries. Usually (Armington, 1969), the coefficient for the demand under consideration is limited to 1 in the long-term equation. Thus the long-term relationship accounts for export performance more than the exports themselves.

Why have French exporters lost market share?

Market shares of the emerging economies

To take account of the upswing in world trade in the emerging economies, and China in particular since it joined the WTO in 2001, the export market shares of the emerging economies are used in the model. They are calculated as the ratio of the volume of exports by emerging countries to world trade by volume, with both aggregates supplied by the Centraal Plan Bureau (see *Appendix 1*). This variable gives the decline in export market share for all the advanced economies. The contribution is calculated outside the model, with the assumption that France's share in exports by the advanced economies is constant. In the long-run model this amounts to indexing French exports to demand for the products of the advanced economies as a whole.

Real effective exchange rate

The real effective exchange rate is calculated as the product of the exchange rates with the partner countries weighted by the weights of the respective exchange rates on total foreign trade, or $TCER = TCEN \; x \; IPR$, with:

$TCEN = \prod_{i}^{n} (e_i)^{xi}$; $n=42$, nominal effective exchange rate where $\{e_i\}$ is the bilateral exchange rate between the country's national currency and foreign currency (i) and xi is the weight of country (i) in the weighting system. And:

$IPR = \prod_{i=1}^{n} (IP_R / IP_i)^{xi}$; with IP_R the price index of the reference country and IP_i the price index of country (i).

To obtain the TCER, the TCEN is deflated by the consumer prices in these countries. Thus an increase in TCER corresponds to a deterioration in export price competitiveness.

Relative unit wage cost (vis-à-vis the Eurozone)

For a given country, the unit wage cost is calculated here as the ratio of wage income by value (wage bill and associated contributions or taxes) to GDP by volume. It therefore reflects wage cost per unit of value added produced.

A cost competitiveness index is then calculated from the unit wage costs for France and its main Eurozone trading partners. This index is calculated in the same way as the real effective exchange rate, as a weighted geometric mean of relative wage costs. The weight given to each partner measures the competition that it exerts over each of France's export markets. It takes into account the importance of the market for France (measured by its weight in the context of exports) and the share of this market held by the competitor. This cost competitiveness indicator therefore compares the change in unit wage costs in France with that of its partners: it increases when unit wage costs increase more quickly in France than in its main trading partners (and hence when the cost competitiveness of French companies deteriorates).

This cost competitiveness indicator was calculated for the manufacturing sector alone and for the whole of the economy. The econometric model shows that the indicator for the economy as a whole accounts for French exports of manufacturing products better than the indicator for manufacturing alone. Manufacturing industry costs are not limited simply to paying wages: the price of intermediate consumptions also weighs heavily on the cost competitiveness of manufactured products. For example, a wage increase in the services to enterprises sector affects costs in the manufacturing sector indirectly. Thus even if wages increased less rapidly in the exposed sectors, the wage increase in the protected sectors still influenced the cost competitiveness of exporting enterprises (Sy, 2014).

Modelling exports to the European Union

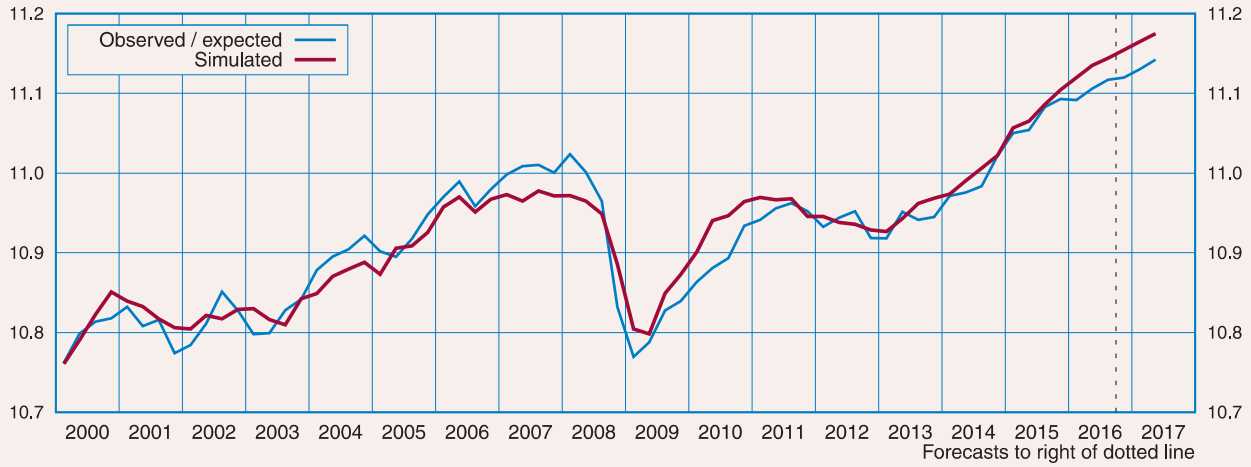
$$\Delta(\log(X_t^{FR\rightarrow UE})) = \underset{(2.1)}{0.65} - \underset{(-3.3)}{0.23}\left[\log(X_{t-1}^{FR\rightarrow UE}) - \log(D_{t-1}^{FR\leftarrow UE}) + \log(1 - Part_{t-1}^{émergents}) + 2.9\log(CSU\_ZE_{t-1}) + 0.27\log(TCER_{t-1})\right] + \underset{(8.4)}{1.0}\,\Delta(\log(D_t^{FR\leftarrow UE}))$$

Where:

- $X_t^{FR\rightarrow UE}$ denote French exports to the European Union;
- $D_t^{FR\leftarrow UE}$ world demand for European Union products;
- CSU_ZE_t relative unit wage costs;
- $TCER_t$ real effective exchange rate;
- $Part_t^{émergents}$: market share of the emerging economies in world trade.

Student statistics for the coefficients are given in brackets below the coefficients.

$R^2 = 0.58$ and standard deviation of the residuals $= 0.019$ – Estimation period: 1997 to 2013



Modelling exports to non-EU countries

$$\Delta(\log(X_t^{FR\rightarrow horsUE})) = \underset{(4.2)}{2.0} - \underset{(-4.0)}{0.28}\left[\log(X_{t-1}^{FR\rightarrow horsUE}) - \log(D_{t-1}^{FR\leftarrow horsUE}) + \log(1 - Part_{t-1}^{émergents}) + 1.4\log(TCER_{t-1})\right]$$
$$+ \underset{(4.2)}{0.51}\Delta(\log(D_t^{FR\leftarrow horsUE})) + \underset{(3.2)}{0.51}\Delta(\log(1 - Part_t^{émergents})) - \underset{(-2.5)}{0.54}\Delta(\log(TCER_t))$$

Where:

- $X_t^{FR\rightarrow horsUE}$ designate French exports to non-EU countries;

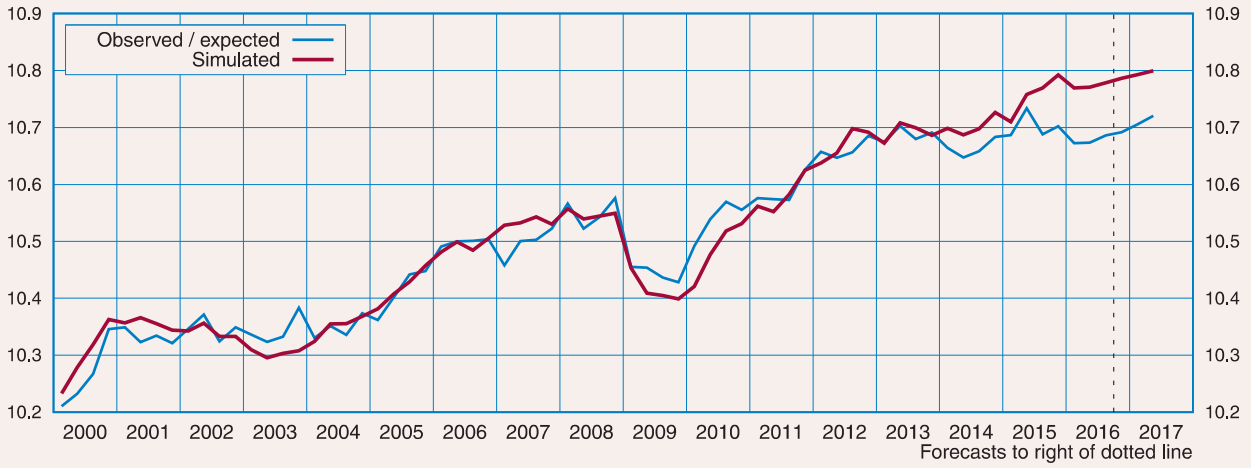
- $D_t^{FR\leftarrow horsUE}$ world demand for non-EU products;

- $TCER_t$: real effective exchange rate;

- $Part_t^{émergents}$: market share of the emerging economies in world trade.

Student statistics for the coefficients are given in brackets below the coefficients.

$R^2 = 0.54$ and standard deviation of the residuals $= 0.023$ – Estimation period: 1996 to 2013



French developments

Review of the previous forecast

In Q3 2016, gross domestic product (GDP) progressed as expected in the Conjoncture in France of October 2016 (+0.2%). Domestic demand excluding inventories made a weak contribution to growth (+0.1 points): household consumption stagnated, almost as forecast (+0.1% forecast) and corporate investment showed a surprising fall (–0.4% against +0.1.%), while residential investment (+0.6% against +0.1%) and government investment (+1.1% against –1.3%) were more vigorous than forecast. Foreign trade made a more negative contribution (–0.6 points) to growth than expected (–0.2 points). Changes in inventory, on the other hand, contributed more (+0.7 points) than expected (+0.3 points). The growth forecast for Q4 remains unchanged from October's Conjoncture in France (+0.4%).
In Q3, market-sector employment was more dynamic than anticipated: +51,000 against a forecast of +32,000. At the same time, the unemployment rate in Metropolitan France stood at 9.7%, against an expected figure of 9.6%. In November 2016, headline inflation stood at +0.5% according to the provisional estimate, as forecast. The forecast for December has been revised slightly upwards (+0.7% against +0.6%).

In Q3, activity progressed as forecast

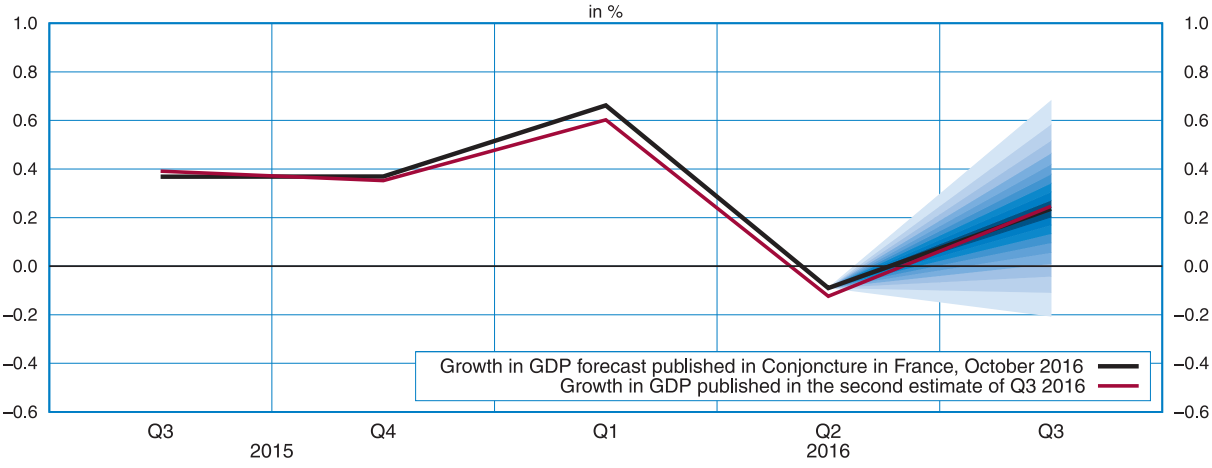
In Q3 2016, gross domestic product increased slightly, as expected in *Conjoncture* in France in October 2016 (+0.2% after –0.1%). Production increased a little more than forecast (+0.5% against +0.4%). It disappointed in manufacturing industry (+0.6% against an expected +1.0%), agriculture (–0.5% against +0.4%) and energy, waste and water (–2.5% against –0.7%). It was surprisingly high in construction, posting its strongest quarterly growth since mid-2013 (+1.0% against a forecast of –0.1%). Production of market-sector services (excluding trade) also increased more than expected (+0.9% against +0.5%).

Domestic demand make a weak contribution to growth, as forecast

The contribution to growth of domestic demand excluding inventory proved to be very weak (+0.1 points), as forecast. Household consumption stagnated, close to what was expected (0.1%): the slight difference stemmed mainly from consumption of manufactured goods (–0.1% against an expected +0.1%) and energy, waste and water (–3.4% against –2.8%). Consumption of market services, however, was almost in line with the forecast (+0.4% against +0.3%).

Household investment increased more than anticipated (+0.6% against +0.1%), with that difference coming mainly from a significant revision of the indicator on new housing which proved to be more dynamic in the past quarters. Government investment proved a surprise by

Fan chart for *Conjoncture* in France for October 2016 and growth achieved



Source: INSEE

accelerating (+1.1% against –1.3%), notably in civil engineering. On the other hand, total investment by non-financial enterprises disappointed slightly (–0.4% against +0.1%): their expenditure on manufactured products fell considerably more than expected and this was not completely offset by their purchases in construction and services, which were more buoyant than expected.

The foreign trade balance had a more negative impact than expected on activity (–0.6 points against –0.2 points). Imports were once again stronger than forecast (+2.5% against a forecast of +0.7%), both in goods (+3.4% against +1.3%) and in services (–0.6% against –1.2%). Exports also increased surprisingly, although much more moderately (+0.5% against +0.1%). Exports of goods were in line with the forecast (+0.5%): the better performance of exports of manufactured products offset a sharper-than-expected fall in sales of agricultural products, caused by this summer's poor harvests. Exports of services, meanwhile, showed a surprising rise (+0.4% against –1.0%), and changes in inventory made a stronger contribution to growth than expected (+0.7 points against +0.3 points).

The growth forecast for Q4 2016 remains unchanged

The growth forecast for Q4 2016 remains unchanged from that in October's *Conjoncture* in France (+0.4%).

In Q4, manufacturing output should grow less than forecast in October's *Conjoncture* in France (+0.1% against +0.4%). More specifically, production of the refining branch is likely to be hit by the progressive shutdown of the La Mède site for its conversion. The forecast for manufacturing value added has been lowered slightly (+0.3% against +0.4%).

Domestic demand should drive growth as forecast in October's *Conjoncture* in France (+0.5 points). The forecast of total household consumption is unchanged (+0.5%): it remains unchanged in manufactured goods (+0.6%), has been lowered slightly in services (+0.3% against +0.4%), and raised slightly in energy (+1.9% against 0.0%). The corporate investment forecast has been revised downwards slightly (+0.5% against +0.8%). However, the forecast for household investment has been revised upwards (+0.6% against +0.3%) while that for investment by general government remains unchanged (+0.3%).

Foreign trade should be neutral for activity, when a slightly negative contribution had been forecast in October's *Conjoncture* in France (–0.1 points). Imports should be less dynamic than expected (+0.2% against +1.0%), essentially due to imports of manufactured products. The downwards revision of exports is less marked (+0.3% against +0.8%). More specifically, energy, waste and water exports should contract sharply (–10.0% against +0.2%), and manufacturing exports should increase less than forecast in October's *Conjoncture* in France. On the other hand, the contribution of changes in inventory should be slightly negative (–0.1 points), whereas a neutral contribution had been forecast in October.

Market-sector employment was more dynamic than expected

In Q3 2016, market-sector employment was more dynamic than anticipated: +51,000 against a forecast of +32,000. This surprise was caused almost solely by temporary employment which was much more buoyant than expected (+30,000 against +12,000). At the same time, the unemployment rate in Metropolitan France increased slightly to 9.7%, when it had been forecast to be stable at 9.6% in October's scenario.

In Q4, employment should be a little less dynamic than initially anticipated in *Conjoncture* in France in October (+29,000 against +34,000). The unemployment rate should be 9.6% in Metropolitan France, against the forecast of 9.5% in October's *Conjoncture* in France.

The headline inflation forecast for December is almost unchanged

In November 2016, headline inflation stood at +0.5% according to the provisional estimate, as had been forecast. For the end of the year, the headline inflation forecast has been revised upwards slightly (+0.7% in December, against +0.6%), while core inflation should be a little lower than forecast in October (+0.5% against +0.6%), mainly due to automobile prices falling more than expected in the autumn. ■

Output

In Q3 2016, gross domestic product bounced back slightly, progressing by 0.2% after being almost flat in Q2 (–0.1%). Total production of goods and services showed a more significant upturn (+0.5% after –0.2%) in almost all branches of activity.

The business climate is stable this autumn, at a level above its long-term average. In November, it is above its average in industry and services, and is continuing to improve in the building industry.

Total production of goods and services should therefore increase by 0.4% in Q4 2016. Affected by refinery shutdowns, it should then weaken slightly in Q1 2017 (+0.3%) before progressing more strongly in Q2 (+0.5%).

Production of goods and services to progress moderately through to mid-2017

After falling back in Q2 2016 (–0.2%), total production of goods and services showed an upturn in Q3 (+0.5%), driven by greater dynamism in construction (+1.0% after –0.3%), market sector services excluding trade (+0.9% after –0.1%) and manufacturing industry (+0.6% after –1.0%; *Table*). Since mid-2015, the general business climate in France has remained slightly above its long-term average (102 in November; *Graph 1*). In November, business climates in industry and services are at higher-than-normal levels, while that in the building industry came closer to its normal level.

Total production of goods and services is likely to increase again in Q4 2016, at a similar rate to that in late 2015-early 2016 (+0.4%). It should weaken again slightly (+0.3%) due to a fall in manufacturing production in Q1 2017, before accelerating again in the spring (+0.5%). Activity in construction, trade and services should progress at a regular rate from the end of 2016 through to mid-2017.

On average in 2016, total production of goods and services should grow slightly more than in 2015 (+1.4% after +1.3%). With the rebound in construction, the agriculture branch is likely to be the only branch that is down in 2016, hit by the poor climate conditions in the spring (*Focus*). For 2017, the growth overhang in total production should be +1.2% by mid-year.

Manufacturing production almost stable at the end of 2016

After falling in Q2 2016 (–1.0%), manufacturing production showed an upturn in Q3 2016 (+0.6%). This rebound was driven mainly by coke and refined petroleum products (+13.6% after –12.8%) and "other manufacturing" (+0.7% after –0.4%), branches which had been hit by social movements in Q2. Production of transport equipment fell back, however (–3.2% after +1.4%).

Output by branch at the previous year's chain-linked prices

Q/Q-1 variations (as a %), SA-WDA data

	Quarterly changes										Annual changes		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agriculture (2%)	–1.3	–1.1	–0.8	–0.9	–1.0	–0.4	–0.5	1.3	2.6	1.9	–2.2	–2.6	4.8
Manufacturing industry (20%)	0.9	–0.2	0.4	0.7	0.1	–1.0	0.6	0.1	–0.2	0.7	1.5	0.3	0.5
Energy, water, waste (4%)	3.7	–1.8	1.3	–0.2	0.8	0.8	–2.5	0.0	0.3	0.2	1.8	0.2	–0.6
Construction (8%)	–0.5	–0.2	–0.7	0.6	0.4	–0.3	1.0	0.4	0.3	0.4	–2.2	0.8	1.4
Trade (10%)	1.1	0.4	0.7	0.5	1.2	–0.4	0.2	0.5	0.4	0.5	3.0	2.0	1.2
Market services excluding trade (41%)	0.5	0.1	0.5	0.7	0.9	–0.1	0.9	0.5	0.4	0.5	1.6	2.2	1.6
Non-market services (15%)	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	1.0	1.2	0.9
Total (100%)	**0.6**	**0.0**	**0.4**	**0.5**	**0.6**	**–0.2**	**0.5**	**0.4**	**0.3**	**0.5**	**1.3**	**1.4**	**1.2**

Forecast

Weights constructed from the annual production value in 2015.

Source: INSEE

French developments

In Q4 2016, manufacturing activity should be close to stable (+0.1%). In October, the quarterly growth overhang of the industrial production index (IPI) was clearly in negative territory. The business climate was favourable in industry, however, with balances of opinion on personal activity, in particular, being well above their long-term average. At sub-sector level, activity is set to rebound in transport equipment (+1.5% after –3.2%), with the sub-sector business climate being well above its long-term average. It should grow at the same rate as in Q3 in machinery and equipment (+0.6%), with the corresponding business climate returning to its long-term average. Activity should be almost stable in food products and beverages (+0.1%) and "other manufacturing" (+0.1%), with the related business climates being stable in November. However, the shutdown of one refinery in November held back manufacturing output as a whole: coke and refined petroleum production should slip by 3.4%, contributing –0.2 points to the change in manufacturing production.

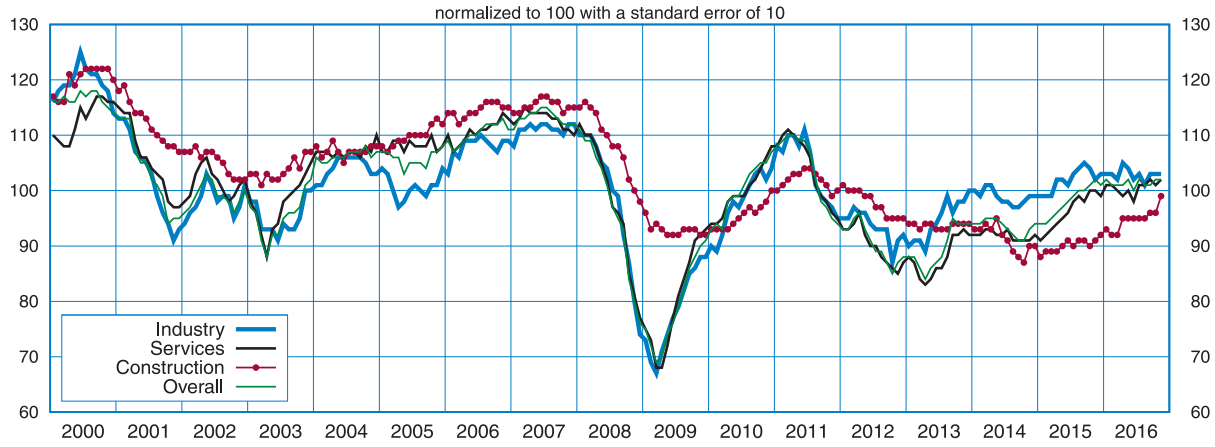
In H1 2017, the pace of activity in refineries should influence the overall profile: manufacturing activity is set to stall in Q1 (–0.2%) and then rebound in Q2 (+0.7%).

On average, manufacturing production should slow down significantly in 2016: +0.3% after +1.5%, notably due to the fall in food products and beverages and coke and refined petroleum products. The growth overhang for 2017 should be +0.5% at the end of Q2.

After a marked slip in Q3 2016, energy production to stagnate at the end of 2016

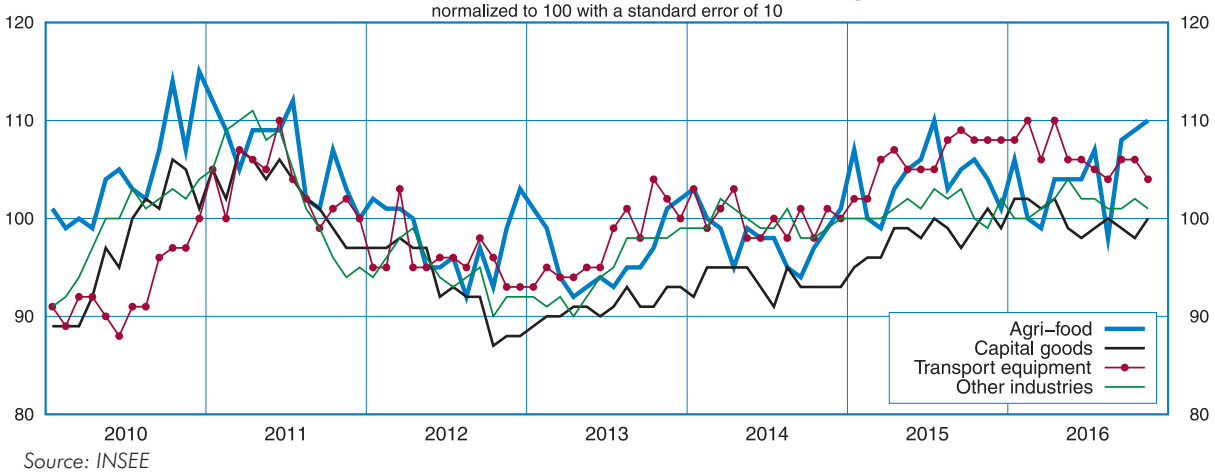
Energy production, the profile of which depends greatly on heating expenditure, was dynamic in H1 2016 (+0.8% per quarter), on account of lower-than-normal temperatures; it then fell back markedly in Q3 (–2.5%), as temperatures returned to normal before becoming mild for the season in September. In Q4 2016, it should stagnate, as a temporary shutdown of several reactors

1 - Business climate in France: all sectors in industry, services and construction



Source: INSEE

2 – Sub-sector business climates in industry



Source: INSEE

significantly limits the export capacity of the branch. If climate conditions are normal, it should increase slightly in H1 2017 (+0.3% in Q1 then +0.2% in Q2). Over 2016 as a whole, energy production is likely to progress less quickly than in 2015 (+0.2% after +1.8%). In mid-2017, the annual growth overhang for 2017 is likely to be –0.6%.

In construction, activity returned to growth in 2016 and should continue to increase in early 2017

In Q3 2016, production in construction rebounded (+1.0% after –0.3%), especially in civil engineering. Activity in the building industry also accelerated to a lesser extent.

The number of building permits has been recovering since early 2015. In the outlook survey among building-sector business leaders, the balance of opinion on activity forecasts has moved back above its long-term average since spring 2016 (*Graph 3*). However, activity prospects are looking a little gloomier in the building crafts sector. In civil engineering, entrepreneurs' opinions of their activity are deteriorating slightly, although the balance should remain above its long-term average. In addition, the number of months of work represented by their current orders fell in the sector in Q4. Consequently, a slowdown is expected in civil engineering. Total production in construction is likely to decelerate in Q4 2016 (+0.4%) and then progress at close to this rate in H1 2017 (+0.3% in Q1 then +0.4% in Q2).

Over 2016 as a whole, production in construction is set to rebound (+0.8%) after falling sharply for two years (–2.7% in 2014, –2.2% in 2015). By mid-2017, the growth overhang for the year should be +1.4%.

In market-sector services excluding trade, activity to decelerate while remaining robust

In Q3 2016, production in market-sector services excluding trade accelerated significantly (+0.9%), after being almost stagnant in Q2. It accelerated in transport (+1.1% after +0.1%) and in information-communication (+1.4% after 0.0%). It rebounded in services to business (+0.8% after –0.2%) and in accommodation and food services (+0.8% after –0.4%), and showed a slight upturn in other service activities (+0.3% after –1.0%).

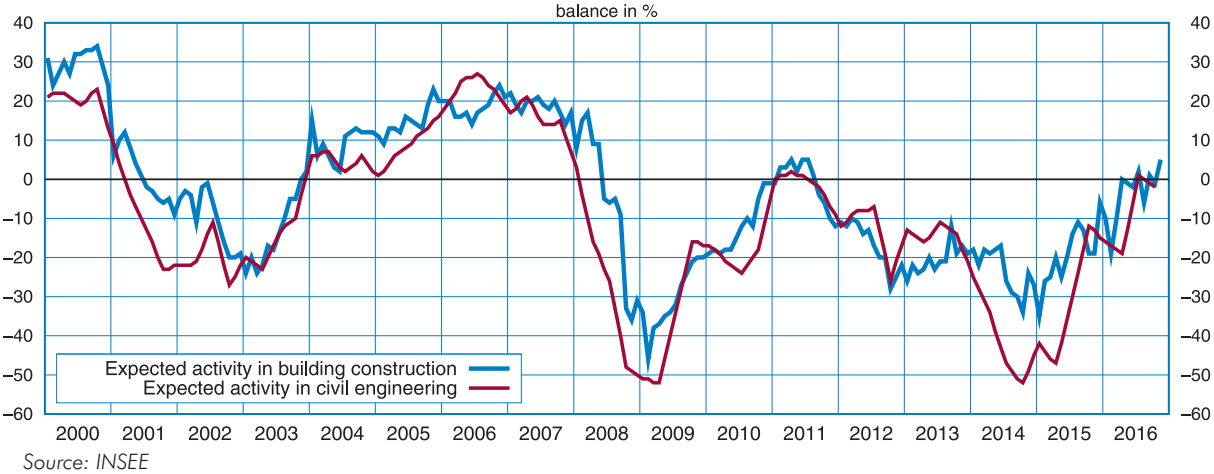
After oscillating around its long-term average (100) since the end of 2015, the business climate in services improved slightly to 102 in November. Thanks to the rebound in accommodation and food services, the business climate is no longer below normal in any sub-sector (*Graph 4*). In Q4, activity in market-sector services excluding trade should slow down, while remaining robust (+0.5%). It should then progress at a similar rate in H1 2017 (+0.4% in Q1, +0.5% in Q2). Over 2016 as a whole, production of market-sector services excluding trade should increase by 2.2%, posting a greater rise than that in 2015 (+1.6%). By mid-2017, the growth overhang for the year should be +1.6%.

Trade activity to accelerate a little at the end of 2016, then remain at a moderate pace in early 2017

In Q3 2016, trade activity rebounded slightly (+0.2% after –0.4%), notably thanks to margins on manufactured product exports.

In November, the business climate weakened in wholesale trade. That in the retail trade and automobiles showed an upturn, meanwhile. It has been above its average level since 2015, driven mainly by the automobile trade.

3 - Expected activity in construction



Source: INSEE

Wholesalers and retail traders are quite optimistic as to their activity prospects. In wholesale trade, balances of opinion on expected activity, both in France and internationally, remain at or above their average levels. In retail trade, sales prospects and order intentions are also on a positive trend.

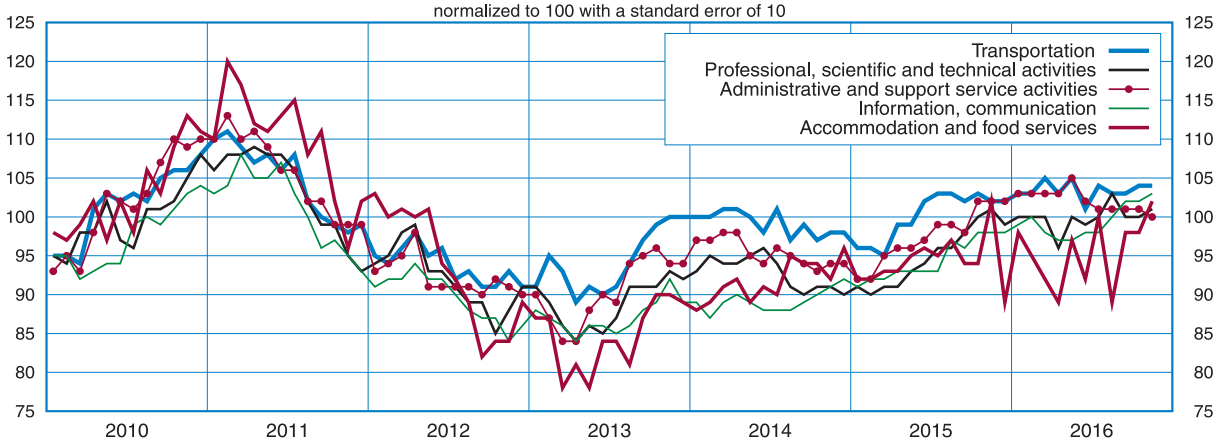
In this context, activity in trade should accelerate a little at the end of 2016 (+0.6%), driven by an upturn in household expenditure on manufacturing products. Trade activity should continue to grow at a moderate pace in H1 2017 (+0.4% in Q1 then +0.5% in Q2).

As an annual average, production of commercial services is likely to slow down in 2016: +2.0% after +3.0%. The annual growth overhang at the end of H1 2017 should stand at +1.2%.

Mainly non-market services: activity to increase moderately

Growth in mainly non-market services held up in Q3 2016 (+0.3%). It should continue to do so in Q4 (+0.3%) and keep up that pace in H1 2017. Over the year as a whole, the activity of the non-market branches should grow by 1.2% in 2016, after +1.0% in 2015. In mid-2017, the annual growth overhang should be +0.9%. ■

4 – Sub-sector business climates in services



Source: INSEE

Poor harvests could bring down annual growth by 0.2 points in 2016

In 2016, agricultural production is likely to decline sharply

In 2016, production in the agricultural branch is likely to decline sharply, by an average of 6.3% over the year,[1] after falling by 2.2% in 2015. This decline stems primarily from crop production (*Graph 1*), which accounts for approximately 60% of agricultural production and is expected to decrease by an average of 10% over the year[2] (after –4% in 2015).

In particular, cereal crop production (approximately one quarter of all crop production) should fall by nearly 25% in 2016, after remaining almost stable in 2015. Most significantly, common wheat yields should drop by almost one third due to the lack of heat and light and excessive rainfall in May, its flowering period. To a lesser extent, barley production is likely to fall due to strong pest pressure this year. In addition, wine production (approximately one quarter of crop production) should drop by 9% in 2016 (after –1% in 2015), mainly because of the spring frost and mildew, which affected several wine-producing areas (Champagne, Burgundy and Val de Loire), in addition to the drought in the Mediterranean region. Damage caused by hailstorms in Charente, Burgundy-Beaujolais and Languedoc-Roussillon also reduced the production potential.

The other types of crop production (industrial and fodder crops, potatoes, fruits and vegetables) are also likely to fall in 2016, but to a much lesser extent (–2%). They had declined significantly in 2015 (–7%), but this was after exceptional harvests in 2014.

Livestock production, representing approximately one third of the agricultural branch, should drop much more moderately; its growth overhang for 2016 settled at –0.6% in Q3.

A decline similar to that of 2003

In 2016, agricultural production should decrease somewhat less sharply than in 2003 (–6.3% compared to –8.0%), a year that was marked by a severe summer drought. In particular, the decline in crop production should be not quite as sharp as in 2003 (–10% compared to –13%). While the level of the cereal harvests in 2016 is likely to be almost as low as in 2003, the level of other crop productions should be higher than 13 years ago.

Assuming normal weather conditions, agricultural production should bounce back in 2017

After two years of decline, production in the agricultural branch has the potential to bounce back in 2017. Assuming a return to normal weather conditions, production should rise by 5.7%. Similarly, it bounced back strongly in 2004 (+12.0% after –8.0%), driven by crop production (*Graph 1*).

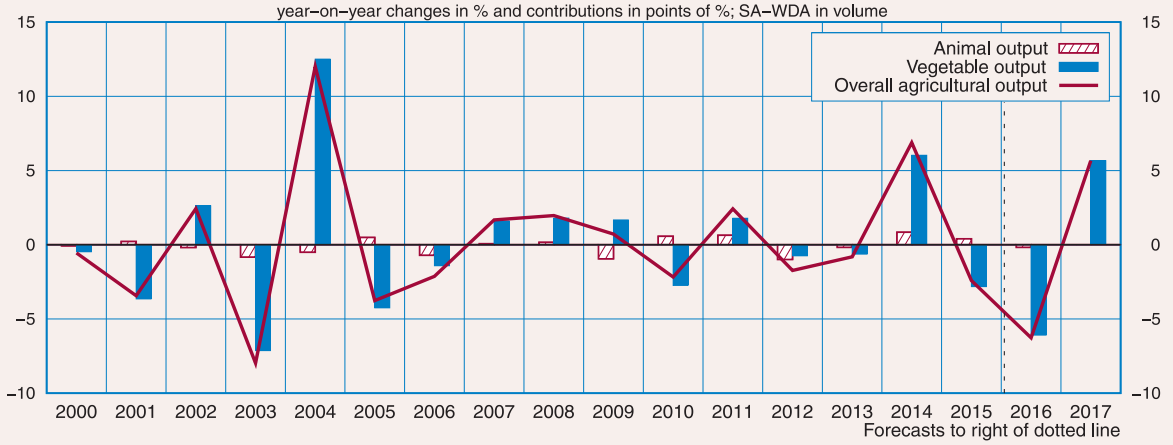
The rebound in the value added of the agricultural branch could be more substantial

The intermediate consumptions of the agricultural branch are, by their very nature, less volatile than its production, whose variations are largely dependent on exogenous factors (weather conditions, diseases, pests). The fluctuations in the branch's value added are therefore generally more substantial (*Graph 2*). For example, in 2003, while agricultural production decreased by 8.0%, agricultural value added plummeted by 15.2%. In 2016, value added is likely to decline by 13.0%, roughly twice the decline in production. In 2017, assuming a return to normal weather conditions, value added should bounce back twice as much (+11%) as production (+5.7%).

1. These estimates of agricultural production are based on "Les comptes prévisionnels de l'agriculture pour 2016", *Insee Première* of December 2016. A proportion of the decline in agricultural production in 2016 is already included in the quarterly national accounts. All the available information will be incorporated into the publication of the detailed Q3 results on 23 December 2016.
2. Date by volume at constant prices evaluated at the producer price.

1 - Changes in total agricultural production, contributions of productions

year–on–year changes in % and contributions in points of %; SA–WDA in volume



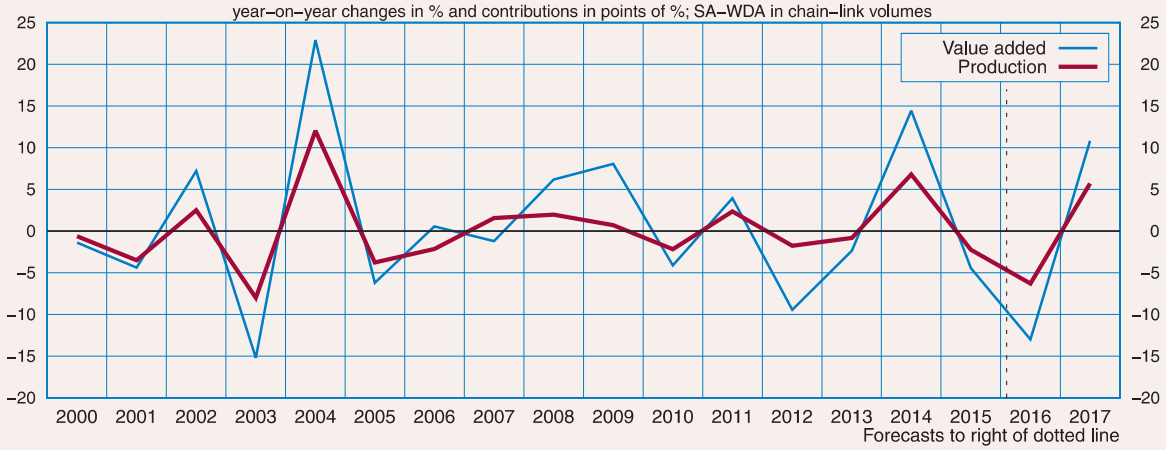
Source: INSEE

After cutting growth by 0.1 points in 2015 and 0.2 points in 2016, the agricultural branch could contribute to an acceleration in GDP in 2017

In 2015, the downturn in agricultural production cut growth in gross domestic product (GDP) by approximately 0.1 points (*Graph 3*). The branch should weigh even more heavily on growth in 2016, by around –0.2 points. In 2017, assuming a return to normal weather conditions, the agricultural branch should make a +0.2-point contribution to annual GDP growth, i.e. a +0.4 point-contribution to GDP acceleration. However, the effect is not likely to be as strong as 13 years ago when agricultural production made a +0.7-point contribution to a 1.7-point GDP acceleration between 2003 and 2004. ■

2 - Changes in production and value added in the agricultural branch

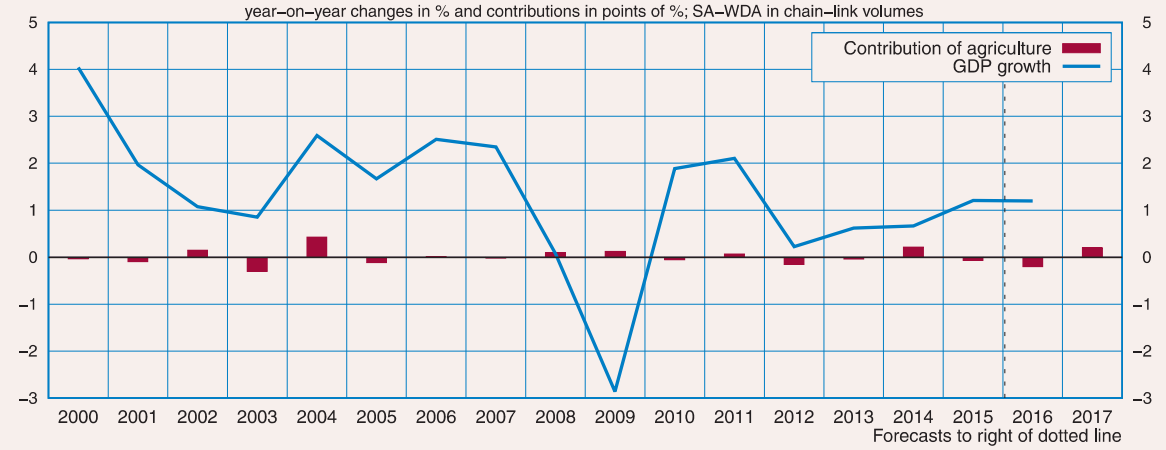
year–on–year changes in % and contributions in points of %; SA–WDA in chain–link volumes



Source: INSEE

3 - Changes in GDP, contribution of the agricultural branch

year–on–year changes in % and contributions in points of %; SA–WDA in chain–link volumes



Source: INSEE

France's International Environment

In the emerging economies, the business climate is improving little by little. Their imports should rise gradually through to mid-2017, contributing to a tentative recovery in world trade. In the advanced economies, the business climate is holding up despite political uncertainties and growth is likely to remain sound.
With the stabilisation in oil prices, inflation is rising in almost all the advanced economies. In the United States, the rise in prices is likely to exceed the 2% threshold and the Federal Reserve is expected to increase its base rates gradually. In the United Kingdom, prices should rise more rapidly due to the depreciation of sterling since the Brexit vote. In the Eurozone, inflation should continue to be contained, at around 1.2% year on year, and should only moderately erode the purchasing power of households who should benefit from a more dynamic labour market. Their investment expenditure on housing and consumption is likely to remain robust. Corporate investment should be buoyant, meanwhile, thanks to favourable financing terms. Growth in world demand for French products should therefore be driven mainly by the dynamism of its main Eurozone trading partners.

The situation in the emerging countries should improve through to mid-2017

The business climate in the emerging countries has been improving since the summer (*Graph 1*). Thanks to the stabilisation of commodity prices, the currencies of the producer countries (Russia and Brazil in particular) have halted their slide, inflation has become more moderate and losses in household purchasing power have eased. The emerging economies should therefore pick up through to mid-2017, although remaining much less vigorous than through the noughties. In China, activity should remain robust thanks to powerful public support boosting investment in construction, in particular. In Brazil the recession is set to continue, while becoming less severe, and activity in Russia should stabilise after contracting significantly in 2015. In Turkey, after stalling in the summer in the wake of the aborted coup d'état, activity should progressively become stronger. Finally, growth in the Eastern European countries and India is likely to remain dynamic.

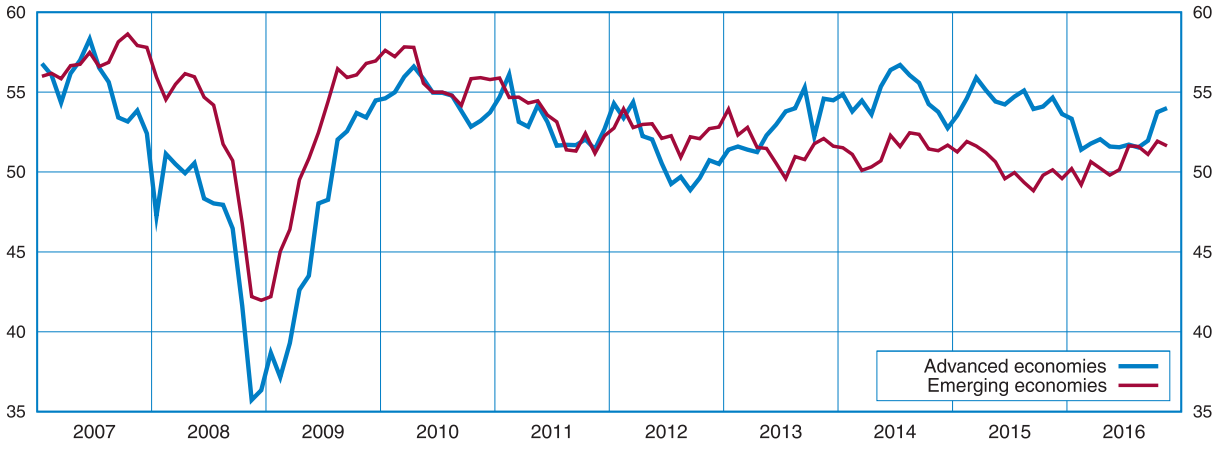
World trade shows a modest recovery

World trade fell back in Q1 2016 (–0.5%) and then recovered modestly in Q2 (+0.7%), hit by the ongoing sluggishness of the emerging economies and the pronounced slowdown in US imports. In Q3, world trade improved weakly (+0.3%). It should now accelerate to +0.8% per quarter through to mid-2017, thanks to the recovery in demand in the emerging countries and the US, and despite the slowdown in the UK. All in all, after a rise of just 1.2% in 2016, the growth overhang in world trade for 2017 should be +2.4% by mid-year.

Oil prices set to remain almost stable at around $50 a barrel

After falling sharply in Q1 2016, Brent prices oscillated around the $47 mark throughout Q2

1 – The business climate recovers in the advanced and emerging economies



Source: Markit

and Q3. In Q3, OPEC output increased sharply, particularly in Saudi Arabia, Iraq and Iran. If the cartel does manage to apply the agreement it announced this autumn, that output should level out in H1 2017. In the United States, oil production is likely to continue falling due to the past collapse in the rig count. With the rise in output from the other oil-producing countries, supply should be stable through to mid-2017, while demand should continue to grow at its trend rate. This tightening of the physical market is unlikely to push prices up, due to the high levels of stocks, especially in the US. Over the forecasting period, the price of Brent has therefore been set to its latest known level at the beginning of December ($50).

Monetary policies diverging

The stabilisation of oil prices is triggering an upturn in inflation in the advanced economies, except in Japan where the sharp rise in the yen is keeping inflation at a low level. In the United States, core inflation (i.e. excluding energy and food products) has moved above the 2% threshold since the beginning of 2016, and headline inflation should also exceed this threshold by mid-2017. As the labour market remains strong, this situation is likely to lead the Federal Reserve to increase its base interest rates gradually through to mid-2017. In the Eurozone, inflation should increase at an annual rate of close to +1.2% (*Graph 2*), which is still too low for the European Central Bank to modify its monetary policy.

Activity to slow down in the United Kingdom

Headline inflation in the UK is likely to increase again significantly, driven by its energy component and the depreciation of sterling since the Brexit vote in June, making imports more expensive. This rise in inflation is likely to trigger an inflection in the purchasing power of British households and then in their consumption. In business, the tendency surveys indicate a marked fall in investment intentions. Domestic demand should therefore slow down sharply through to mid-2017. After growth of 2.0% in 2016, the overhang for UK activity is likely to be just +1.1% in mid-year.

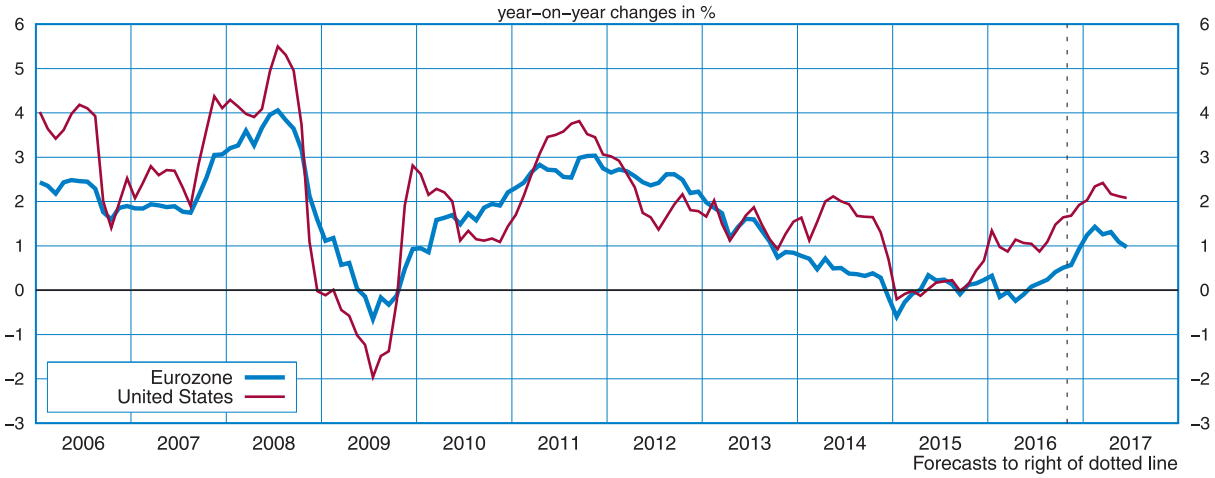
Growth to return to its trend rate in the United States

In Q3 2016, activity accelerated in the United States (+0.8% after +0.4%), driven notably by the recovery in corporate demand (investment and changes in inventories). In Q4, US GDP should grow by almost as much (+0.6%), due to domestic demand, notably the continuing restocking trend. Over the year as a whole, however, activity is likely to slow down significantly (+1.6% after +2.6% in 2015), hit by the fall in corporate investment (–0.6% after +2.1%) and a strong destocking trend (contribution of –0.4.points). Imports are therefore likely to slow sharply (+0.7% after +4.6%). In H1 2017, activity should slow down slightly to return to its trend rate (+0.5% per quarter). Household consumption is likely to decelerate slightly, in line with household purchasing power, as precautionary saving has already slipped back significantly with the fall in unemployment to a low level. Conversely, corporate investment should pick up tentatively in early 2017, despite the expected tightening of lending terms.

Eurozone growth to increase slightly

In the Eurozone, growth remained moderate in Q3 (+0.3%). Through to mid-2017, activity is set to accelerate a little (+0.4% per quarter), driven by vigorous domestic demand, especially in Germany. The political uncertainties both internal to the European Union (the refugee crisis, prolonged lack of a government in Spain, consequences of the referendum in Italy, elections in France and Germany) and external to it (consequence of the Brexit vote and the US

2 – Inflation should rise with the stabilisation of oil prices



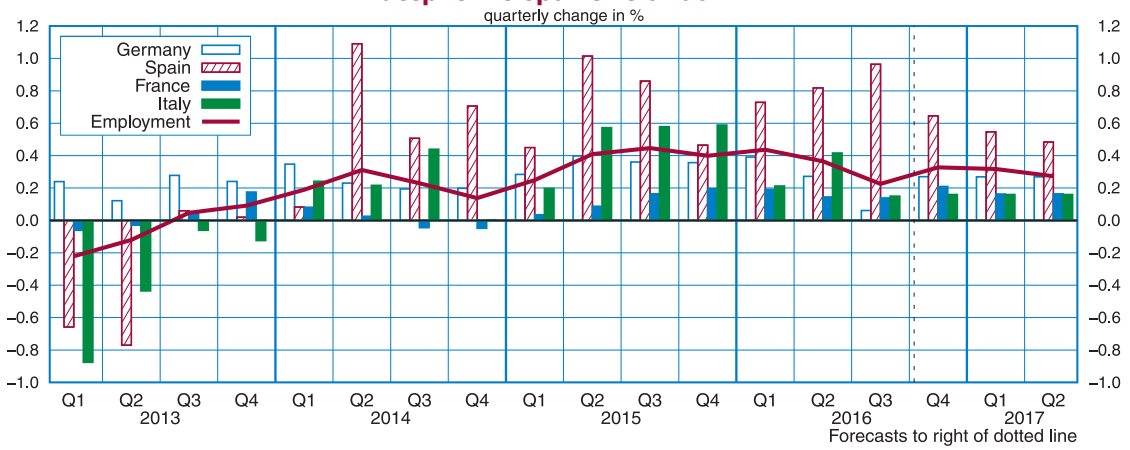
Sources: BLS, Eurostat

presidential election) do not seem to have hit the business climate, which remains high. Corporate investment should therefore increase strongly in early 2017. Household consumption should continue to grow significantly, despite a slight weakening of purchasing power. Indeed, employment should continue to progress, notably thanks to dynamic labour markets in Germany and in Spain (*Graph 3*), while the unemployment rate should stand at 9.7% in mid-2017, against 10.1% one year earlier. Finally, investment expenditure on construction is set to carry on rising in all the Eurozone countries, after returning to growth in 2016 in France and in Italy.

World demand for French products to remain buoyant, especially demand from the Eurozone

In this international context, world demand for French products should increase strongly (+0.8% per quarter after –0.1% in Q3 2016). This strong performance should be driven by the Eurozone and most notably Germany. ■

3 - Payroll employment in the Eurozone should increase significantly again despite the Spanish slowdown



Sources: INSEE, Destatis, Istat, INE, Eurostat

International environment

levels ; percentage changes from previous period

	2015				2016				2017		2015	2016	2017 ovhg
	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2			
Euro-dollar exchange rate	1.13	1.10	1.11	1.10	1.10	1.13	1.12	1.08	1.06	1.06	1.11	1.11	1.06
Barrel of Brent oil (in dollars)	55	63	51	45	35	47	47	50	50	50	53	45	50
World trade	**0.4**	**0.1**	**0.7**	**0.5**	**–0.5**	**0.7**	**0.3**	**0.8**	**0.8**	**0.8**	**2.4**	**1.2**	**2.4**
Imports of advanced economies	1.8	0.0	0.7	1.0	0.2	0.3	0.4	0.8	0.8	0.8	4.0	1.9	2.3
Imports of emerging economies	–2.6	0.4	0.7	–0.5	–1.9	1.3	0.1	0.8	0.8	0.8	–1.0	–0.5	2.4
World demand for French products	**1.1**	**0.1**	**0.6**	**0.9**	**–0.1**	**1.2**	**–0.1**	**0.8**	**0.8**	**0.8**	**3.4**	**2.0**	**2.2**
Gross domestic product of advanced economies	**0.6**	**0.3**	**0.5**	**0.3**	**0.4**	**0.3**	**0.6**	**0.5**	**0.4**	**0.4**	**2.1**	**1.6**	**1.4**
United States	*0.5*	*0.6*	*0.5*	*0.2*	*0.2*	*0.4*	*0.8*	*0.6*	*0.5*	*0.5*	*2.6*	*1.6*	*1.8*
Japan	*1.5*	*–0.1*	*0.2*	*–0.4*	*0.7*	*0.5*	*0.3*	*0.2*	*0.2*	*0.3*	*1.2*	*1.0*	*0.9*
United Kingdom	*0.3*	*0.5*	*0.3*	*0.7*	*0.4*	*0.7*	*0.5*	*0.3*	*0.3*	*0.2*	*2.2*	*2.0*	*1.1*
Eurozone[1]	*0.4*	*0.4*	*0.3*	*0.5*	*0.5*	*0.3*	*0.3*	*0.4*	*0.4*	*0.4*	*1.5*	*1.6*	*1.3*
Germany	*0.2*	*0.5*	*0.2*	*0.4*	*0.7*	*0.4*	*0.2*	*0.5*	*0.5*	*0.5*	*1.5*	*1.8*	*1.6*
Spain	*1.0*	*0.8*	*0.9*	*0.8*	*0.8*	*0.8*	*0.7*	*0.7*	*0.6*	*0.5*	*3.2*	*3.2*	*2.1*
Italy	*0.3*	*0.3*	*0.1*	*0.2*	*0.4*	*0.1*	*0.3*	*0.1*	*0.2*	*0.2*	*0.6*	*0.9*	*0.6*
Consumer prices in Eurozone[2]	–0.3	0.2	0.1	0.2	0.1	–0.1	0.3	0.7	1.3	1.1	0.0	0.2	1.2
ILO unemployment rate in the Eurozone	11.2	11.0	10.7	10.5	10.3	10.1	10.0	9.9	9.8	9.7	10.9	10.1	9.7

Forecast

1. Eurozone excluding Ireland, as this country's accounts present a break in series in Q1 2015
2. Year-on-year on the last month of the quarter and annual averages

Source: INSEE

Foreign trade

In Q3 2016 world trade grew moderately once again (+0.3% after +0.7%), but world demand for French goods stalled (–0.1% after +1.2%). French exports bounced back (+0.5% after –0.1%), in particular with the acceleration in manufactured goods (+1.1% after +0.8%). In Q4 they are expected to increase only slightly (+0.3%), hit by the fall in electricity exports. In H1 2017 they should rise more markedly (+1.1% per quarter), benefiting among other things from deliveries of large military and shipbuilding contracts.

Imports bounced back sharply in Q3 (+2.5% after –1.7%), particularly imports of manufactured goods (+1.9% after –1.1%) and raw hydrocarbons (+24.9% after –13.9%). In Q4 they are expected to slow considerably in reaction (+0.2%), then in HI 2017 they should settle at a pace of growth more in line with domestic demand (+0.6% at end 2016, then +1.0% per quarter on average).

After adversely affecting growth in Q3 2016 (–0.6 points), foreign trade's contribution is expected to become neutral again from Q4 on. On average for the year 2016, foreign trade is likely to have held back growth by 0.7 points, i.e. more markedly than in 2015 (–0.3 points).

World trade is expected to regain its momentum by mid-2017

World trade grew moderately again in Q3 (+0.3% after +0.7%, *Graph 1*), after a first quarter that saw a decline in global imports (–0.5%). Indeed, the imports of the advanced countries picked up slightly in the summer, in particular outside the Eurozone. However, those of the emerging countries slowed considerably. By mid-2017, world trade is expected to grow by 0.8% per quarter on average, thanks to increased vigour in the imports of the advanced countries, the United States in particular, and a gradual acceleration in those of the emerging countries. On average over the year, world trade has slowed considerably in 2016 and its growth is likely to be the lowest since 2009 (+1.2% after +2.4% in 2015); it should regain momentum in 2017 (+2.3% carry-over effect at mid-year).

World demand for French goods stalled in Q3 (–0.1% after +1.2%, *Graph 2*), due to the downturn in Spanish and British imports. Through to mid-2017, world demand for French goods is expected to grow at the same pace as world trade (+0.8% per quarter). Given the geographical make-up of French exports, world demand for French goods is expected to come above all from its partners in the Eurozone.

Exports are expected to grow slowly again in Q4 2016

In Q3 2016 total French exports bounced back modestly (+0.5% after –0.1%). Indeed, exports of manufactured goods grew a little faster (+1.1% after +0.8%), with a notable rebound in «other industrial products» (+1.7% after –0.9%), agri-food products (+3.7% after –0.6%) and refined petroleum products (+6.3% after –13.0%). However, exports of transport equipment shrank (–1.7% after +8.9%), mainly as an after-effect of the delivery of the Harmony of the Seas cruise ship in Q2. Finally, agricultural sales collapsed due to poor harvests (–17.5%).

1 – World demand for French products and world trade

Sources: INSEE, DG Trésor, Centraal PlanBureau

In Q4, exports of goods and services are expected to grow slightly again (+0.3%). Exports of manufactured goods are expected to slow anew (+0.4%, *Graph 3*) and those of agricultural products are set to contract a little more (2.0%). Moreover, energy exports are expected to plummet (–10.0%), due to several nuclear power stations being shut down for inspections. Exports of services are likely to remain sustained (+1.0%).

In H1 2017, exports are expected to benefit from the buoyancy of world demand for French goods, as well as from the delivery of some large military and shipbuilding contracts (+1.1.% per quarter). Exports of manufactured goods are expected to increase by 1.2% per quarter on average and exports of services by 0.9%.

On average over the year, exports are likely to have slowed considerably in 2016 (+0.6% after +6.0% in 2015), but should regain a little vigour in 2017: at the end of H1, the carry-over effect is expected to be +2.4%.

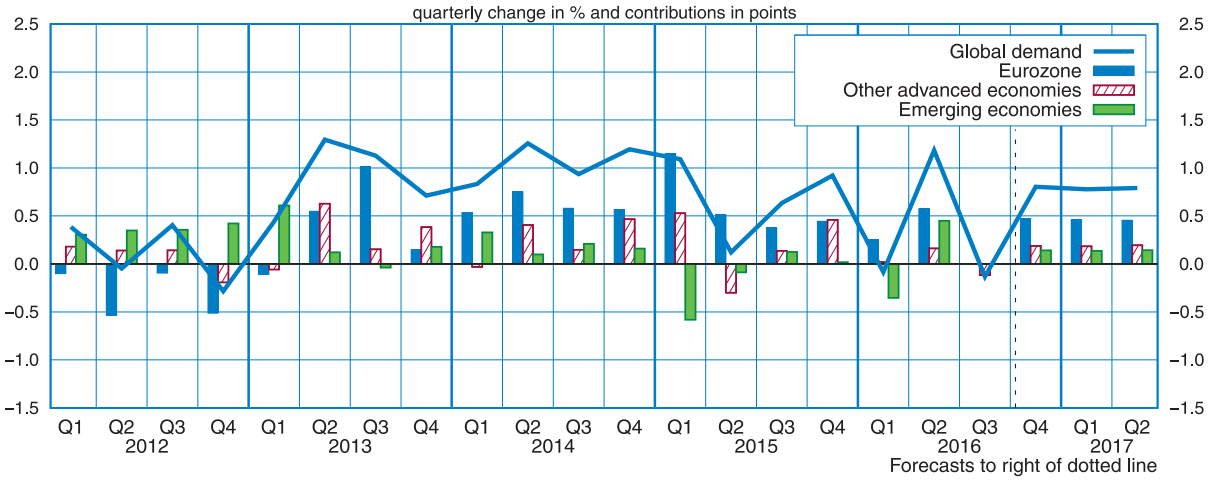
Imports should slow down considerably in Q4 2016

In Q3 2016, French imports bounced back sharply (2.5% after –1.7%). This vigour originated firstly from manufactured goods (+1.9% after –1.1%), in particular capital goods (2.1% after –1.3%) and transport equipment (+6.8% after –0.2%), and secondly from imports of raw hydrocarbons, which bounced back strongly (+24.9% after –13.9%) as a result of work starting up again in French refineries after the picketing of May and June.

In Q4 2016 imports are expected to slow (+0.2%), in particular those of manufactured goods (+0.2%). In addition, imports of raw hydrocarbons are expected to decline (–3.0%) due to an expected new dip in activity in the refineries.

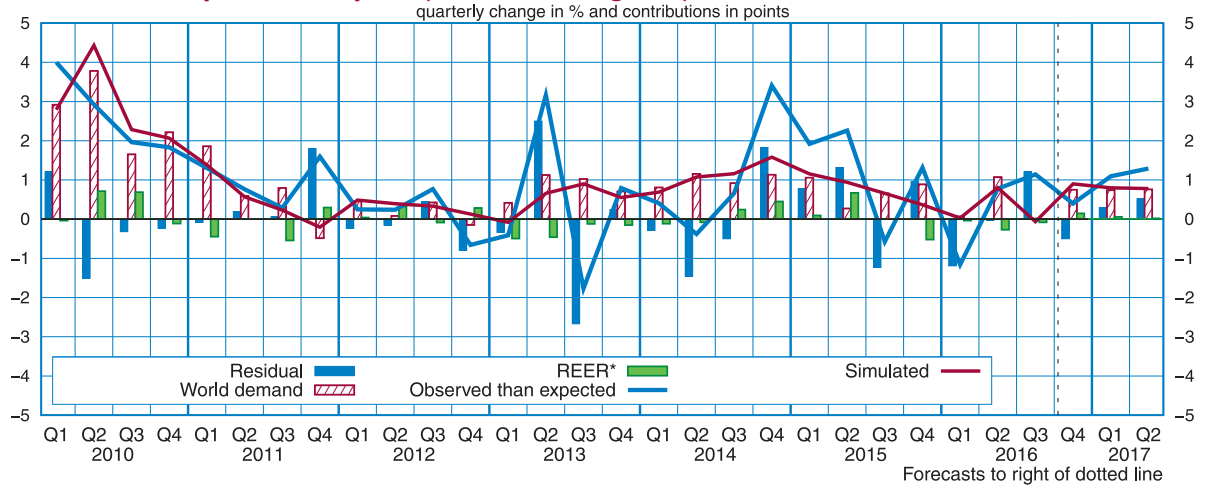
In H1 2017, imports are set to increase by 1.0% per quarter on average, returning to a pace more in line with growth in domestic demand.

2 – World demand for French products and contributions of the main partners



Sources: INSEE, DG Trésor

3 - Equation of exports (manufactured goods) and econometric contributions



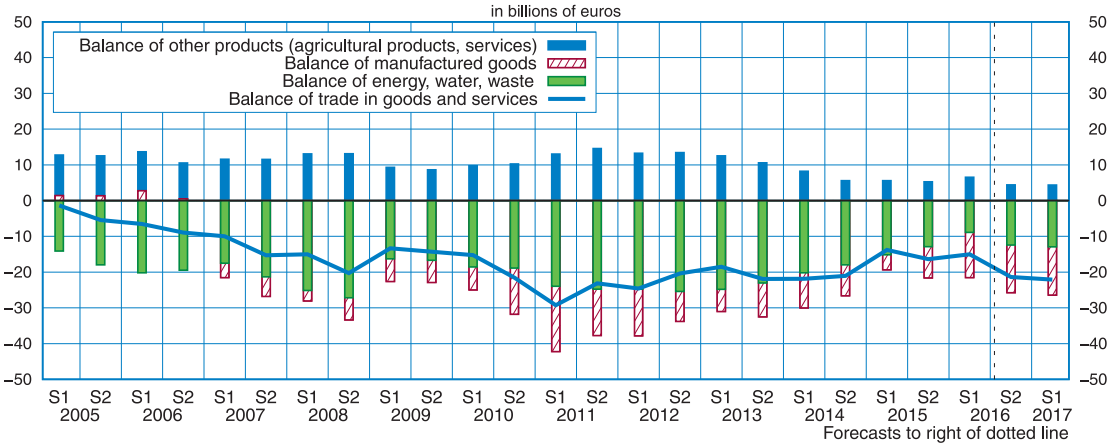
*REER: real effective exchange rate
Sources: INSEE, DG Trésor

French developments

On average over the year, imports are expected to have slowed in 2016 (+2.8% after +6.4% in 2015), but nonetheless significantly less than exports. Foreign trade is therefore likely to have had a negative effect on growth in 2016 (–0.7 points after –0.3 points in 2015). Through to mid-2017, its contribution to growth is expected to be neutral each quarter (*Table*).

In 2016 and through to mid-2017, the trade deficit in value of goods and services is not expected to subside, as the balance of trade in manufactured goods is likely to worsen (*Graph 4*). ■

4 - Trade deficit in goods and services



Source: INSEE

Foreign trade growth forecast

variations in % at chain-linked previous year prices, contributions in points

	Quarterly changes						Annual changes		
	2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2			
Exports									
All goods and services	–0.5	–0.1	0.5	0.3	1.1	1.1	6.0	0.6	2.4
Manufactured products (68%)*	–1.2	0.8	1.1	0.4	1.1	1.3	6.6	1.4	3.2
Imports									
All goods and services	0.3	–1.7	2.5	0.2	0.9	1.1	6.4	2.8	2.7
Manufactured products (68%)*	1.3	–1.1	1.9	0.2	1.2	1.2	6.4	4.9	3.0
Contribution of foreign trade to GDP	**–0.2**	**0.5**	**–0.6**	**0.0**	**0.0**	**0.0**	**–0.3**	**–0.7**	**–0.1**

Forecast

*Part of exports (resp. imports) of non-energy industrial goods in exports (resp. imports) in a whole in 2015.

Source: INSEE

Employment

Non-agricultural market employment picked up a little in Q3 2016 (+51,000 jobs, after +29,000 in Q2), driven mainly by temporary employment. It should slow slightly through to mid-2017 as the effect of higher employment intensity of growth linked with measures to reduce the cost of labour is likely to weaken. All in all, 157,000 market sector jobs are expected to have been created in this way year-on-year by the end of 2016 (after a rise of 99,000 in 2015), then 60,000 during H1 2017.

In the non-market sectors, employment should continue to rise moderately in H1 2017 (+8,000, as in H2 2016): the number of subsidised employment contracts is likely to remain almost unchanged and non-assisted public sector employment is expected to continue to fall, but private sector employment should remain buoyant. All in all, 188,000 jobs are set to be created in 2016 and 70,000 in H1 2017.

Market-sector employment expected to slow slightly in H1 2017

In Q2 2016, non-agricultural market employment increased by 29,000 before picking up slightly in Q3 (+51,000) thanks to temporary employment. From Q4 2016, it should more or less return to its former pace (+30,000 on average per quarter, *Table 1*). The number of temporary workers is expected to stabilise, while job creations should keep their momentum in the tertiary sector excluding temporary work. In addition, employment is likely to increase slowly in the construction sector and there should be only moderate job losses in industry.

The rise in employment in the market sectors is expected to weaken slightly in H1 2017 compared with the average in 2016 (*Graph 1*). The tax credit for encouraging competitiveness and jobs (CICE) and the Responsibility and Solidarity Pact (PRS) are likely to boost job growth a little less in H1 2017 (around 20,000 jobs) than in H2 2016 (around 30,000 jobs). On the one hand, the effect on employment of increasing the CICE rate from 6% to 7% on January 1st 2017 is likely to be small before mid-2017; and on the other hand, extending the reductions in social contributions under the PRS to 1st April 2016 is expected to have a limited effect because they do not target low-paid employees (between 1.6 and 3.5 times the minimum wage). However, the hiring premium for SMEs, which will be maintained until 2017, should continue to boost growth with almost 20,000 extra jobs in H1 2017. All in all, policies to encourage employment growth should generate 40,000 jobs in H1 2017 against 50,000 in H2 2016. Thus after growing by 80,000 jobs in H2 2016, market employment should increase by 60,000 in H1 2017.

Table 1

Change in employment

in thousands, SA

	2016				2017		2016 H1	2016 H2	2017 H1	2015	2016	Level end 2015
	Q1	Q2	Q3	Q4	Q1	Q2						
Mainly non-agricultural market sectors (1)	47	29	51	29	29	30	76	80	60	99	157	15968
Industry	–6	–8	–5	–6	–6	–6	–14	–11	–12	–36	–25	3122
Construction	–2	–2	0	1	1	1	–4	1	2	–34	–3	1314
Temporary employment	1	0	30	0	2	3	1	30	5	50	30	585
Market services excl. tempory employment	54	39	27	34	32	32	93	61	65	119	154	10946
Agricultural workers	1	1	1	1	1	1	2	2	2	2	4	
Mainly non–market service sectors	13	10	3	5	4	5	23	8	8	24	31	
Self–employed	–1	–1	–1	–1	0	0	–2	–2	0	–8	–4	
TOTAL EMPLOYMENT	60	39	54	34	34	36	99	88	70	116	188	

Forecast

(1) Sectors DE to MN and RU

Source: INSEE

Temporary employment should stabilise and tertiary employment excluding temporary work should remain positive

After stabilising in H1 2016 (+1,000), temporary employment increased substantially in Q3 (+30,000). Given the employment prospects described by business leaders in the sector, temporary employment should stabilise at the end of 2016 before picking up modestly at the beginning of 2017.

In the tertiary market sector excluding temporary employment, business leaders believe that prospects for change in their workforce remain favourable. Employment should therefore increase at a similar pace in H2 2016 (+61,000) and in H1 2017 (+65,000, *Graphs 2* and *3*).

All in all, tertiary employment (including temporary work) is expected to continue to increase at the same pace in H2 2016 (+90,000 after +94,000 in H1). It should slow a little in H1 2017, with +70,000 jobs.

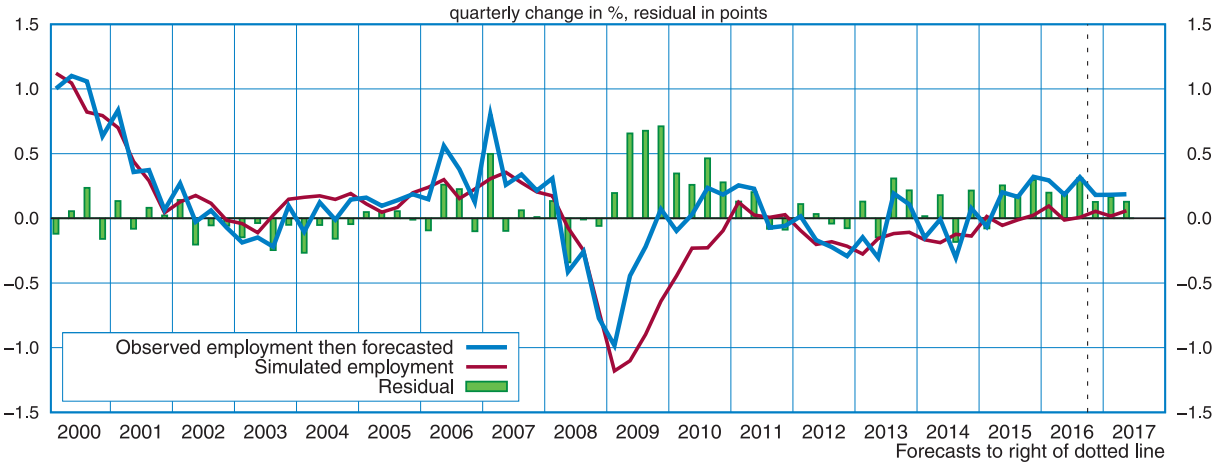
Job destructions in industry should remain moderate

Net losses of industrial jobs continued in Q3 2016, although they were a little less pronounced than in H1 (–5,000, after –14,000 in H1). The expectations of industrialists in terms of employment suggest that job destructions are likely to maintain a similar pace in Q4 2016 and H1 2017 (–6,000 on average per quarter).

Employment in construction is no longer declining

Payroll employment in construction has fallen almost continuously since the end of 2008. The sector lost 34,000 jobs in 2015 and 4,000 in H1 2016. In Q3 2016, it stabilised. In the business

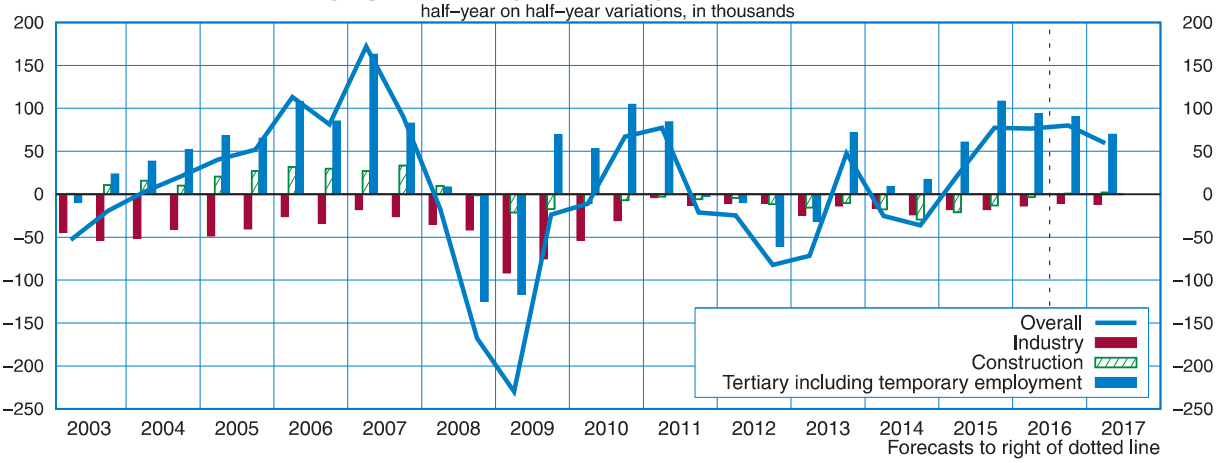
1 - Employment observed in the non-agricultural market sector, simulated and residual employment



Note: The equation residual for employment is the spread between the observed employment and the simulated employment from past and current variations in employment and activity and from effects of employment policies (included, over the recent period, the effects of the CICE, the PRS and the employment plan). A positive residual, such as that observed in 2015, indicates that observed employment showed better growth than past behaviour would lead us to expect. Estimation period: 1984-2009.

Source: INSEE

2 - Employment change in non-agricultural market sectors



Source: INSEE

tendency surveys, the balances of opinion on planned workforce numbers continue to pick up in civil engineering and are substantially higher in the building sector than they were in spring. In this context, workforce numbers should tentatively rise in construction by mid-2017 (+1,000 per quarter).

Non-market employment should increase moderately due to its private component

Non-market employment is expected to increase by 31,000 in 2016 (after +24,000 in 2015), driven by subsidised contracts (+16,000, *Table 2*).

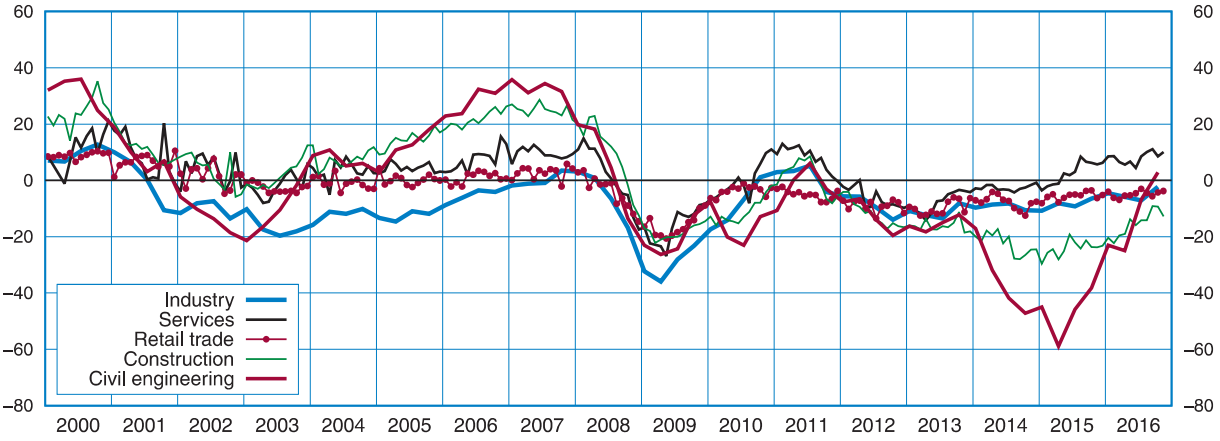
It should continue to rise moderately in H1 2017 (+8,000 jobs, the same as in H2 2016). On the one hand, given the number of newcomers expected on subsidised contracts, such as the CUI-CAE[1] (*contrat unique d'insertion - contrat d'accompagnement dans l'emploi* i.e. Single Integration Contract - Contract for Support in Employment) and the *emplois d'avenir* programme (about 200,000 in Metropolitan France, after more than 230,000 in H2 2016), the number of subsidised contract beneficiaries should remain virtually unchanged H1 2017 (–1,000, the same as in H2 2016). At the same time, the number of people in civic service should stabilise. As for non-subsidised public employment, it is expected to decline moderately, especially in local government. However, the private component of non-market employment (teaching, healthcare establishments, etc.) should continue to increase steadily.

Total employment is set to increase by 70,000 in H1 2017

Taking into account self-employed and agricultural jobs, total employment, all sectors combined, is set to increase by 188,000 in 2016 (after +116,000 in 2015), with a slight slowdown in H2 (+88,000, after +99,000). It is expected to be a little less dynamic in H1 2017 (+70,000) as market sector employment is likely to slow slightly as the effects of high employment intensity of growth associated with CICE and PRS lessen slightly. On the other hand, non-market employment should rise moderately once again thanks to its private component. ■

1. "Subsidised contracts in 2015", *Conjoncture in France*, March 2016, p. 80-81.

3 - Balance of opinion of business leaders on expected workforce



Source: INSEE, Business tendency surveys

Table 2

Change in subsidised employment and civic service in the non–market sector

in thousands

	2016				2017		2016		2017 H1	2015	2016
	Q1	Q2	Q3	Q4	Q1	Q2	H1	H2			
"Future Jobs"	–2	–4	–4	–1	1	1	–6	–4	1	5	–11
CUI-CAE incl. ACI*	16	7	1	3	–2	–1	23	4	–3	17	26
Civic service contracts	2	2	3	4	0	0	4	7	0	8	11
Total	**16**	**5**	**0**	**6**	**–2**	**0**	**20**	**6**	**-2**	**30**	**26**

Forecast

* Since July 2014, recruitment by integration workshops and sites (ACI) no longer takes the form of a CUI–CAE (*Contrat unique d'insertion – Contrat d'accompagnement dans l'emploi* – Single integration contract – Employment support contract) but instead a CDDI (*Contrat à durée déterminée d'insertion* - Fixed-term integration contract). Nevertheless, in order to ensure that the scope of this analysis remains constant when tracking subsidised jobs, the CUI–CAE forecasts given here include ACIs.
Scope: Metropolitan France

Sources: DARES, INSEE calculations

Unemployment

After falling sharply in Q2 2016, the number of unemployed rose slightly in Q3 (+31,000 in Metropolitan France). The ILO unemployment rate stood at 9.7% of the labour force, after 9.6% in Q2 and 10.1% one year earlier. Including the French overseas departments, the rate was 10.0%, after 9.9% in the previous quarter and 10.5% one year before.
Over the forecasting period, the unemployment rate is expected to drop again slightly and should stand at 9.5% for Metropolitan France in mid-2017 (9.8% for the whole of France excluding Mayotte).

The unemployment rate rose slightly in Q3 2016 but remains lower than one year previously

In Q3 2016, the number of unemployed in Metropolitan France increased by 31,000, after dropping by 69,000 the previous quarter (*Table*). Unemployment stood at 9.7% of the labour force, after 9.6% in Q2 2016 (*Graph*). Year on year, the number of unemployed fell by 118,000 in Q3, corresponding to –0.4 points. Throughout the whole of France (excluding Mayotte) the unemployment rate was 10.0%, after 9.9% in Q2 2016 and 10.5% one year earlier. The halo of unemployment[1] decreased by 26,000 people between Q2 and Q3 2016; as compared to Q3 2015, it had increased by 70,000 people.

1. The halo of unemployment is made up of economically inactive persons as defined bi the International Labour Office (ILO): it refers to people who are seeking employment but who are not available and people who wish to work but are not seeking employment, whether they are available or not.

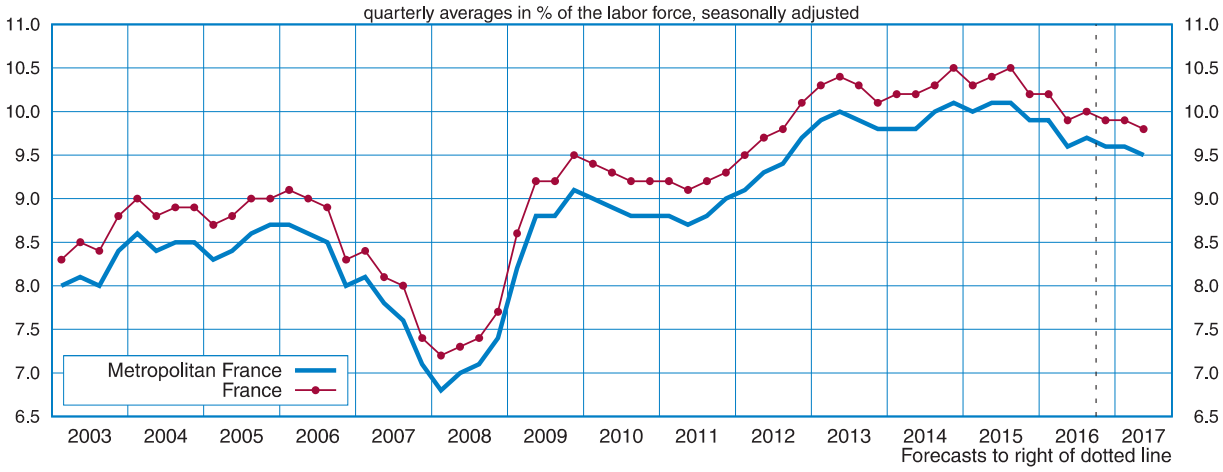
The male unemployment rate continues to fall

Between Q2 and Q3 2016 the unemployment rate rose for women (+0.4 points) and fell for men (–0.2 points). The year-on-year variations also differ: between Q3 2015 and Q3 2016, the male unemployment rate dropped by 1.0 points, while the female rate increased by 0.2 points. In Q3 2016, the male unemployment rate matched the female rate (9.7%), whereas it had been higher since mid-2012, with the gap rising to +1.2 points in Q3 2015. Since the economic crisis of 2008-2009, the male unemployment rate had increased faster than the female rate, as job destructions were more numerous in industry and construction – sectors characterised by predominantly male employment. Over the past year, however, the relative employment dynamics per sector, and especially the improved short-term outlook for the construction sector in which job destructions have ceased (*Employment sheet*), are more beneficial to men than women.

The youth unemployment rate rises again

The unemployment rate for 15-24-year-olds rose by 1.2 points between Q2 and Q3 2016, and by 0.8 points compared to Q3 2015. It stood at 25.1% in Q3 2016: close to the peak level reached in late 2012 (25.4%). Youth employment was partly penalised by the decline in the number of beneficiaries of emplois d'avenir («future jobs») employment contracts, aimed at young people with few or no qualifications.

Unemployment rate (ILO definition)



Scope: Population of households, people aged 15 or over
Source: INSEE, Employment Survey

The unemployment rate for the over 50s rose by 0.5 points against the previous quarter and has returned to the level seen in the summer of 2015 (7.0%). Conversely, the unemployment rate for 25-49-year-olds fell by 0.2 points between Q2 and Q3 2016. It dropped by 0.8 points year on year.

The unemployment rate should fall through to mid-2017

In 2016, the labour force is expected to rise by 126,000, after +39,000 in 2015. The increase in the labour force stems primarily from the trend increase in the working age population; however, it should slow down due to people continuing to take early retirement, in the scheme specifically applying to long careers, and by the jobseekers' training plan announced in early 2016, which has been ramped up since the spring. In H1 2017, although the impact of these two schemes is expected to wane, the labour force should rise again, although not quite as fast (+49,000) as its spontaneous increase (+60,000). All in all, net job creations (+69,000 in H1 2017) should slightly exceed the anticipated rise in the labour force, and the unemployment rate should fall again: in mid-2017, it should stand at 9.5% of the labour force in Metropolitan France, and 9.8% for the whole of France (excluding Mayotte). ■

Changes to the active population, employment and unemployment in Metropolitan France

in thousands, SA, and in %

	Quarterly changes										Annual changes				
	2015				2016				2017		2013	2014	2015	2016	2017 H1
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2					
Population of the 15-64 age bracket	–17	–15	–12	–10	–9	–8	–9	–10	2	2	–81	–78	–54	–36	4
Population of the 15-59 age bracket	–13	–9	–5	–1	1	1	1	–1	0	0	–57	–49	–28	1	0
Labor force	**–42**	**64**	**51**	**–33**	**52**	**–19**	**78**	**16**	**24**	**25**	**126**	**149**	**39**	**126**	**49**
including:															
(a) Contribution of the population and the trend participation rate	*32*	*32*	*32*	*32*	*31*	*31*	*31*	*31*	*30*	*30*	*120*	*135*	*128*	*123*	*60*
(b) Estimated bending effects	*-2*	*–2*	*–2*	*–1*	*–4*	*–9*	*–18*	*–15*	*–6*	*–5*	*–22*	*–18*	*-8*	*–46*	*–10*
(c) Other short-term fluctuations (residual)	*–72*	*34*	*21*	*–64*	*25*	*–40*	*64*	*0*	*0*	*0*	*28*	*32*	*–80*	*50*	*0*
Employment	**14**	**18**	**30**	**40**	**60**	**50**	**47**	**44**	**34**	**35**	**124**	**25**	**102**	**200**	**69**
Reminder: End-of-period employment *(see "Employment" note)*	–3	40	20	59	60	39	54	34	34	36	180	–4	116	188	70
ILO unemployment	**–56**	**45**	**21**	**–73**	**–8**	**–69**	**31**	**–28**	**–10**	**–10**	**2**	**124**	**–63**	**–74**	**–20**
	Quarterly average										Average in the last quarter of the period				
ILO unemployment rate (%)															
Metropolitan France	10.0	10.1	10.1	9.9	9.9	9.6	9.7	9.6	9.6	9.5	9.8	10.1	9.9	9.6	9.5
France (including overseas departments)	10.4	10.4	10.5	10.2	10.2	9.9	10.0	9.9	9.9	9.8	10.1	10.5	10.2	9.9	9.8

Forecast

How to read it:
- the Employment line presents variations in the number of people in employment as a quarterly average, for consistency with the other data in the table,
- 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,
- in (a), the contribution of demographics and of trend activity behaviour includes all the effects of pensions reforms up to and including that in 2010.

Source: INSEE

Consumer prices

In November 2016 inflation stood at +0.5% year on year, according to provisional estimates. Through to mid-2017 it should see a moderate increase, to +1.0% year on year, with the recovery of energy prices and a rise in tobacco prices. After picking up in 2015, core inflation[1] virtually stabilised in 2016, mainly because the past depreciation of the Euro was no longer contributing to the increased cost of imported products. Through to June 2017, it should increase only slightly, by +0.7% year on year (against +0.5% in October 2016): it is likely that the earlier drop in commodity prices and the high level of unemployment will continue to limit inflationary pressures.

Headline inflation should rise moderately

In November 2016, according to the provisional estimate of the consumer price index, headline inflation rose to +0.5% year on year, after +0.4% in October (*Graph 1*). Energy prices picked up (+2.1% after +0.7% in October), food prices recovered (+0.3% after –0.1%) while the price of manufactured products continued to fall at the same pace (–0.6%). The prices of services increased once again by 1.0%.

1. The core inflation indicator calculated by INSEE is estimated by excluding the prices of energy, fresh food, public tarifs from the overall index. This indicator is corrected for tax measures and is seasonally-adjusted.

Headline inflation is likely to increase moderately during H1 2017 and should settle at +1.0% in June 2017. It should be driven mainly by energy prices and the price of tobacco, with the increase in taxes on these products in January 2017, while core inflation is unlikely to be much higher in mid-2017 than in autumn 2016.

Energy prices should continue to rise

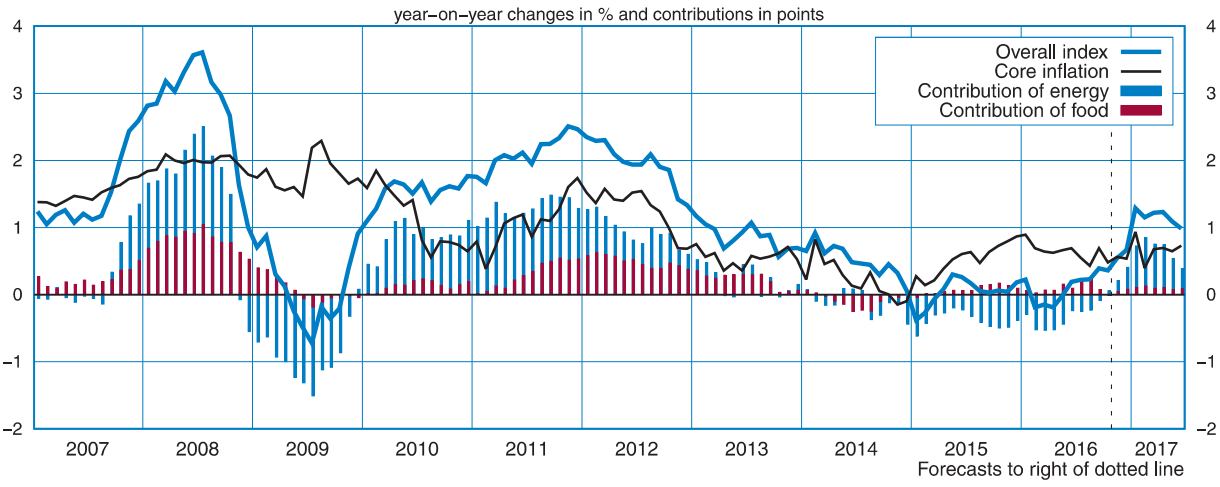
In November 2016, energy prices increased by 2.1% year on year, following the recent rise in crude oil prices. Assuming that the price of a barrel of Brent remains stable at $50 (€47.2), the rise in energy prices is set to continue mechanically due to the effect of the exit from the year-on-year figures of the sharp fall in prices at the beginning of 2016. In addition, energy taxation will increase again in January 2017. All in all, the rise in energy prices should settle at +3.8% year-on-year in June 2017.

Small rise in food inflation

Food prices should continue to pick up, but are expected to remain sluggish over the next half-year: +0.5% year-on-year in June 2017, after +0.3% in November 2016.

After variations due to weather conditions – which were particularly unfavourable for production in spring 2016, then favourable during the summer – and assuming normal conditions for the coming seasons, the prices of fresh food are likely to slow slightly through to mid-2017 (+1.4% in June 2017 after +2.1% in November 2016).

1 - Inflation in France



Source: INSEE

Excluding fresh products, food prices should start to rise again slightly (+0.4% in June 2017, after 0.0% in November). The prices of dairy products in particular are likely to pick up due to the recovery in world prices and the dairy industry's undertakings with regard to the price paid to farmers.

The prices of manufactured goods are set to decline further

The prices of manufactured goods should decline further, by 0.3% year-on-year in June 2017, after –0.6% in November 2016. The high level of unemployment and the gradual spread of the past fall in commodity prices are likely to continue to influence prices. However, the tightening of the "bonus-malus" scheme covering carbon emissions should contribute to an increase in the price of new cars.

Prices in clothing-footwear should remain stable overall at the beginning of 2017. However, a one-off increase is expected in June 2017, to +1.8% year-on-year, because of the later start to the summer sales.

Prices of healthcare products should continue to decrease substantially (–2.9% year-on-year in June 2017 after –2.5% in October 2016), especially drug prices, in line with the objective set out in the Social Security Financing Act for 2017, and the price of glasses and lenses, under the 2014 Consumer Law.

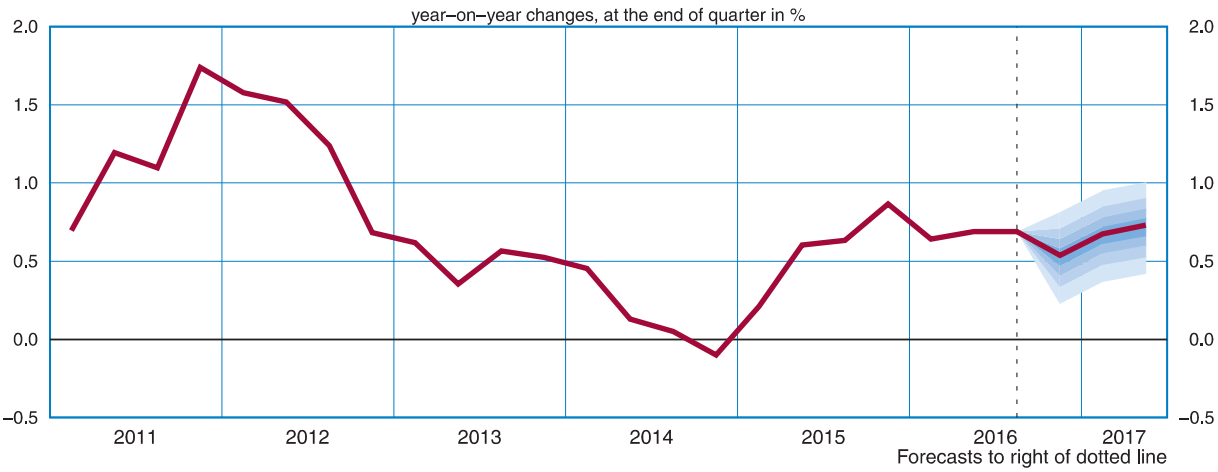
Prices of services are expected to accelerate slightly

The prices of services are expected to accelerate slightly through to June 2017 (+1.2% after +1.0% in November 2016). Prices of transport services should pick up with the gradual dissipation of the effects of the fall in oil prices on air transport (+0.8% year-on-year in June 2017 after –0.5% in October 2016). The prices of health services should accelerate significantly (+1.4% year-on-year in June 2017 after +0.3% in October), driven by the increase in the tariff for a general practitioner consultation in May 2017. The increase overall is likely to remain limited, however, due to the sluggishness of rents (+0.4% in June 2017 after +0.2% in October 2016), indexed against past inflation (*Focus*).

Core inflation should increase hardly at all

After recovering in 2015, core inflation was virtually stable in 2016, as import prices were no longer bolstered by the past depreciation of the Euro. By June 2017, it should increase very slightly, to +0.7% year-on-year, after +0.5% in October (*Graph 2*). ■

2 - The core inflation forecast for France and risks around the forecast



How to read it: the fan chart plots 80% of the likely scenarios around the baseline forecast. The first and darkest band covers the likeliest scenarios around the baseline, which have a combined probability of 20%. 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 40%. We can repeat the process, moving from the centre outwards and from the darkest band to the lightest, up to a 80% probability.

Source: INSEE

French developments

Consumer prices

changes as %

CPI* groups (2016 weightings)	October 2016		November 2016		December 2016		June 2017		Annual averages	
	yoy	cyoy	yoy	cyoy	yoy	cyoy	yoy	cyoy	2015	2016
Food (16.2%)	**–0.1**	**0.0**	**0.3**	**0.0**	**0.5**	**0.1**	**0.5**	**0.1**	**0.5**	**0.6**
including: fresh food (2.2%)	*0.0*	*0.0*	*2.1*	*0.0*	*3.6*	*0.1*	*1.4*	*0.0*	*5.3*	*3.5*
excluding: fresh food (14.0%)	*–0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*	*0.1*	*–0.2*	*0.1*
Tobacco (2.0%)	**0.1**	**0.0**	**0.1**	**0.0**	**0.1**	**0.0**	**4.0**	**0.1**	**0.3**	**0.1**
Manufactured products (26.5%)	**–0.6**	**–0.2**	**–0.6**	**–0.2**	**–0.7**	**–0.2**	**–0.3**	**–0.1**	**–0.9**	**–0.5**
including:										
clothing and footwear (4.1%)	*0.2*	*0.0*	*0.3*	*0.0*	*0.3*	*0.0*	*1.8*	*0.1*	*-0.9*	*0.2*
medical products (4.7%)	*–2.5*	*–0.1*	*–2.3*	*–0.1*	*–2.4*	*–0.1*	*–2.9*	*-0.1*	*–3.5*	*–3.0*
other manufactured products (17.7%)	*–0.4*	*–0.1*	*–0.3*	*–0.1*	*–0.4*	*–0.1*	*–0.1*	*0.0*	*–0.3*	*–0.1*
Energy (7.7%)	**0.7**	**0.1**	**2.1**	**0.2**	**4.2**	**0.3**	**3.8**	**0.3**	**–4.7**	**–2.8**
including: oil products (4.2%)	*1.8*	*0.1*	*4.1*	*0.2*	*7.3*	*0.3*	*4.1*	*0.2*	*–10.8*	*–5.4*
Services (47.7%)	**1.0**	**0.5**	**1.0**	**0.5**	**0.9**	**0.4**	**1.2**	**0.6**	**1.2**	**1.0**
including: rent-water (7.7%)	*0.2*	*0.0*	*0.3*	*0.0*	*0.3*	*0.0*	*0.4*	*0.0*	*0.9*	*0.6*
health services (6.0%)	*0.3*	*0.0*	*0.2*	*0.0*	*–0.3*	*0.0*	*1.4*	*0.1*	*0.5*	*0.2*
transport (2.8%)	*–0.5*	*0.0*	*0.1*	*0.0*	*–0.2*	*0.0*	*0.8*	*0.0*	*0.9*	*–1.6*
communications (2.5%)	*3.2*	*0.1*	*2.9*	*0.1*	*2.9*	*0.1*	*1.0*	*0.0*	*1.2*	*2.1*
other services (28.8%)	*1.3*	*0.4*	*1.3*	*0.4*	*1.3*	*0.4*	*1.5*	*0.4*	*1.5*	*1.3*
All (100%)	**0.4**	**0.4**	**0.5**	**0.5**	**0.7**	**0.7**	**1.0**	**1.0**	**0.0**	**0.2**
All excluding energy (92.3%)	0.3	0.3	0.4	0.4	0.4	0.4	0.7	0.7	0.5	0.5
All excluding tobacco (98.1%)	0.4	0.3	0.6	0.5	0.7	0.6	0.9	0.9	0.0	0.2
Core inflation (60.8%)**	**0.5**	**0.3**	**0.6**	**0.3**	**0.5**	**0.3**	**0.7**	**0.4**	**0.5**	**0.6**

Provisional — Forecast

yoy : year-on-year

cyoy : contribution to the year-on-year value of the overall index

*Consumer price index (CPI)

**Index excluding public tariffs and products with volatile prices, corrected for tax measures.

Source: INSEE

The differences in price dynamics between France and its neighbours can be ascribed more to fiscal policy than to underlying inflationary pressures

In 2016, changes in prices as measured by the Harmonised Index of Consumer Prices (HICP) are expected to be similar in France and Germany, i.e. up by 0.2% on average over the first ten months of 2016 (*Graph 1*). However, prices are expected to have fallen in Spain (–0.6%) and Italy (–0.1%). French inflation stands out as a result of its energy component, which has fallen less than in neighbouring countries, especially due to differences in the taxation of these products.

Core inflation gives the underlying trend in the variation in prices by excluding the most volatile prices (energy and agri-food products).[1] Over the first ten months it was higher in Germany (+1.1%) than in France (+0.6%). The underlying increase in French prices was closer to that of Spain (+0.6%) and Italy (+0.5%).

1. This indicator of core inflation is slightly different to the one calculated by INSEE, as the latter also corrects for public tariffs, tax measures and seasonal variation.

In France, energy prices fell less sharply, mainly due to increases in taxes on these products

In the wake of the fall in oil prices, prices of energy products fell back in the Eurozone. This decline was less pronounced however in France (–3.6% on average) than in the other countries (–6.4% in Germany, –6.1% in Italy, and –10.6% in Spain).

This gap is mainly due to the taxation of these products, whose changes and structure differ from one country to the next. Thus, in January 2016 indirect taxation on energy products increased in France. The TICPE (domestic consumption tax on energy products) was raised by 3 cents per litre for diesel and 1.7 cents per litre for premium-grade petrol (excluding VAT). Similarly, the domestic consumption tax on gas (TICGN) and the domestic final consumption tax on electricity (TICFE) also increased. These hikes contributed +2.3 points to energy inflation in 2016 in France, and +0.2 points to headline inflation. In the other countries, changes in taxation had a neutral effect on prices.

Neutralising the effects of the variation in taxes would mean that the fall in the price of energy products in France was close to that in Germany and in Italy (*Graph 2*). In Spain, the fall is more pronounced. Electricity prices in particular fell considerably there in 2016, contributing –3.5 points to the decline in energy prices. In addition, fuel prices in Spain were adjusted downwards more in line with the fall in oil prices. In the tax-inclusive price of fuels, the share of excise duties on the quantities consumed is in fact lower in Spain than in the other countries: in October 2016, these indirect taxes represented approximately 47%[2] of the total price of 95-octane lead-free petrol in Spain compared to 59% in France and 60% in Italy. The prices of petroleum products therefore react to variations in oil prices more in Spain.

Core inflation is higher in Germany

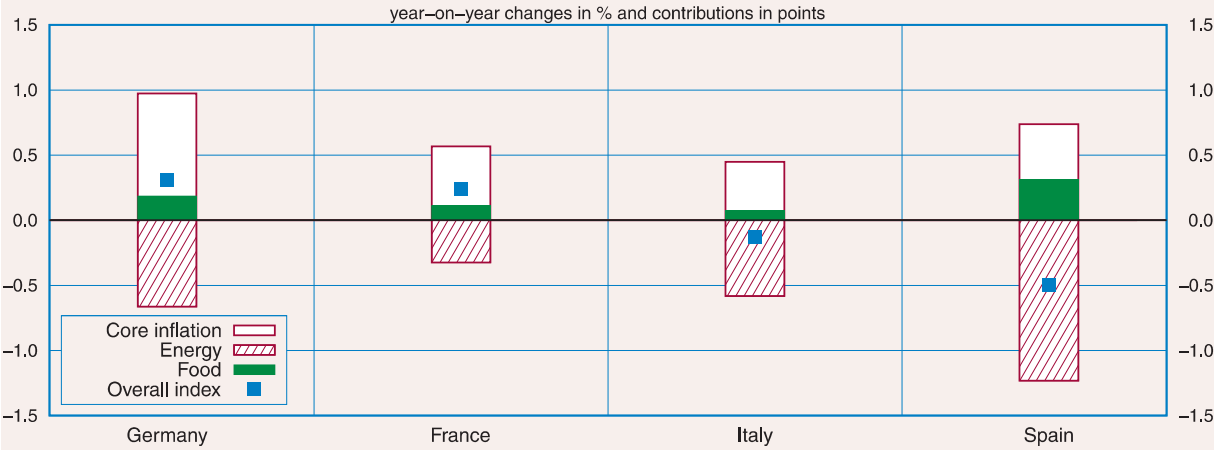
German core inflation (+1.1%) is higher than that of its neighbours and in particular higher than in France (+0.6%). This difference may be due to substantially lower unemployment than in the rest of the Eurozone (4.0% compared to 10.0% in France, 11.5% in Italy and 19.4% in Spain) and markedly more vigorous wages: the German average wage increased by 2.1% over the year to Q2 2016, compared to 1.1% on average in the other three countries.

Nevertheless, considered by product, the greater vigour of core inflation in Germany compared to France is concentrated on only four items: private vehicles and their maintenance, transport services, healthcare, and rents and housing-related services.

First of all, purchase prices and the costs of using private vehicles (excluding fuel) were less buoyant in France (+0.2%) than in Germany (+1.5%), due to slower increases in the prices of new cars. Prices of repair services increased much less in France than in Germany. Only this item, whose contribution to the core inflation differential amounts to +0.13 points, seems to reveal a real difference in the underlying inflationary pressures between the two economies (*Table*).

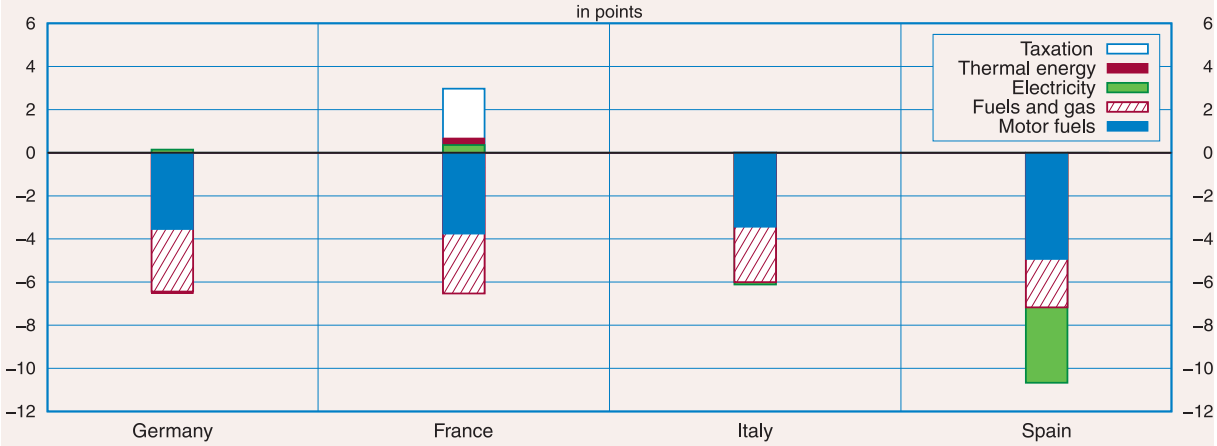
2. According to the European Commission's Weekly Oil Bulletins in October 2016.

1 - Average inflation in 2016 and contributions of the different components



Note: inflation for 2016 is calculated by the year-on-year averages of the index from January to October 2016.
Source: Eurostat

2 - Contributions of energy products to inflation in 2016



Note: inflation for 2016 is calculated by the year-on-year averages of the index from January to October 2016.
Source: Eurostat

For the three other items, the gap is of a rather different nature.

Prices of transport services fell in 2016 in France, especially in air transport, with prices coming down due to the past drop in oil prices. Conversely, transport prices rose in Germany, as the fall in oil prices had already been passed on more quickly than in France. Also, in France the price of public transport fell in September 2015 (in particular the Navigo season ticket in the Paris region), influencing the overall decline in 2016. The transport sector thus contributed +0.14 points to the difference in core inflation.

In addition, the reinforcement of savings measures in health insurance in France also led to considerable efforts to reduce the prices of pharmaceutical products (–2.5%), whereas, on the contrary, in Germany drug prices rose (+2.4%). The healthcare sector thus contributed +0.14 points to the difference in core inflation. The gap on this item appears above all to be a consequence of drug pricing policies, without revealing any difference in inflationary pressures.

Finally, the prices of rents and housing-related services increased more moderately in France (+0.6%) than in Germany (+1.1%), contributing +0.10 points to the difference in core inflation between the two countries. This gap is explained by a difference in the regulation on rent increases. In particular, the increase in rents on main residences slowed in France (+0.3% on average over the year in 2016) because rents are mainly indexed on past inflation. In Germany, although controlled, rent increases are generally freely decided between landlord and tenant. This differential is not expected to ease before mid-2017, in view of the method of calculating the index for rent increases in France. ■

Table - Annual changes in the different components of core inflation and contribution to the difference in inflation between France and Germany

	Annual changes (%) 2016		Contribution to the gap between France and Germany
	France	Germany	
Core inflation	**0.6**	**1.1**	**0.43**
Purchase prices and costs of using private vehicles (excluding fuel)	0.2	1.5	0.13
Transport services	–2.0	1.4	0.14
Health products and services	–0.6	1.4	0.14
Rents and housing-related services	0.6	1.1	0.10
Communications	0.7	–1.1	–0.08
Other	1.0	1.1	0.00

Sources: Eurostat, INSEE calculations

Wages

In 2016, nominal wages in the market sectors are expected to increase at almost the same rate as in 2015, as an annual average: +1.2% for the basic monthly wage and +1.5% after +1.6% for the average wage per capita. Prices are likely to be stable, so wages in real terms should slow in 2016: +1.4% after +1.8% for the average wage per capita.

In H1 2017 the average nominal wage per capita is expected to increase at a similar pace as in H2 2016. However, the anticipated upswing in inflation is likely to undermine the purchasing power of the wage per capita, for which the annual growth overhang is expected to be +0.4% in mid-2017, compared to +1.3% one year earlier.

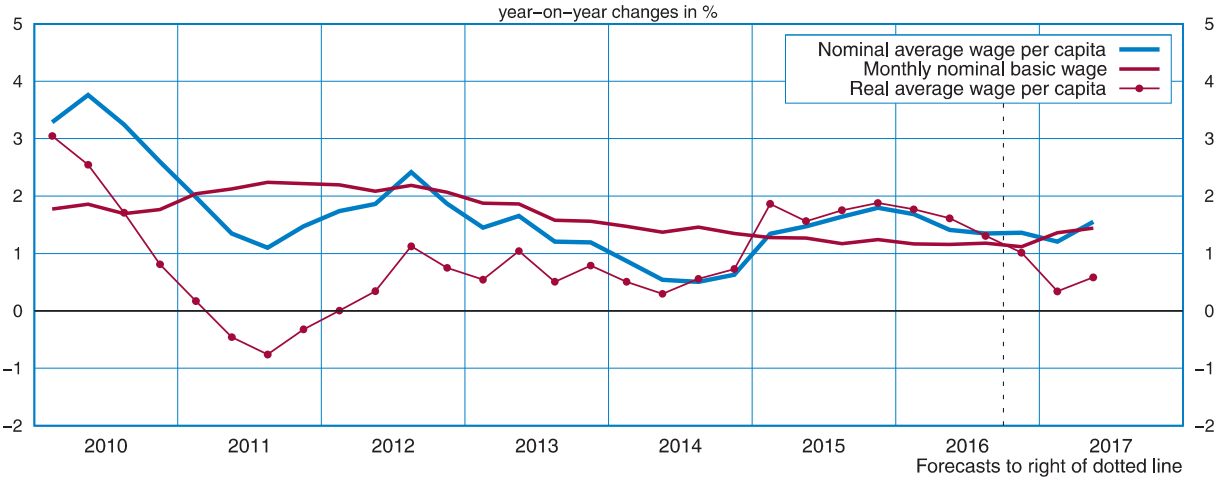
In general government, the average nominal wage per capita should accelerate sharply in 2016 (+1.4% after +0.5% in 2015), as a result of the increase in the index point for civil servants and statutory measures. It should also accelerate in real terms (+1.4% after +0.7%). The slight increase in the index point in February 2017 will raise nominal wages in H1, but the anticipated increase in prices is likely to hold back the average wage per capita in real terms: its annual growth overhang should be +0.6% in mid-2017, compared to +1.2% one year earlier.

In 2016, wages are expected to rise at almost the same pace as in 2015 in nominal terms, but should slow in real terms

In 2016, the minimum wage was raised slightly less (+0.6%) than one year earlier (+0.8%) and inflation has remained very low; however, unemployment has edged down slightly. Consequently, the basic monthly wage[1] in the non-agricultural market sectors should rise at the same pace as in 2015 (+1.2% as an annual average, *Graph* and *Table*). The average wage per capita, which covers a broader scope of remunerations (bonuses, profit-sharing, and overtime payments) has an irregular quarterly profile: it increased sharply in Q1 (+0.6%) – especially due to bonuses being paid earlier this year than previously – before slowing significantly in reaction in Q2 (+0.1%). In H2, the average wage per capita is expected to increase at the same rate as in H1 (+0.7% half-year on half-year). On average over the year, it should rise by 1.5% after +1.6% in 2015.

1. For a definition of *basic minimum wage* and *nominal average wage per capita*, see the "Definitions" section on the website www.insee.fr

Change in the nominal and real average wage per capita and basic wage



Scope: non-agricultural market sector
Sources: INSEE, Dares

In H1 2016, since prices[2] were stable, real wages increased at the same pace as nominal wages (+0.7% over the half-year). In H2, the anticipated slight acceleration of prices (+0.4%) is likely to have undermined the purchasing power of wages (+0.3%). Over 2016, as a whole, the increase in real wages is likely to slow down: +1.1% after +1.4% in 2015 for the basic monthly wage and +1.4% after +1.8% for the average wage per capita.

In early 2017, wages should continue to rise at almost the same pace as in H2 2016

Assuming that there is no "extra", the minimum wage should be increased by 0.8% on 1st January 2017. In H1 2017, the upturn in inflation is expected to be only partly reflected in wages and the average nominal wage per capita should barely pick up (+0.8% after +0.7% half-year on half-year). In real terms, wages are likely to rise at the same pace as in H2 2016 (0.3%).

By mid-2017, the annual growth overhang for the average wage per capita in real terms is expected to be +0.4%, compared to +1.3% in mid-2016, due to a higher price growth overhang (+0.8% after –0.1% one year earlier).

In the civil service, nominal wages are likely to accelerate in 2016

In the civil service, the index point rose in July 2016 (+0.6%) for the first time since 2010. In addition, the civil servants' purchasing power guarantee scheme was renewed. However, the increases negotiated in the framework of the agreement on "professional career paths, careers and remunerations" in October 2015 have had only a limited effect on wages in 2016, as they are mainly implemented by converting bonuses into index points. Throughout 2016, the average wage per capita is expected to have picked up, both in nominal terms (+1.4% after +0.5% in 2015), and in real terms (+1.4% after +0.7%).

In 2017, the purchasing power guarantee scheme should be renewed. The index point will be increased by 0.6% in February 2017. Consequently, the average nominal wage per capita should accelerate slightly in general government, with a growth overhang of +1.5% in mid-2017, compared to +1.1% one year earlier; in real terms, however, the average wage per capita should slow down significantly, with a carry-over effect of +0.6% in mid-2017 compared to +1.2% one year earlier. ■

2. Inflation is measured here by the variation in household consumer prices, provided by the quarterly national accounts.

Variation in the basic monthly wage and the average wage per capita in the non-agricultural market sector and in general government

in %

	Quarterly growth rates						Half-yearly rates			Annual averages		
	2016				2017		2016 H1	2016 H2	2017 H1	2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2						
Basic monthly wage	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.8	1.2	1.2	1.2
Average wage per capita in the non-agricultural market sector (NAMS)	0.6	0.1	0.3	0.4	0.4	0.4	0.7	0.7	0.8	1.6	1.5	1.2
Average wage per capita in general government (GG)										0.5	1.4	1.5
Household consumer price index (quarterly national accounts)	–0.1	0.1	0.1	0.3	0.4	0.2	0.0	0.4	0.6	–0.2	0.0	0.8
Real basic monthly wage	0.3	0.2	0.2	0.0	0.0	0.2	0.6	0.2	0.2	1.4	1.1	0.4
Real average wage per capita (NAMS)	0.7	0.0	0.2	0.1	0.0	0.2	0.7	0.3	0.3	1.8	1.4	0.4
Real average wage per capita (GG)										0.7	1.4	0.6

Forecast

Sources: INSEE, Dares

Household income

In 2016 household purchasing power appeared to have picked up moderately: +1.8% after +1.6% in 2015. This slight acceleration would seem to be mainly the result of a rise in gross disposable income (GDI) (+1.8% in 2016 after +1.4%), in particular wage income. At the same time, consumer prices are expected to have stabilised after falling 0.2% in 2015.

In H1 2017, gains in household purchasing power are expected to slow down (+0.4% half-year on half-year after +0.6% in H2 2016). Indeed, growth in GDI is expected to slow slightly (0.9% after +1.0%), whilst consumer prices should pick up a little (+0.6% after +0.4%).

Earned income is expected to remain buoyant in 2016 and into H1 2017

In 2016 households' earned income picked up slightly (+1.8% after +1.7% in 2015, *Table 1*), in particular wages received by households (+2.1% after +1.6%). Payroll employment in the non-agricultural market sector is expected to increase by 0.9% in 2016, on average over the year, after 0.0% in 2015 (*Graph*) and the average wage per capita is expected to rise at virtually the same rate as in 2015 (+1.5% after +1.6%). However, the earned income of self-employed workers is expected to slip back in 2016 (–0.1% after +2.4% in 2015). In H1 2017 wage income is expected to rise at the same pace as in H2 2016 (+1.1% half-year on half-year) whilst the income of self-employed workers is expected to gather pace (+1.0% after +0.7%). All in all, earned income is expected to grow by 1.1% during H1 2017, after +1.0% in H2 2016.

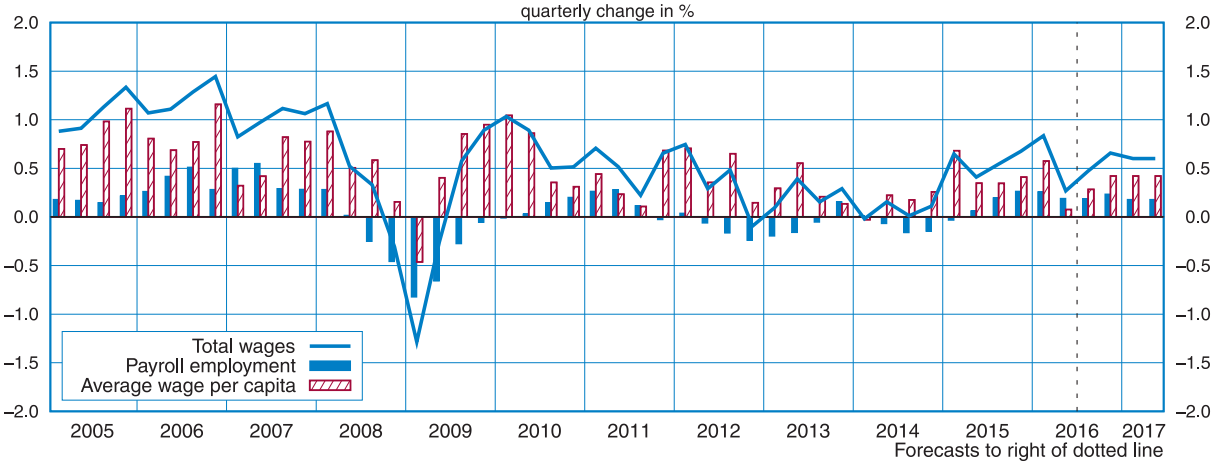
Net property income is expected to have recovered a little in 2016 (+0.9%) after a decline in 2015 (–1.2%). Households are still benefiting from a fall in interest rates, amplified by much renegotiation of existing mortgages. In addition, in the absence of further reductions in the rate paid on the Livret A savings account in 2016, interests received by households are expected to have declined less than in 2015. However, income from life insurance is likely to have fallen. At the beginning of 2017, property income is expected to slip back slightly again (–0.3% over the half-year) as the effect of mortgage renegotiations is expected to fade a little.

The gross operating surplus of pure households is expected to slow slightly, from +1.2% in H1 2016 to +0.9% in H2 2016 and then +1.0% in H1 2017.

Social benefits are expected to have increased in 2016 as they did in 2015

Social benefits in cash are expected to have increased 1.9% over 2016 as a whole, as in 2015 (*Table 3*).

Breakdown of the total gross wages received by households in the competitive non-agricultural sector



Source: INSEE

French developments

Social security benefits are expected to have slowed down in 2016 (+1.8% after +2.0% in 2015). Indeed, family benefits appear to have fallen back on average over the year, under the effect of a full year's application of the means testing of family allowance and the dip in young child allowance (PAJE). Retirement pensions have also contributed to this slowdown due to lower raises than in previous years given the low rate of inflation. Welfare benefits are likely to have accelerated a little over the year. They fell back at the start of the year due to the ramping up of the activity premium, the amounts of which did not immediately equal those of the old RSA (earned income supplement) and the employment premium; they then bounced back considerably, as the rate of applicants for the activity premium progressively increased.

In H1 2017, social security benefits are expected to pick up slightly: +1.0% half-year on half-year after +0.8%. Family allowances are expected to return to a rate of growth closer to their trend, as the effect of the change to means testing no longer holds them back. Retirement pensions are also expected to gather pace a little. On the other hand, welfare benefits are expected to slow down. All in all, social benefits in cash should rise in H1 2017 at virtually the same rate as in H2 2016 (+1.0% after +0.9%).

Table 1

Household gross disposable income

	Quarterly changes in %										Annual changes in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross disposable income (100%)	**0.6**	**0.2**	**0.7**	**0.5**	**0.5**	**0.3**	**0.7**	**0.3**	**0.4**	**0.5**	**1.4**	**1.8**	**1.5**
including:													
Earned income (70%)	0.7	0.3	0.5	0.5	0.6	0.2	0.4	0.6	0.5	0.5	1.7	1.8	1.7
Gross wages and salaries (62%)	*0.6*	*0.4*	*0.5*	*0.6*	*0.7*	*0.3*	*0.5*	*0.6*	*0.6*	*0.6*	*1.6*	*2.1*	*1.7*
GOS of sole proprietors[1] (8%)	*1.8*	*–0.5*	*0.2*	*0.0*	*0.2*	*–0.6*	*0.2*	*0.5*	*0.5*	*0.5*	*2.4*	*–0.1*	*1.2*
Social benefits in cash (35%)	0.3	0.4	0.4	0.6	0.4	0.4	0.5	0.4	0.5	0.5	1.9	1.9	1.5
GOS of "pure" households (13%)	–0.1	–0.1	0.3	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.1	2.0	1.6
Property income (8%)	–0.4	0.0	–0.4	0.1	0.6	0.3	0.4	0.2	–0.1	–0.2	–1.2	0.9	0.1
Social contributions and taxes (–27%)	0.1	0.8	–0.6	0.9	0.8	0.5	–0.4	1.0	0.7	0.4	1.8	1.8	1.7
Contributions of households (–11%)	*0.9*	*0.7*	*0.5*	*0.8*	*0.7*	*0.4*	*0.3*	*0.5*	*0.8*	*0.4*	*2.0*	*2.3*	*1.7*
Income and wealth tax (including CSG and CRDS) (–16%)	*–0.4*	*0.8*	*–1.3*	*0.9*	*0.9*	*0.5*	*–0.9*	*1.4*	*0.7*	*0.4*	*1.7*	*1.4*	*1.6*
Household consumer prices (quarterly national accounts)	**–0.1**	**0.2**	**–0.1**	**0.0**	**–0.1**	**0.1**	**0.1**	**0.3**	**0.4**	**0.2**	**–0.2**	**0.0**	**0.8**
Purchasing power of gross disposable income	**0.7**	**0.0**	**0.8**	**0.5**	**0.6**	**0.2**	**0.6**	**0.1**	**0.0**	**0.3**	**1.6**	**1.8**	**0.6**
Household purchasing power by consumption	**0.6**	**–0.1**	**0.7**	**0.4**	**0.5**	**0.1**	**0.5**	**0.0**	**–0.1**	**0.2**	**1.2**	**1.4**	**0.2**

Forecast

How to read it: the figures in parentheses give the structure of the year 2015.

1. The gross operating surplus (GOS) of sole proprietors is the balance of the operating accounts of sole proprietorships. It is mixed income, because it remunerates the work performed by the sole proprietor, and possibly the members of his family, but also contains the profit achieved as an enterpreneur.

Source: INSEE

Table 2

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

	Quarterly changes in %										Annual changes in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Non-financial enterprises (67%)	0.7	0.4	0.6	0.7	0.9	0.3	0.5	0.7	0.6	0.6	1.7	2.4	1.9
including: Average wage per capita	*0.7*	*0.3*	*0.4*	*0.4*	*0.6*	*0.1*	*0.3*	*0.4*	*0.4*	*0.4*	*1.6*	*1.4*	*1.2*
Financial corporations (4%)	–0.3	0.5	–0.1	0.7	0.5	0.5	0.6	0.6	0.7	0.7	–0.4	1.9	2.1
General government (22%)	0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.5	0.4	0.5	1.0	1.5	1.5
Households excluding sole proprietors (2%)	0.9	0.2	–0.1	–0.3	–0.7	0.0	–0.3	0.0	0.0	0.0	–0.3	–1.1	–0.1
Total gross wages received by households	**0.6**	**0.4**	**0.5**	**0.6**	**0.7**	**0.3**	**0.5**	**0.6**	**0.6**	**0.6**	**1.6**	**2.1**	**1.7**
including: Non-agricultural market sectors	*0.6*	*0.4*	*0.5*	*0.7*	*0.8*	*0.3*	*0.5*	*0.7*	*0.6*	*0.6*	*1.5*	*2.3*	*1.9*

Forecast

How to read it: The figures in parentheses give the structure of the year 2015.

Source: INSEE

Taxes and social contributions are likely to gather pace at the beginning of 2017

Over 2016 as a whole, taxes and social contributions paid by households are expected to have risen at the same pace as in 2015 (+1.8%). The acceleration in households' social contributions (+2.3% after +2.0% in 2015) is expected to offset the slowdown in income and wealth taxes (+1.4% after +1.7%).

As every year, the measures decided concerning income and wealth taxes for 2016 affect the quarterly tax profile in H2. In particular, income tax relief benefiting low-income households and the indexing of the income tax brackets would seem to have led to a drop in Q3 (+0.9%) followed by a rebound in Q4 (+1.4%).

In H1 2017, income tax is expected to gather pace in reaction to this situation (+1.0% half-year on half-year after +0.4%). As for households' contributions, they are expected to gather pace slightly compared to H2 2016 (+1.2% after +0.8%): the increase in the pension contributions of salaried workers on 1st January is expected to be only partly offset by the reduction in those of self-employed workers. All in all, taxes and social contributions are expected to pick up in H1 2017 (+1.1% after +0.6%).

After a slight acceleration in 2016, purchasing power is expected to slow down in H1 2017

All in all, the nominal gross disposable income (GDI) of households is expected to pick in 2016 (+1.8% after +1.4% in 2015). As consumer prices stabilise (0.0% after –0.2%),household purchasing power is expected to rise slightly faster (+1.8% after +1.6% in 2015). Adjusted to an individual level to account for demographic changes, purchasing power per consumption unit is expected to rise by 1.4%, after +1.2%.

In H1 2017, the increase in households' GDI is expected to slow slightly (+0.9% after +1.0% in H2 2016). In addition, consumer prices are expected to gather pace a little, with the result that the purchasing power of GDI is likely to see a downturn in the first part of the year (+0.4% after +0.6%). ■

Table 3

	Quarterly changes in %										Annual changes in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Social cash benefits received by households (100%)	**0.3**	**0.4**	**0.4**	**0.6**	**0.4**	**0.4**	**0.5**	**0.4**	**0.5**	**0.5**	**1.9**	**1.9**	**1.5**
Social Security benefits in cash (72%)	0.3	0.4	0.4	0.6	0.6	0.1	0.4	0.3	0.5	0.5	2.0	1.8	1.4
Other social insurance benefits (19%)	0.4	0.3	0.3	0.6	0.8	0.5	0.7	0.4	0.4	0.6	1.9	2.3	1.7
Social assistance benefits in cash (8%)	–0.1	0.2	0.6	0.8	–1.8	3.0	0.7	0.6	0.3	0.4	1.7	1.9	2.2
Total social contribution burden by households (100%)	–0.1	0.5	0.6	0.7	0.7	0.0	0.3	0.5	0.7	0.5	1.3	2.0	1.6
Actual social contributions paid	–0.1	0.6	0.7	0.7	0.8	–0.1	0.3	0.6	0.8	0.5	1.4	2.1	1.7
including: Employers contributions[1] *(63%)*	*–0.6*	*0.5*	*0.8*	*0.7*	*0.9*	*–0.4*	*0.3*	*0.6*	*0.7*	*0.5*	*1.0*	*2.0*	*1.7*
Contributions of households (37%)	*0.9*	*0.7*	*0.5*	*0.8*	*0.7*	*0.4*	*0.3*	*0.5*	*0.8*	*0.4*	*2.0*	*2.3*	*1.7*

Forecast

How to read it: The figures in parentheses give the structure of the year 2015.

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

Household consumption and investment

In Q3 2016, household consumption stagnated once again. Expenditure on goods fell back, in particular those on furnishings and automobiles, while consumption of services picked up again. In Q4 consumption is expected to rise anew (+0.5%) thanks to a recovery in the purchase of goods. Energy expenditure is set to pick up, as are purchases of consumer durables. Furthermore, consumption of services is likely to continue to grow at a moderate rate. In H1 2017 household consumption is expected to rise by 0.3% per quarter, driven by the recent purchasing power gains. On average over the year 2016, household consumption expenditure is expected to grow in line with 2015 (+1.5%), even though household purchasing power gains are expected to be slightly higher (+1.8% after +1.6% in 2015). For this reason the savings ratio is expected to rise on average over the year 2016 by 0.2 points, reaching 14.7%. It is expected to fall in H1 2017 to return to virtually the same level as mid-2016.Over the year 2016 as a whole, household investment in housing is expected to bounce back (+1.4% on average) after four years of decline. It should continue to increase sharply in H1 2017.

Consumption stagnated once again in Q3 2016

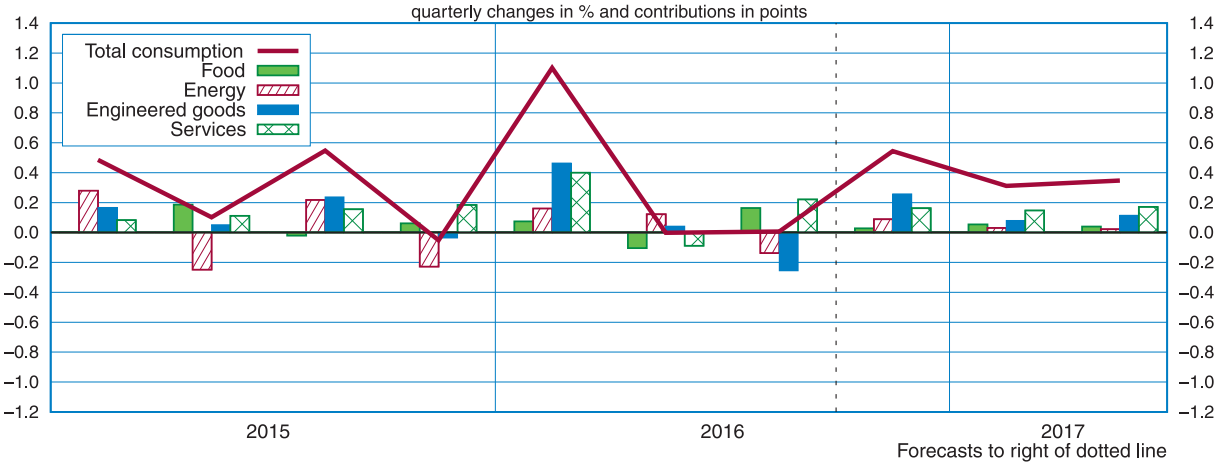
In Q3 2016 household consumption stagnated for the second quarter running (*Graph 1*). The recovery in consumption of services (+0.4% after –0.2%) offset the marked decline in expenditure on goods (–0.5% after +0.1%). In particular, expenditure on furnishings slumped (–6.1%) after a very vigorous first quarter, and automobile purchases continued to slip back (–0.3% after –1.0%), as did expenditure on clothing (–0.8% after –0.6%). Energy consumption decreased substantially in summer (–1.7%) as temperatures in September were higher than the seasonal norms, after a fairly cold winter and spring.

Consumption of services picked up in summer (+0.4% after –0.2%), most notably due to a recovery in transport expenditure and a rebound in accommodation and food services, in spite of further terrorist attacks in France and the end of the Euro 2016 football tournament. However, purchases of leisure services did not recover (–0.2%) after the downturn in Q2 (–2.0%) which came in reaction to the Euro 2016 football ticket sales in Q1.

In Q4 2016, consumption is expected to pick up moderately

In Q4 2016 total household consumption is expected to pick up moderately (0.5%; *Table*). Consumption of goods should regain some momentum (+0.8% after –0.5%). Energy consumption should bounce back (+1.1% after –1.7%), in particular spending on gas and electricity. Purchases of consumer durables are expected to pick up (+2.0% after –2.3%). Expenditure on furnishings is likely to regain momentum (+2.6% after –6.1%), and automobile purchases should rebound sharply (+1.7% after –0.3%). Lastly, consumption of services is expected

1 - Contributions of the various items to quaterly household consumption



Source: INSEE

to grow at a slightly more moderate rate than in Q3 (+0.3%). In particular, expenditure on transport and accommodation and food services is expected to slow down somewhat, while leisure consumption is likely to recover only slightly.

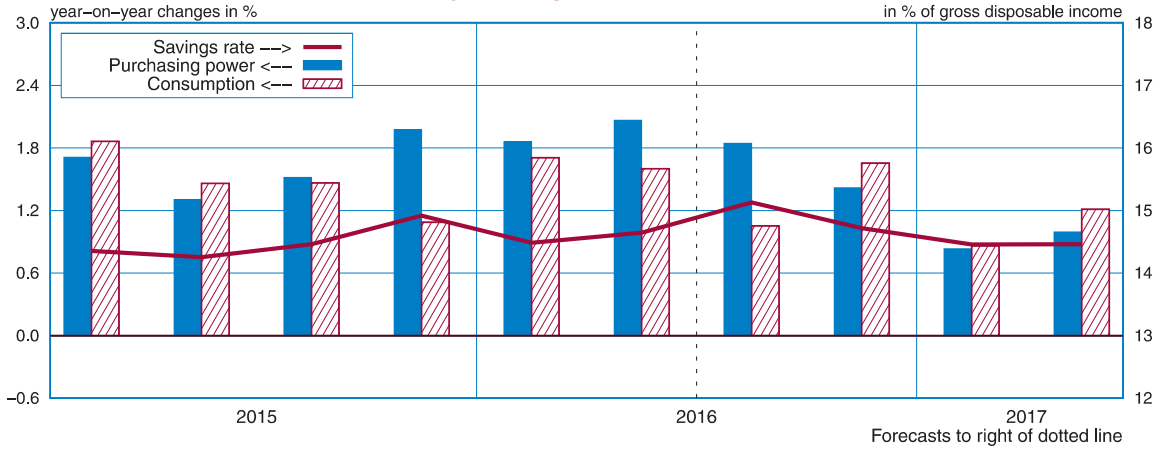
In H1 2017, consumption is expected to increase by 0.3% per quarter

In H1 2017 household consumption is expected to rise moderately once again (+0.3% per quarter), driven by the recent increases in purchasing power. Consumption of manufactured goods is expected to slow whilst remaining sustained, automobile purchases in particular. Consumption of services should continue to grow at the same moderate pace (+0.3% per quarter).

By mid-2017, the savings ratio is expected to stand at 14.5%, virtually the same level as mid-2016

On average over the year 2016, household consumption expenditure is expected to rise in line with 2015 (+1.5%), while the increase in household purchasing power is expected to be slightly higher than last year (+1.8% after +1.6%). As a result, households' savings ratio is expected to increase to 14.7% in 2016, 0.2 points more than in 2015 (*Graph 2*). However, the savings ratio has been uneven: first it was down in Q1 2016 (from 14.9% at end 2015 to 14.5%), due to a sharp rise in household consumption, then it increased strongly as expenditure stagnated, and is thought to have reached 15.1% in the summer. It is then expected to decline moderately, down to 14.5% by mid-2017, virtually the same level as mid-2016.

2 - Savings ratio and variations in consumption and in purchasing power of gross disposable income



Source: INSEE

Household consumption and investment expenditure

at chain-link previous year prices, SA-WDA

	Quarterly changes in %										Annual changes in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Total household consumption expenditures (G+S)	**0.5**	**0.1**	**0.5**	**–0.1**	**1.1**	**0.0**	**0.0**	**0.5**	**0.3**	**0.3**	**1.5**	**1.5**	**1.0**
Tourism balance	10.9	–0.3	8.8	6.5	–0.5	–5.0	–2.8	–1.0	0.0	0.0	–11.3	2.8	–3.5
Services (S)	**0.2**	**0.2**	**0.3**	**0.3**	**0.7**	**–0.2**	**0.4**	**0.3**	**0.3**	**0.3**	**1.0**	**1.4**	**0.9**
Goods (G)	**0.9**	**0.0**	**0.9**	**–0.4**	**1.5**	**0.1**	**–0.5**	**0.8**	**0.4**	**0.4**	**1.9**	**1.7**	**1.0**
including:													
Food (AZ-C1)	**0.0**	**1.0**	**–0.1**	**0.3**	**0.4**	**–0.6**	**0.9**	**0.2**	**0.3**	**0.2**	**1.2**	**0.9**	**0.9**
Agriculture goods (AZ)	–0.5	1.3	–0.3	–0.6	1.2	–1.6	–0.8	1.2	0.4	0.2	–0.3	–0.4	0.7
Agri-food products (C1)	0.1	1.0	–0.1	0.5	0.3	–0.4	1.2	0.0	0.3	0.2	1.5	1.2	1.0
Energy (DE-C2)	**3.3**	**–2.9**	**2.6**	**–2.7**	**1.9**	**1.5**	**–1.7**	**1.1**	**0.4**	**0.3**	**1.4**	**1.0**	**1.0**
Energy, water and waste (DE)	7.3	–5.2	2.4	–2.3	2.6	3.0	–3.4	1.9	0.7	0.5	2.1	1.6	1.5
Coke and refined petroleum (C2)	–0.9	–0.2	2.9	–3.0	1.1	–0.4	0.7	0.0	0.0	0.0	0.7	0.1	0.3
Engineered goods (C3-C5)	**0.8**	**0.2**	**1.1**	**–0.2**	**2.2**	**0.2**	**–1.2**	**1.2**	**0.4**	**0.5**	**2.6**	**2.5**	**1.1**
Manufactured goods (C1-C5)	**0.4**	**0.5**	**0.8**	**–0.2**	**1.4**	**–0.1**	**–0.1**	**0.6**	**0.3**	**0.4**	**2.0**	**1.8**	**1.0**
Investment expenditure	**0.0**	**0.1**	**0.1**	**0.4**	**0.3**	**0.4**	**0.6**	**0.6**	**0.6**	**0.6**	**–0.8**	**1.4**	**1.9**

Forecast

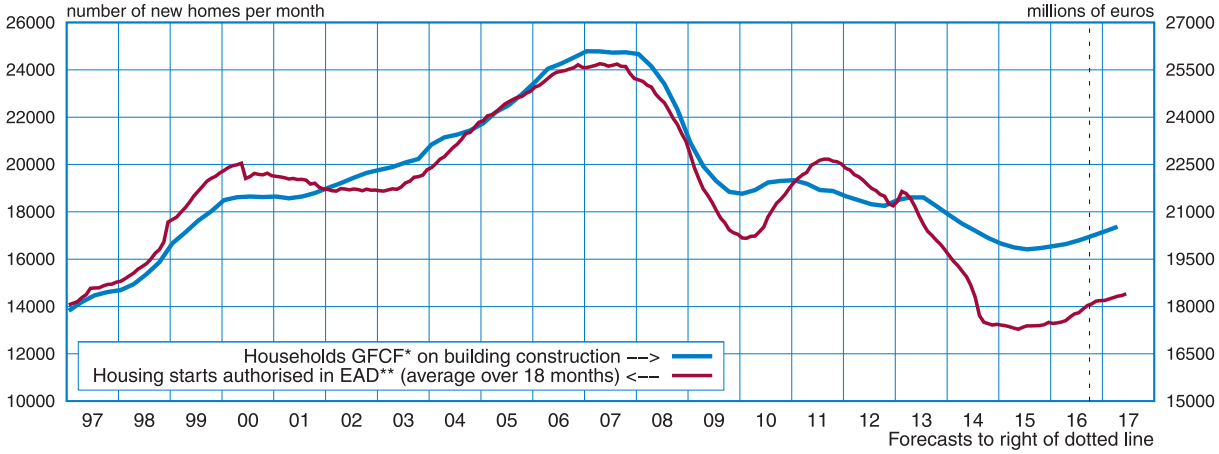
Source: INSEE

Household investment should continue to grow steadily in H1 2017

In Q3 2016 household investment continued to increase sharply (+0.6% after +0.4%), for the fourth consecutive quarter.[1] The number of housing starts authorised has been growing continually since the beginning of 2016 (*Graph 3*). In view of the usual time lags between permits being issued and actual construction, household investment is also expected to see a strong increase once again in Q4 2016 and then in H1 2017 (+0.6% per quarter on average). On average over the year, household investment is expected to bounce back in 2016 (+1.4%) after four years of decline (including –0.8% in 2015). For 2017, the annual carry-over effect of household investment should already stand at +1.9% by mid-year. ■

1. The indicator used for the "new housing investment" series was substantially revised during the first estimation of the quarterly accounts for Q3 2016.

3 - Household investment on construction and housing starts



*GFCF: gross fixed capital formation
**EAD+: estimated actual dates

Sources: INSEE, SOeS

Economic outlook publications influence public opinion on unemployment, not on inflation

The monthly economic outlook survey on households helps to monitor household's opinions on their personal economic situation (savings, opportunity for major purchases, etc.) as well as their economic environment (prices, unemployment, etc.). Regarding this environment, how do households form their responses to these questions: do they draw on their own experience of these subjects, or do they adjust their opinion based on the most recent statistical information published and disseminated through the media?

Econometric analyses show that households' responses depend to a large extent on the publications of the Directorate for the Coordination of Research, Studies and Statistics (DARES, Ministry of Labour) and Pôle Emploi (job centres) on the number of registered jobseekers at the end of the month (DEFM); on the other hand, households' responses on inflation do not seem to depend on INSEE's most recent publications.

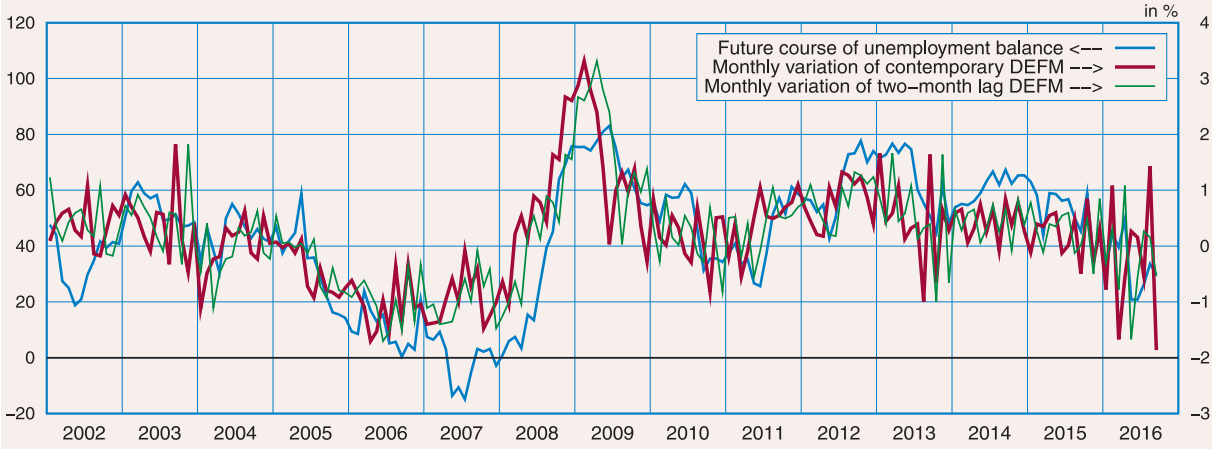
Households' opinions concerning the "future course of unemployment" are strongly influenced by the monthly publication of jobseeker figures

In the monthly economic outlook survey on households ("Camme"), respondents are questioned on their opinion regarding future unemployment: "Do you think that in the next twelve months, the number of people unemployed will… increase considerably (+) / increase a little (+) / stay the same / fall a little (–) / fall considerably (–)?". The balance of opinion derived from their responses on the future course of unemployment can therefore be linked to the change in the number of jobseekers registered at the end of the month (DEFM), in particular for the monthly indicator most often used in the joint publications of the DARES and Pôle Emploi (category A registered jobseekers).

The figure for DEFMs for a given month "m" is published at the end of month "m+1", that is to say after the "Camme" survey for "m+1"[1] is carried out. The potential effect of the publication of the DEFM figures on households' opinion can therefore only be perceived in "m+2". For example, the estimated DEFM figures for October are known at the end of November, and so the possible impact on households' opinions can only be effective in the December "Camme" survey.

Graphically, the balance of opinion on the future course of unemployment appears closer to the DEFM figures with the two-month lag than to the contemporary DEFM figures (*Graph 1*), which suggests that households' responses depend more on the publications on short-term trends than they do on a perception of their own situation or that of the people around them.

1 - Comparison of changes in the balance of opinion on future unemployment and changes in the contemporary and two month-lagged DEFM figures



Source: INSEE

To test this hypothesis, a Granger causality test was conducted. This can determine whether the information known about DEFMs at the time of the survey (two-month time lag and earlier time lags) has an impact on the balance of opinion on future unemployment.
In formalised terms, what is being tested is the hypothesis H0: b0=b1=b2=b3=b4=b5=b6=0 in the following equation:

$$cf_t = \alpha + a_0 cf_{t-1} + a_1 cf_{t-2} + a_2 cf_{t-3} + a_3 cf_{t-4} + a_4 cf_{t-5} + a_5 cf_{t-6} + b_0 \Delta DEFM_{t-2} + b_1 \Delta DEFM_{t-3} + b_2 \Delta DEFM_{t-4} + b_3 \Delta DEFM_{t-5} + b_4 \Delta DEFM_{t-6} + b_5 \Delta DEFM_{t-7} + b_6 \Delta DEFM_{t-8} + \upsilon_t$$

where:
- cf is the balance of opinion on future unemployment;
- $\Delta DEFM_t$ (respectively $\Delta DEFM_{t-1}$, $\Delta DEFM_{t-2}$…) the contemporary time lag in the number of jobseekers (respectively lags of one month, two months, etc.);
- and where $\upsilon_t = \rho \upsilon_{t-1} + \varepsilon_t$ and ε_t are white noise.

1. The monthly economic outlook survey on households for month "m" is published at the end of month "m" using data collected over a period running from the end of month "m–1" to the middle of month "m".

The symmetrical relationship is also tested to determine whether the survey provides information on changes in the number of jobseekers during the month of the survey:

$$\Delta DEFM_t = \alpha + a_0\Delta DEFM_{t-1} + a_1\Delta DEFM_{t-2} + a_2\Delta DEFM_{t-3} + a_3\Delta DEFM_{t-4} + a_4\Delta DEFM_{t-5}$$
$$+a_5\Delta DEFM_{t-6} + b_0cf_t + b_1cf_{t-1} + b_2cf_{t-2} + b_3cf_{t-3} + b_4cf_{t-4} + b_5cf_{t-5} + b_6cf_{t-6} + \upsilon_t$$

The results (*Table 1*) show that there is indeed a causality "in the Granger sense" between the publications of DEFM figures and the balance of opinion on future unemployment. In other words, the balance of opinion on unemployment in the survey depends directly on recent publications on short-term trends. Conversely, the Granger test on the DEFM figures is not very significant: the balance of opinion in the survey provides little information on changes in the DEFM figures in the months of the survey and the previous month and therefore on the situation on the job market as perceived by households at the time of the survey.

Table 1 - Results of the Granger causality test for the balance of opinion on future unemployment

	Degree of freedom of model under H1	Difference in the degree of freedom with the model under H0	Fisher's statistic	Pr(>F)
cf Model	164	6	19.239	$<2.2.10^{-16}$
DEFM Model	164	6	2.175	0.04813

To quantify the share of the balance of opinion that can be ascribed to the publications known at the time of the survey, and that really based on households' own impressions, the model below has been estimated:[2]

$$cf_t = \alpha + \delta_0 cf_{t-1} + \beta_0\Delta DEFM_t + \beta_1\Delta DEFM_{t-1} + \beta_2\Delta DEFM_{t-2} + \beta_3\Delta DEFM_{t-3} + \upsilon_t$$

The variations in the contemporary and the one month-lagged DEFM figures are not known to households whilst all the other time lags have been published at the time when households are surveyed.
The variation in two month-lagged (and more) DEFM figures appears to have a significant impact on the balance of opinion on the future course of unemployment (*Table 2*). An increase in the DEFM figures (two month-lagged) contributes to an increase in the proportion of households stating that they think unemployment will go up. The contemporary increase has a considerably lower impact, and the one month-lagged increase a non-significant effect. Finally, three month-lagged DEFM figures have a negative impact on the balance of opinion in month "m".

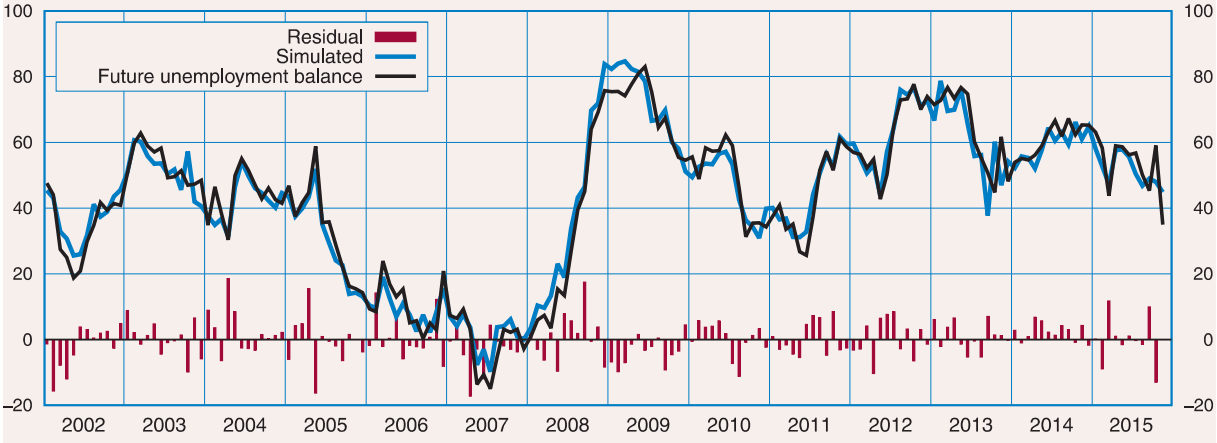
Table 2 - Results of the equation on the balance of opinion on future unemployment

	Coefficient	Student
Constant	7.34	5.21
Balance of opinion time lag	0.79	22.14
Diff DEFM	0.09	2.20
Diff DEFM (t–1)	0.02	0.66
Diff DEFM (t–2)	0.26	8.81
Diff DEFM (t–3)	–0.09	–2.62

R^2 : 0.93 - RMSE : 6.03 - Estimation period: January 2002 to September 2016

Over the period 2002-2016, a variance breakdown shows that 60% of the variations in the balance of opinion are explained by the already known publications of DEFM figures (2-month time lag and more), and only 3% come from the contemporary and one month-lagged variations which are not known. To a large extent, the balance of opinion is therefore largely predictable from the figures published by the DARES and Pôle Emploi (*Graph 2*). On the other hand, the balance of opinion in the survey has a very modest informative content on as yet unpublished changes in the job market.

2 - Balance of opinion on "future course of unemployment" differences between the simulated and the actual balance



Source: INSEE

2. Several models were tested with a certain number of lags on the balance of opinion and the DEFM figures: the one presented is the best one.

Households' opinions concerning "past prices" do not seem to be influenced by the monthly publication of inflation figures.

The "Camme" survey also questions French households on their opinion on past price changes: "Have you found, over the last twelve months, that prices have… increased considerably (–) / increased moderately / increased a little (+) / stagnated (+) / fallen (+)?". The balance of opinion derived from their responses on past price changes (referred to as «pp») can be compared to the annual increase in the consumer price index (CPI), i.e. inflation. The balance of opinion is calculated as the difference between the proportions of responses considering inflation high ("prices have increased considerably») and those considering inflation moderate ("prices have increased little/stagnated/fallen"). As with the publication of jobseeker figures, the CPI for a given month "m" is published at the earliest a few days before the end of the survey for month "m+1". If the publication of this index has an impact on households' opinions, it can only have an effect in the survey conducted in month "m+2"[3].
The different analyses comparing inflation and perceived inflation (Accardo *et al.* 2007, Accardo *et al.* 2012) have shown that there was a distinct unhitching between the two at the time of the changeover to the Euro, and that the gap then persisted. To avoid having to take account of this split, the analysis is restricted to a period beginning in 2002, the date when the link between the two values began to stabilise.
A first graphical analysis illustrates the strong link between actual inflation and perceived inflation, but does not allow the contemporary CPI (measured year-on-year) to be separated from the two month-lagged CPI in their resemblance with the change in the balance of opinion on «past prices» (*Graph 3*).

3 - Comparison of changes in the balance of opinion on past prices and contemporary and two month-lagged inflation

Source: INSEE

First of all, a Granger causality test was conducted to see whether the information on inflation known at the time of the survey (year-on-year price increases with two-month time lags and earlier) had an impact on the balance of opinion on past prices.

What is being tested is the hypothesis H0: b0=b1=b2=b3=b4=b5=b6=0 in the following equation:

$$pp_t = \alpha + a_0 pp_{t-1} + a_1 pp_{t-2} + a_2 pp_{t-3} + a_3 pp_{t-4} + a_4 pp_{t-5} + a_5 pp_{t-6} + b_0 GAipc_{t-2} + b_1 GAipc_{t-3} + b_2 GAipc_{t-4} + b_3 GAipc_{t-5} + b_4 GAipc_{t-6} + b_5 GAipc_{t-7} + b_6 GAipc_{t-8} + \upsilon_t$$

where:
- pp is the balance of opinion on past prices;
- $GAipc_t$ (respectively $GAipc_{t-1}$, $GAipc_{t-2}$…) is contemporary inflation (respectively lagged by one month, two months, etc.);
- and where $\upsilon_t = \rho\upsilon_{t-1} + \varepsilon_t$ and ε_t are white noise.

The results (*Table 3*) show the absence of causality in the Granger sense between the publications of inflation figures and the balance of opinion on past prices: the latter is simply influenced by its own time lags. Conversely, the test shows that inflation appears to be influenced by the balance on opinion on past prices (and its time lags), which suggests that the balance of opinion in the survey has an informative content on the prices that households face in the month of the survey, but does not depend on the latest publication of the CPI.

In a second phase, to measure this relationship between actual inflation and perceived inflation, the following equation was estimated[4]:

$$pp_t = \alpha + \delta_0 pp_{t-1} + \beta_0 GAipc_t + \beta_1 GAipc_{t-1} + \beta_2 GAipc_{t-2} + \beta_3 GAipc_{t-3} + \upsilon_t$$

3. Since January 2016, INSEE has been publishing a provisional CPI for month «m» at the end of month «m». For this reason, the calculations will stop in December 2015.
4. Several models were tested with a certain number of lags on the balance of opinion and on inflation: the one presented is the best one.

Table 3 - Results of the Granger causality test for the balance of opinion on past prices

	Degree of freedom of model under H1	Difference in the degree of freedom with the model under H0	Fisher's statistic	Pr(>F)
pp model	164	6	0.283	0.9443
Inflation model	164	6	2.869	0.0111

The analysis of the coefficients (*Table 4*) shows that the contemporary variable of the annual price increase stands out as significant. The two and three month-lagged variables do not stand out as significant. In other words, the publication of inflation figures does not seem to influence the opinions of households, which seem to be basing their responses on their own perceptions. ■

Table 4 - Results of the equation on the balance of opinion on past prices

	Coefficient	Student
Constant	2.72	2.00
Balance of opinion time lag	0.94	31.16
Inflation (t)	6.55	4.09
Inflation (t–1)	0.32	0.13
Inflation (t–2)	–3.56	–1.54
Inflation (t–3)	–1.34	–0.86

R^2 : 0.96 - RMSE : 5.04 - Estimation period : January 2002 to December 2015

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Accardo J., **Célérier C.**, **Herpin N.** and **Irac D.** (2012), "L'inflation telle qu'elle est perçue par les ménages", *Insee Analyses*, n° 5, July.

Enterprises' earnings

At the end of 2016, the margin rate of non-financial corporations (NFCs) would appear to have returned to its level of end 2015: 31.6%. Its sub-annual profile appeared uneven at the start of the year, primarily due to fluctuations in oil prices. As a result, the margin rate increased by 0.4 points in Q1 2016 (to 32.0%), mainly due to the drop in oil prices. After this it fell by 0.4 points (to 31.7%) as a result of the rebound in oil prices and a downturn in productivity. In H2 2016 then in H1 2017, the margin rate should remain virtually unchanged (31.6% mid-2017).

At the end of 2016 the margin rate should return to its late 2015 level

After a strong increase throughout the year in 2015 (+1.0 point as an annual average), the margin rate again increased significantly in Q1 2016: 32.0% after 31.6% in Q4 2015 (*Table*). The improvement in "terms of trade", which mainly reflects the drop in oil prices, was the main contributory factor in this rise (contributing +0.4 points). However, the increase in the rate of employers' pension contributions on 1st January has slowed it down. The buoyancy of real wages and productivity gains almost completely cancelled each other out in Q1.

In Q2 2016, the margin rate fell by 0.4 points, and so was almost back to its level of the end of 2015 (31.7%). The influence of the rebound in oil prices via the terms of trade was 0.3 points. In addition, apparent labour productivity fell back in Q2 (contributing –0.3 points) in line with the economic slowdown, whereas real wages stabilised. Conversely, the implementation of the second phase of the Responsibility and Solidarity Pact (extending the reduction in contribution rates for families on 1st April 2016) improved the margin rate by +0.1 points.

In H2 2016, the growth in real wages is likely to offset gains productivity (zero contribution overall across the half-year). At the same time, the ramp-up of the hiring premium for SMEs should bolster the margin rate slightly (contributing +0.2 points). Conversely, the slight increase in the price of oil products is likely to weigh a little on

Breakdown of the margin rate of non-financial corporations (NFC)

in % and in points

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Margin rate (in level)	**31.7**	**31.2**	**31.3**	**31.6**	**32.0**	**31.7**	**31.7**	**31.6**	**31.6**	**31.6**	**31.4**	**31.8**	**31.6**
Variation in margin rate	**1.1**	**–0.5**	**0.1**	**0.3**	**0.4**	**–0.4**	**0.1**	**–0.1**	**–0.1**	**0.0**	**1.0**	**0.3**	**–0.2**
Contributions to the variation margin rate													
Productivity gains	0.4	–0.1	0.1	0.1	0.4	–0.3	0.1	0.1	0.1	0.1	0.8	0.3	0.2
Real wage per capita	–0.5	–0.1	–0.3	–0.3	–0.4	0.0	–0.1	–0.1	0.0	–0.2	–1.2	–0.9	–0.2
Employer contribution ratio	0.3	0.0	–0.1	–0.1	–0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Ratio of the value-added price to the consumer price	0.3	–0.3	0.4	0.4	0.4	–0.3	0.0	–0.1	–0.2	0.0	0.8	0.7	–0.3
Other factors	0.6	–0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.5	0.3	0.2

Forecast

Note: The margin rate (TM) 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.
- others factors: taxes on production net of operating subsidies, including CICE and the emergency plan for employment:[1]

$$TM = \frac{EBE}{VA} \approx 1 - \frac{W.L}{Y.P_{va}} + other\ factors = 1 - \frac{L}{Y}\frac{W}{SMPT}\frac{SMPT}{P_c}\frac{P_c}{P_{va}} + \text{other factors}$$

1. The CICE reduces companies' corporation tax, but in the national accounts it is recorded as a subsidy to companies, as recommended in the latest version of the European System of Account (ESA 2010).

Source: INSEE

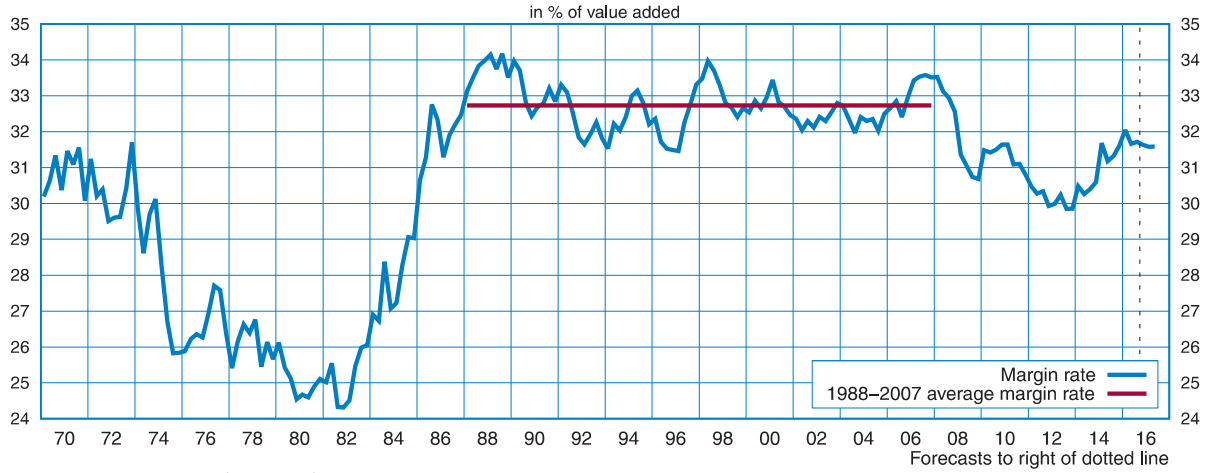
the margin rate (contributing –0.1 points). All in all, the margin rate is set to remain virtually unchanged in the course of H2, and should reach 31.6% at the end of 2016, the same level as one year earlier, although this is still lower than its average between 1988 and 2007 (*Graph 1*).

On average, after a strong upturn, especially in industry (*Graph 2*) in 2014 (+0.4 points) and 2015 (+1.0 point), the margin rate of NFCs should increase slightly in 2016 (+0.3 points).

The margin rate is set to be virtually stable in H1 2017

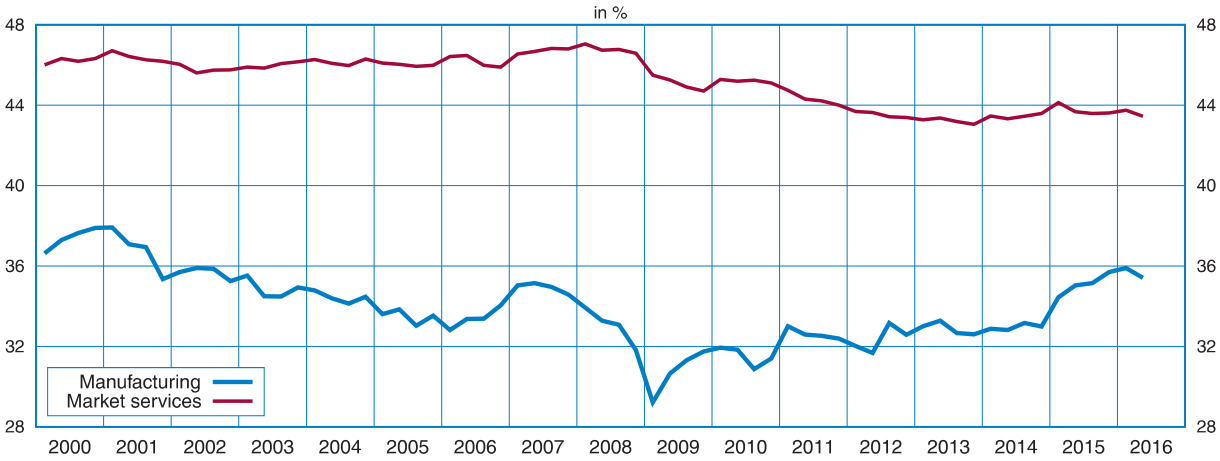
Real wages and productivity gains should grow at practically the same pace in H1 2017. The terms of trade are likely to deteriorate slightly, as consumer prices are scheduled to rise due to the increase in taxes on fuel on 1st January (contributing –0.2 points). The increase in employers' pension contribution rates in January is also expected to have a limited effect on margin rate. Lastly, enterprises should continue to benefit from the ramp-up of the hiring premium. All in all the margin rate is set to stabilise during the coming half-year, remaining at 31.6% in mid-2017. ■

1 - Margin rate of non-financial corporations (NFC)



Source: INSEE, quarterly national accounts

2 - Margin rate in industry and in services



Source: INSEE, quarterly national accounts

Corporate investment and inventory

Corporate investment fell once again in Q3 2016 (–0.4% after –0.2%), as a result of a sharp decline in expenditure on manufactured products (–3.2% after –0.3%), especially on transport equipment. However, investment in services recovered (+1.3% after 0.0%) and investment in construction bounced back (+0.8% after –0.4%).

In Q4 corporate investment should return to growth (+0.5%) and then remain dynamic throughout H1 2017 (+0.8% in Q1 and +0.5% in Q2), sustained once again by demand prospects and favourable financing conditions, as well as the additional depreciation allowance. As an annual average, investment looks set to increase by 3.4% in 2016, which is more than in 2015 (+2.7%). For 2017, the growth overhang mid-year is likely to be +1.4%.

In Q3 2016 changes in inventories made a positive contribution to growth (+0.7 points of gross domestic product), in contrast with Q2 (–0.7 points). Changes in inventories of manufactured products (+0.4 points after –0.7 points) and energy, water and waste (+0.2 points after –0.1 points) contributed most to this turnaround. Over the next two quarters, it is likely that the contribution of changes in inventories to growth will return to negative (–0.1 points each quarter) after which it should be neutral in Q2 2017. Over 2016 as a whole, changes in inventories should contribute +0.1 points to GDP growth, as in 2015.

In Q3 2016, corporate investment declined once again

In Q3 2016, investment by non-financial enterprises (NFE) fell by 0.4% (*Table 1*). Enterprises substantially reduced their expenditure on manufactured products (–3.2% after –0.3%), especially transport equipment (–7.3% after four highly vigorous consecutive quarters). However, investment expenditure on services recovered (+1.3% after 0.0%). Similarly, investment in construction bounced back (+0.8% after –0.4%), mainly in civil engineering. The investment rate of NFEs therefore seems likely to have decreased slightly in Q3, to 21.6%, while nevertheless remaining high (*Graph 1*).

Investment should bounce back in Q4 2016 and remain vigorous in H1 2017

According to the business tendency survey in industry, production capacity tensions eased slightly in October, although the share of industrialists reporting production bottlenecks increased slightly (*Graph 2*). The investment revision indicator remained positive and more industrialists reported an increase rather than a decline in their investment in the course of H2 2016. In services, while the balance of opinion on past investment had increased since July, the balance on investment planned for the future decreased; however, both balances remained higher than their long-term average.

Financing conditions continued to be favourable to investment. On the one hand, real interest rates were still very low in autumn 2016 and credit terms remained highly advantageous. On the other hand, the 2016 self-financing ratio looks set to achieve its highest level since 2004, with companies able to rebuild their margins as a result of the earlier drop in oil prices and measures to reduce labour costs. Thus investment expenditure by NFEs should bounce back in Q4 2016 (+0.5%) and should remain buoyant in H1 2017. It is expected to accelerate in Q1 (+0.8%) before the announced end of the additional depreciation allowance, then recover a similar growth trend to that of Q2 (+0.5%). On average over the year,

Table 1

Investment by non-financial enterprises (NFE)

at chain-link previous year prices, SA-WDA

	Quarterly changes										Annual changes		
	2015				2016				2017				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	2015	2016	2017 ovhg
Manufactured products (34%)	0.9	0.5	1.7	3.1	3.8	–0.3	–3.2	0.4	1.3	0.5	3.0	5.3	0.2
Construction (24%)	0.1	0.4	–0.3	0.8	0.4	–0.4	0.8	0.3	0.2	0.2	–0.3	1.2	0.9
Other (42%)	1.9	0.9	0.6	0.6	1.2	0.0	1.3	0.8	0.8	0.7	4.2	3.1	2.6
All non-financial enterprises (100%)	**1.1**	**0.7**	**0.7**	**1.5**	**1.9**	**–0.2**	**–0.4**	**0.5**	**0.8**	**0.5**	**2.7**	**3.4**	**1.4**

Forecast

Source: INSEE

investment by NFEs appears to have picked up in 2016: +3.4% after +2.7% in 2015. For 2017, the growth overhang is likely to be +1.4% mid-year. In 2016, the NFE investment rate should return to its 2008 level then remain high (21.7% mid-2017).

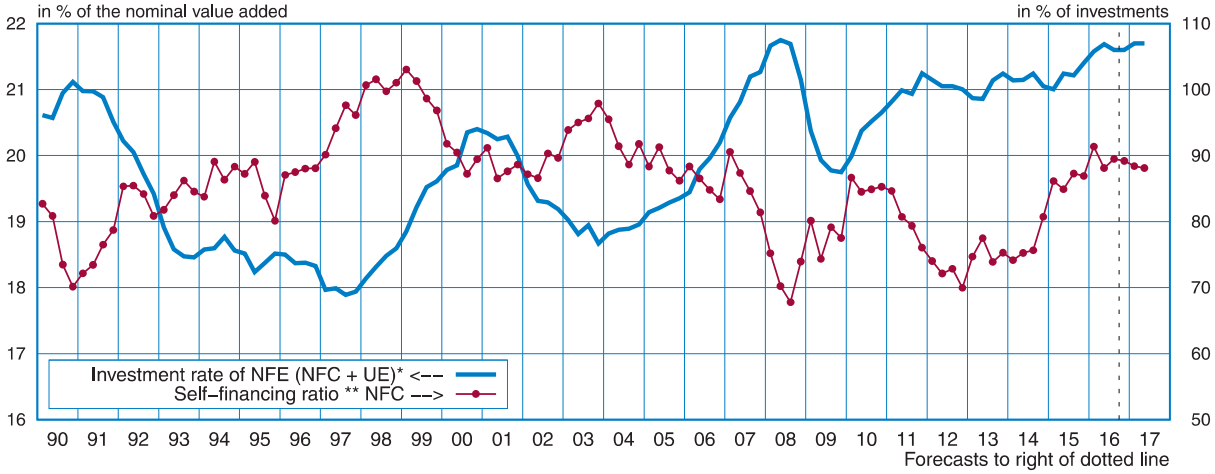
Investment in manufactured products is likely to see modest growth at the end of 2016 then accelerate in H1 2017

NFE investment in manufactured products should pick up moderately in Q4 2016 (+0.4% after –3.2%). On the one hand, car registrations through to November suggest a slight rebound in automobile investment over the quarter. On the other hand, some of NFEs' spending on capital goods will be able to take advantage of the additional depreciation allowance, extended until mid-April 2017: in Q1 2017 this should stimulate investment in manufactured goods, which should accelerate (+1.3%) albeit considerably less than a year previously (+3.8%), before slowing in Q2 (+0.5%). As an annual average, investment in manufactured products is expected to be vigorous in 2016 (+5.3% after +3.0%) before slowing down in 2017.

Investment in construction is expected to slow at the end of 2016

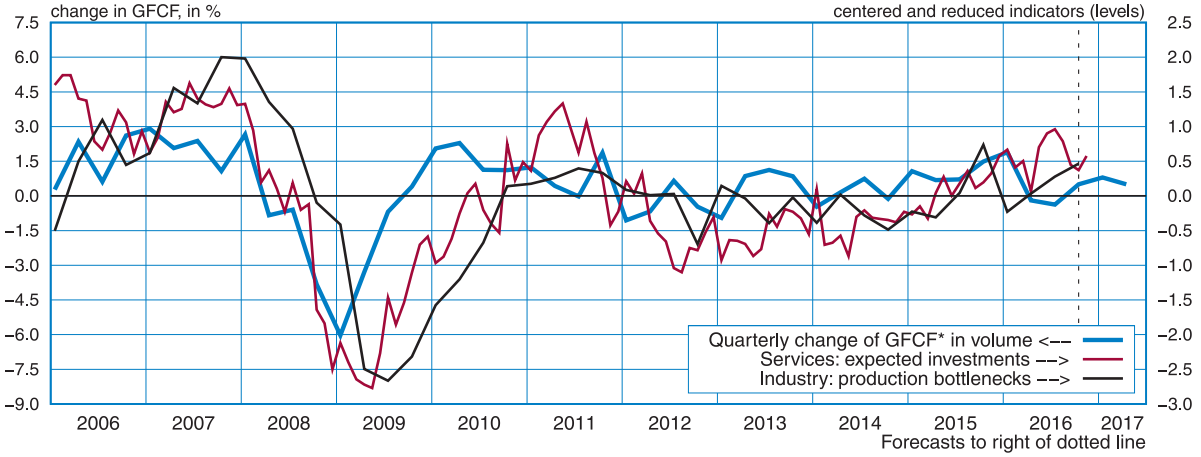
Corporate investment in construction is expected to slow in Q4 2016 (+0.3% after +0.8%) then maintain virtually the same pace in H1 2017 (+0.2% per quarter). Given the past history of housing starts, spending on buildings should accelerate slightly in Q4 then continue to grow at the same pace in the next two quarters. However, investment in civil engineering is likely to slow in Q4 after a very buoyant Q3, and is likely to slow further at the start of 2017 before returning to growth close to its Q2 trend. All in all, investment in construction should pick up in 2016 (+1.2% after –0.3% in 2015) and the growth overhang for 2017 is set to be +0.9% at mid-year.

1 - NFE investment rate and self-financing rate



* Non-financial enterprises: non-financial corporations (NFC) and unincorporated enterprises (UE)
** Self-financing rate: ratio of non-financial enterprises savings to their investments.
Source: INSEE, Quarterly national accounts

2 - Opinion on future trend of investment in services and production bottlenecks in industry



*GFCF: Gross fixed capital formation
Sources: INSEE, monthly survey in services and industry, quarterly national accounts

Investment in services should continue to increase at a sustained pace

After bouncing back in Q3, corporate investment in services is expected to increase at a similar pace to its trend in recent years: +0.8% in Q4 2016 and Q1 2017, then +0.7% in Q2 2017. For 2017, the growth overhang is expected to be +2.6% mid-year, after +3.1% for 2016 as a whole.

On average over the year, the contribution of changes in inventories to growth should once again be slightly positive in 2016

In Q3 2016, changes in inventories made a positive contribution to GDP growth (+0.7 points), after a negative contribution in Q2 (–0.7 points; *Table 2*). This trend was particularly strong in transport equipment (+0.3 points after –0.4 points), as some important shipbuilding contracts were delivered in Q2. The positive trend was also strong for energy, water and waste, as enterprises had rebuilt their inventories after running them down in H1 (+0.2 points after –0.1 points in the first two quarters).

In the monthly business tendency survey in industry in November 2016, the balance of opinion among industrialists on the level of inventory is virtually unchanged and slightly lower than normal. The contribution of changes in inventories of manufactured goods to growth is likely to return to negative (–0.1 points), reflecting the divergence between resources (production, imports) which are likely to narrow while domestic demand is set to bounce back. For 2016 as a whole, changes in inventories should contribute +0.1 points to GDP growth, as in 2015.

The contribution is expected to remain slightly negative in Q1 2017 (–0.1 points), mainly due to deliveries of military equipment; it is likely to be zero in Q2. ■

Table 2

Contribution of inventory changes to growth

in GDP points

	Quarterly changes										Annual changes		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural and agrifood products	**0.0**	**–0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.2**
Manufactured products	**0.3**	**–0.3**	**0.4**	**0.4**	**0.1**	**–0.7**	**0.4**	**–0.1**	**–0.2**	**0.0**	**0.1**	**0.2**	**–0.2**
Agrifood products	0.0	0.0	0.0	0.0	–0.1	–0.1	–0.1						
Coke and petroleum products	0.2	–0.2	0.0	0.2	0.0	–0.2	0.0						
Machinery and equipment goods	–0.1	0.1	–0.1	0.1	–0.1	0.0	0.2						
Transport equipment	0.2	–0.2	0.3	0.0	0.4	–0.4	0.3						
Others industrial goods	0.0	0.0	0.2	0.1	0.0	–0.1	0.1						
Energy, water and waste	**0.1**	**–0.1**	**0.1**	**0.2**	**–0.1**	**–0.1**	**0.2**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**
Others (construction, services)	**0.0**	**0.0**	**0.0**	**0.0**	**–0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
TOTAL[1]	**0.3**	**–0.5**	**0.4**	**0.5**	**–0.1**	**–0.7**	**0.7**	**–0.1**	**–0.1**	**0.0**	**0.1**	**0.1**	**0.0**

Forecast

1. Changes in inventories include acquisitions net of sales of valuables.

Source: INSEE

International developments

Oil and raw materials

Towards a return to market equilibrium

In Q3 2016, the price of Brent hovered around $47 per barrel on average, as it had done in Q2. Supply rebounded, driven by record production by the OPEC countries, and demand returned to trend growth. All in all, the surplus in the physical crude market increased.By June 2017, the gap between supply and demand is likely to narrow: world oil production should stabilise, especially in the OPEC countries and Russia which should be cutting their output after the agreement reached at the end of November, as well as in North America. The pace of demand is unlikely to alter. Stocks are expected to remain high. Through to June 2017, the conventional assumption is that oil prices will be around $50, their level at the beginning of December. The increasing pressure to tighten the physical market should be contained by the high level of stocks. Commodity prices in Euros climbed back slightly in Q3 2016, although levels remained low. Prices of industrial commodities continued to increase. However, cereal prices plummeted during the summer (–11.3%) as a result of abundant global harvests.

In Q3 2016, the price of Brent held at around $47 per barrel

In Q3 2016, the price of a barrel of oil (Brent) averaged $47, as in Q2, a level that was one third higher than in Q1. At the end of September, the price reached $50 per barrel (*Graph 1*), following the announcement by OPEC of a possible agreement by the cartel to cut production, details of which were finalised at the end of November. The price of oil is hovering around $50 on average in Q4 2016.

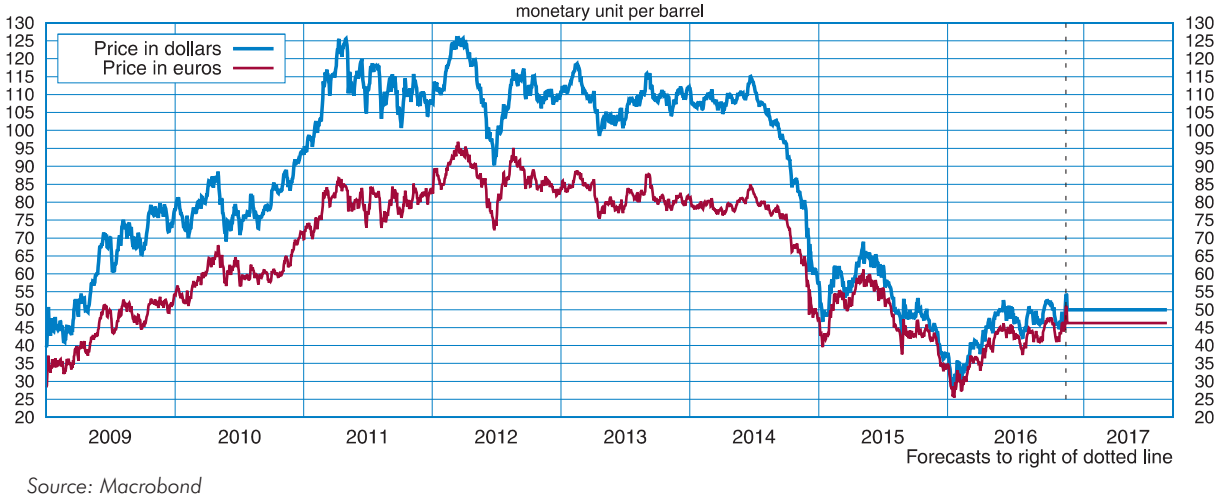
Supply should stabilise through to mid-2017 if OPEC manages to curb production

In Q3 2016, oil supply rebounded strongly (+0.8 million barrels per day - Mbpd) after two quarters of sharp decline (*Graph 2*). This rebound was due mainly to record production by OPEC (+0.6 Mbpd): Saudi Arabia produced 10.6 Mbpd and Iraq 4.4 Mbpd, their highest levels since 2007. In addition, production in Iran continued to rise (+0.7 Mbpd since January 2016), returning to its pre-embargo level.

In Q4, production is likely to decline moderately in Saudi Arabia. In Libya, output is expected to increase with the end of the blockade on the terminals and should reach 0.4 Mbpd. Production in Iran and Iraq should continue to increase. In H1 2017, assuming that the agreement announced by OPEC and Russia at the end of November is respected, production by Saudi Arabia will probably decline by an average of 0.3 Mbpd compared with H2 2016. However, production by Libya, Iran and Nigeria is likely to continue to increase, so that overall, OPEC's output should stabilise.

In America, supply from OECD member countries is expected to stabilise globally. In the United States, the new rig count was higher in Q3 2016. However, output looks set to continue its decline, given the collapse of the rig count since the end of 2014. Supply in Canada, however, looks set to pick up considerably after the Fort McMurray fire. All in all, world production seems likely to virtually stabilise through to mid-2017.

1 - Price of Brent in euros and in dollars



Source: Macrobond

Demand should continue to increase at its trend pace

In Q3 2016 global demand for oil returned to its trend growth (+0.4 Mbpd), after weakening slightly in the previous quarter. It was better sustained by non-OECD countries, including China, and by OECD member countries in the Americas. In Q4 2016 demand is expected to remain vigorous, mainly driven by the emerging economies. As an annual average for 2016, demand should increase by 1.2 Mbpd, a smaller increase than in 2015 (+1.9 Mbpd) but similar to that of 2014 (+1.1 Mbpd). In H1 2017, demand looks set to continue to rise at its trend pace, once again driven by demand from China and the other emerging countries.

The high stock level should curb the rise in prices

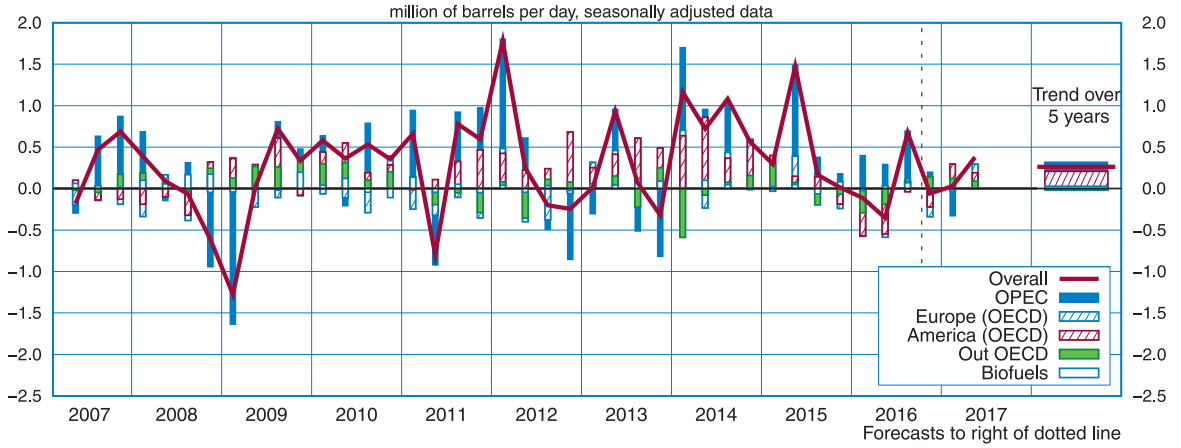
Surplus supply, which was still substantial at the end of 2015, has tended to diminish since the start of 2016, mainly because of the decline in American supply (*Graph 3*).

In the United States, stocks of crude declined in Q3 (–4.0%) after reaching the record level of 539.8 million barrels at the end of April. However, these commercial reserves are still very much higher than the average level between 2010 and 2014, and may therefore limit any price rise that could be generated by a tightening of the physical market (*Graph 4*). Similarly, the rebound potential of oil production in North America should prices recover is likely to limit the upward pressure on prices.[1]

Two uncertainties overshadow the supply scenario. First, the stabilisation of production by OPEC following the reduction agreement at the end of November is by no means a certainty. If, ultimately, production by the cartel declined, this would encourage a price rise; but if, on the contrary, the agreement were not respected, the physical market

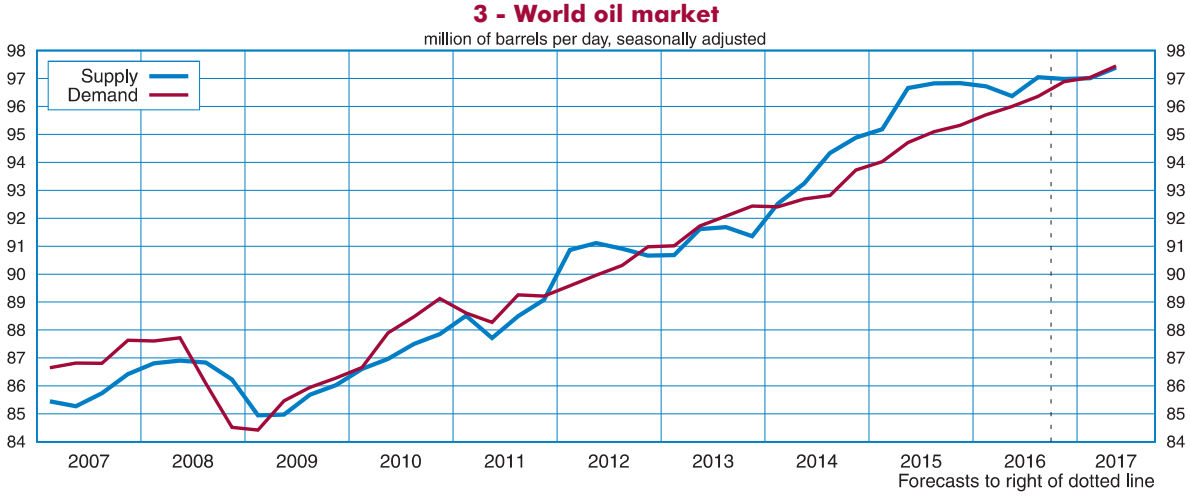
1. See Focus "A sharp downturn in American oil production expected by the end of 2016", *Conjoncture in France*, June 2016.

2 - Principal contributing factors to the variation in global oil supply



Source: IEA, INSEE

3 - World oil market



Source: IEA, INSEE

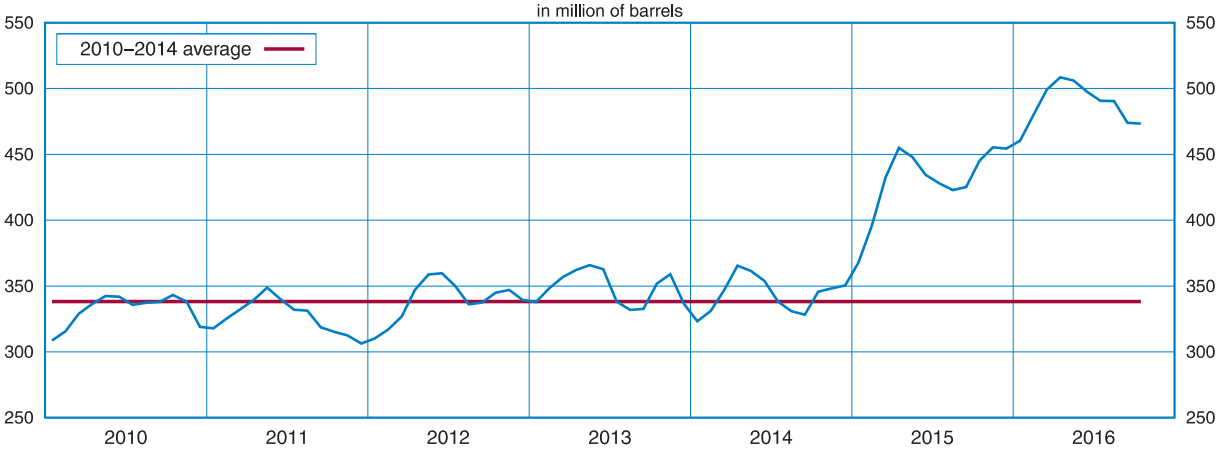
would remain in surplus, curbing prices. Second, although US production is expected to fall according to this scenario, forecasts by the International Energy Agency (IEA) and the US Department of Energy (DoE) suggest an earlier rebound, from Q2 2017, which in this case would affect prices.

Prices of other commodities increased moderately

In Q3 2016, prices in Euros of commodities excluding energy rose slightly (+1.4%), but they remained lower than at the beginning of 2015 (*Graph 5*). Cereal prices plummeted in the summer (–11.3%) due to the effect of abundant harvests, especially in Eastern Europe and the United States. However, the price of industrial commodities continued to rise in Q3 (+3.3%). ■

4 - U.S. crude oil inventories

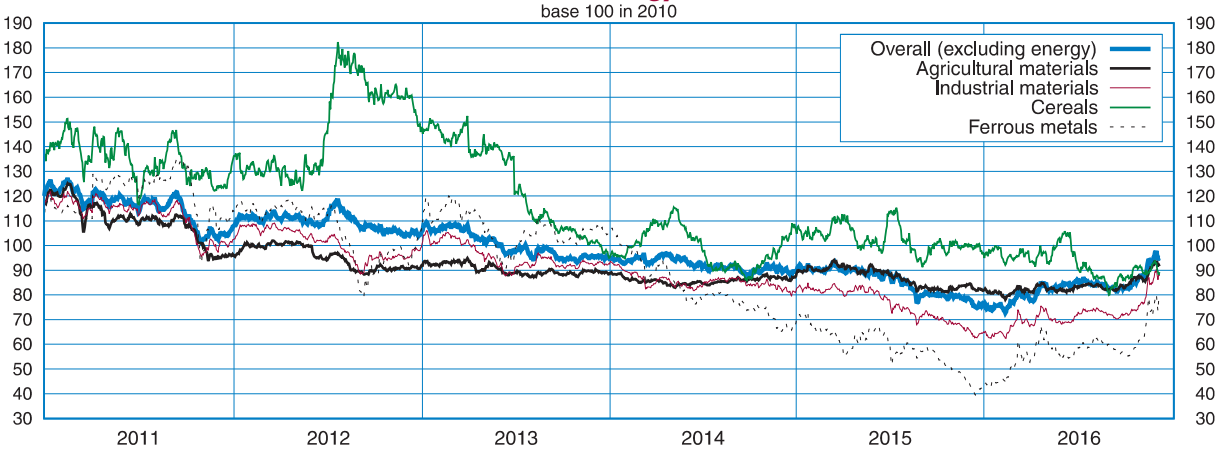
in million of barrels



Source: DoE

5 - Prices of non-energy commodities

base 100 in 2010



Source: HWWI

Financial markets

Financial markets stand up to political uncertainties

By mid-2017, monetary policy orientations are expected to continue to diverge on either side of the Atlantic. On the one hand, the American Federal Reserve is likely to gradually raise its base interest rates once again, bolstered by the prospects of US inflation rising above the 2% target and a labour market that is still moving in the right direction. On the other hand, inflation remains very low in the Eurozone and the ECB is pursuing its accommodating monetary policy. It is expected to extend its programme of asset purchases beyond March 2017. The Eurozone credit market continues to improve, although situations differ from country to country. Outstanding loans to businesses are growing solidly in France and Germany, while they are still decreasing in Spain and Italy. For the end of the year, the European banks are still expecting a rise in the demand for credit and plan to relax their conditions slightly once again. After falling back following the Brexit referendum, European sovereign yields are recovering slightly in anticipation of the increase in American base rates and the prospects of increased US debt after the result of the presidential election; at the beginning of December they were still at relatively low levels. The consequences of the pro-Brexit vote then the American presidential election have taken their toll on the foreign exchange market: in Q3, the pound depreciated against the other currencies, especially the Euro, which itself depreciated against the yen and the emerging currencies; in Q4, the dollar appreciated against the Euro. The real effective exchange rate has varied little overall since March 2016 and should remain almost stable over the forecasting period. For the purposes of this forecast, the Euro exchange rate is set at 1.06 dollars, 0.85 pounds sterling and 120 yen.

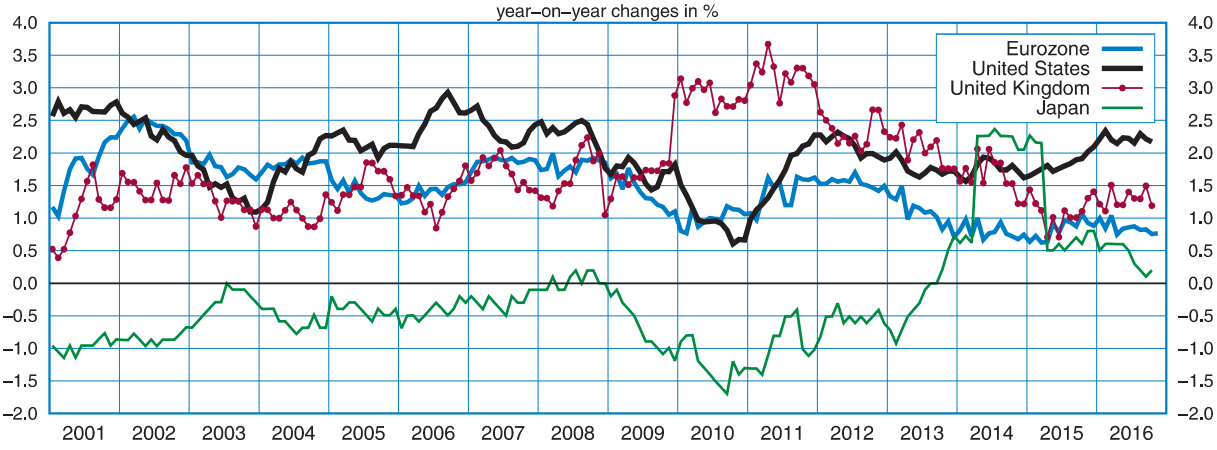
The Fed is likely to raise its base rates slightly once again

After raising its base interest rates in December 2015 for the first time in ten years, the American Federal Reserve (Fed) has not adjusted them since. However, the unemployment rate remains low (4.6% in November) and American core inflation has stayed firmly above the 2% threshold since January 2016 (*Graph 1*), so the Fed seems likely to tighten its monetary policy by gradually raising its base interest rates.

The ECB seems set to pursue its accommodating monetary policy

For its part, the European Central Bank (ECB) confirmed in October 2016 that it was extending its accommodating policy, as core inflation remains low, at less than 1% since the beginning of the year. Base interest rates are being kept at a historic low: the deposit facility rate has been held at –0.4% since March 2016. In addition, the ECB is continuing its asset purchase programme in the secondary market at a rate of 80 billion Euros per month; this programme is supposed to end in March 2017 but the ECB has hinted that it could be extended beyond that date.

1 - Core inflation in the world



Source: Eurostat, BLS, JSB, ONS

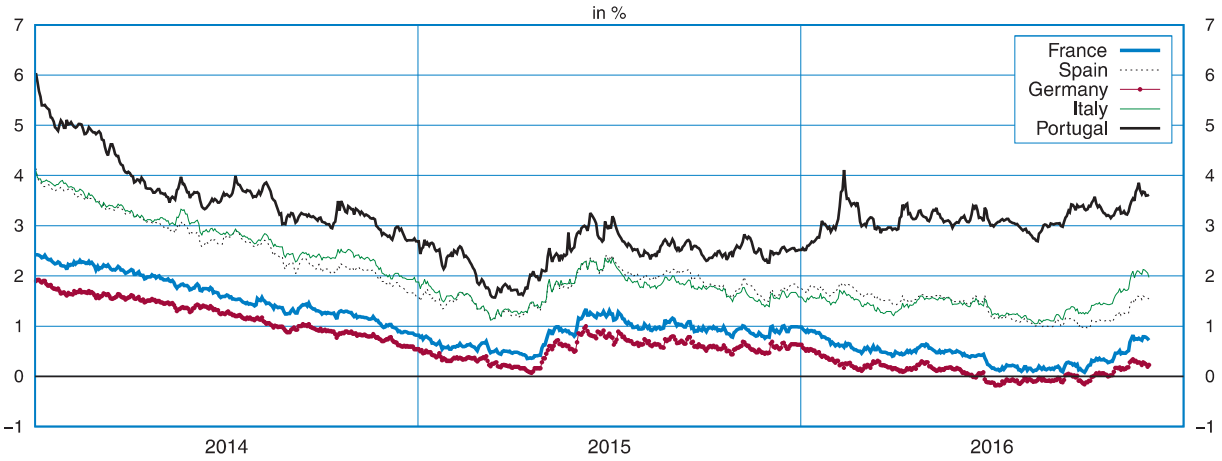
European sovereign yields are rising again

Sovereign yields in the advanced economies weakened after the result of the Brexit vote on 23 June, reaching historic lows, then picked up in the autumn in anticipation of the rise in US base interest rates by the Fed and the prospects of a strong increase in US debt after the presidential election. At the beginning of December, the French 10-year bond yield settled at around 0.8% after falling to an all-time low of 0.2% in July 2016. The German 10-year yield became negative in July 2016, then climbed again to settle at around 0.3% at the start of December (*Graph 2*). The Spanish and Italian 10-year yields also fell substantially to a low of around 1%, then recovered, with the Italian yield even rising back over the 2% threshold.

Outstanding loans to businesses in the Eurozone increased further

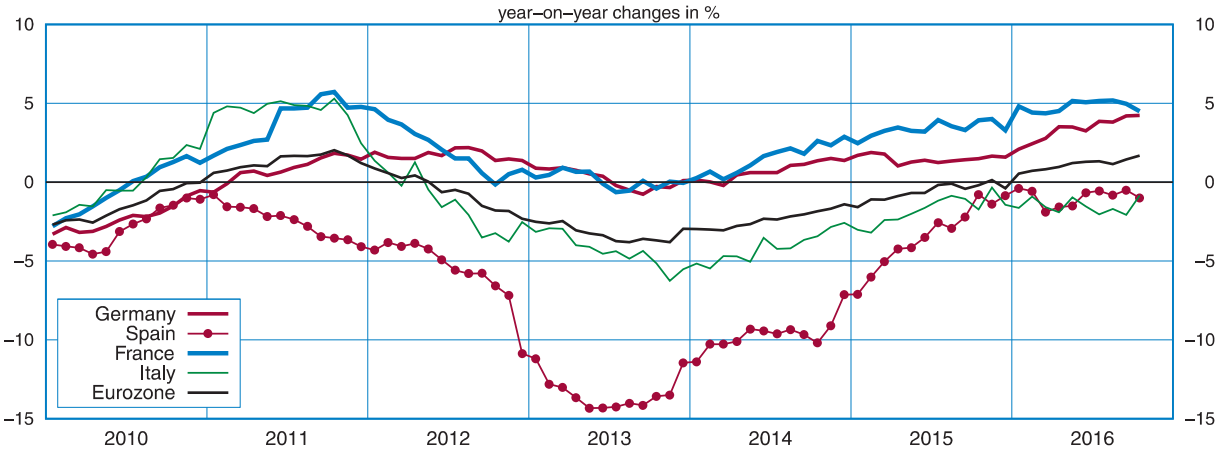
In the Eurozone, outstanding loans to non-financial corporations have increased since the beginning of 2016, maintaining the upturn that got underway in early 2014: in October 2016, they had increased by 1.7% year on year – growth that has been unprecedented since 2011 (*Graph 3*). Outstanding loans are buoyant in France (+4.5% year on year) and Germany (+4.2%), but are still falling in Italy and Spain. However, before the recent rise in sovereign yields in Italy, interest rates for new loans had converged between the main Eurozone countries (between 1.4% and 2.1%).

2 - Ten-year sovereign yields



Source: Macrobond

3 - Annual growth rate of outstanding loans in the Eurozone



Source: European Central Bank

Stock market indices have returned to their pre-Brexit referendum level

After taking a brief tumble in the aftermath of the British referendum results on 23 June, the main stock market indices in the advanced countries rebounded sharply in July and August. Despite the surprise US election result, they continued to improve in November. In addition, their volatility remains lower than the levels reached just after the Brexit result, which themselves were relatively low when set against previous shocks (*Graph 4*).

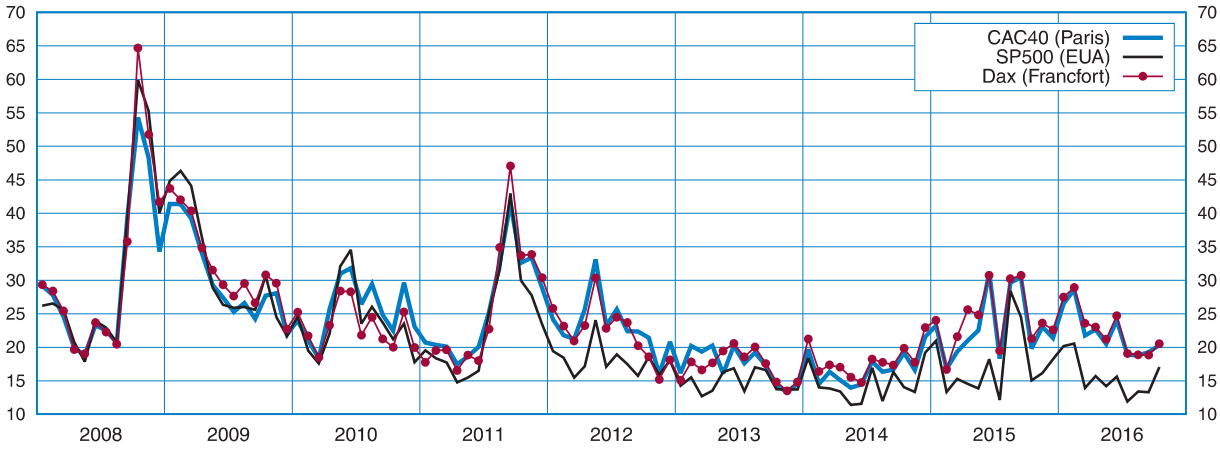
For their part, stock market indices in the emerging countries have been rising overall since February 2016, to a large extent wiping out the declines of summer 2015 and January 2016.

The Euro exchange rate is withstanding political uncertainties

After falling substantially in 2014 and early 2015, especially against the dollar, the Euro exchange rate has remained almost unchanged since mid-2015 (*Graph 5*). Since the beginning of 2016, although the Euro has appreciated against the pound, both before and after the Brexit vote, this appreciation has been offset overall by a depreciation against the yen and the emerging currencies, especially in Q3. As for the dollar, it appreciated to $1.06 to the Euro at the start of December, with the expectation of an increase in base rates by the Fed and the prospects of a rise in US debt.

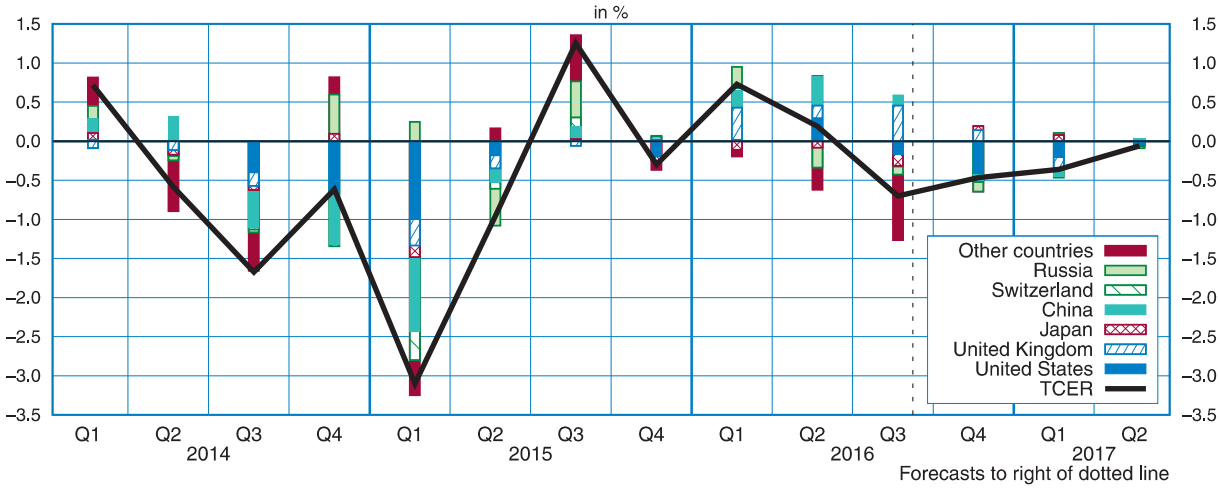
By convention, the Euro exchange rate is fixed at its last recorded level of early December (1.06 dollars, 0.85 pounds sterling and 120 yen) for this forecasting period. ■

4 - Monthly average volatility of stock market indices of the advanced countries



Source: Macrobond

5 - Quarterly change in real effective exchange rate (REER) and its contributing components



Source: DG Trésor, INSEE forecast

Eurozone

Residential investment and consumption driving growth

After increasing by 0.3% in Q3 2016, activity is expected to pick up slightly in the Eurozone to +0.4% through to mid-2017. Despite greater political uncertainties, the business climate remains positive and actually improved in the autumn. Due to its energy component, inflation is likely to rise to +1.1% year on year in Q2 2017, after two years of virtual price stability. However, the negative impact of this upturn in inflation on the improvement of purchasing power is likely to be partly offset by the rise in employment and wages, especially in Germany. In addition, households have saved a large proportion of their purchasing power gains from previous quarters and their propensity to save should remain virtually stable (12.0% mid-2017). All in all, household consumption is likely to increase steadily again (+0.4% per quarter).

Investment should enjoy renewed vitality; construction in particular is accelerating in all Eurozone countries. Finally, foreign demand is likely to gather pace moderately in early 2017: the recovery of demand in the United States and emerging countries should more than offset the drop in British demand.

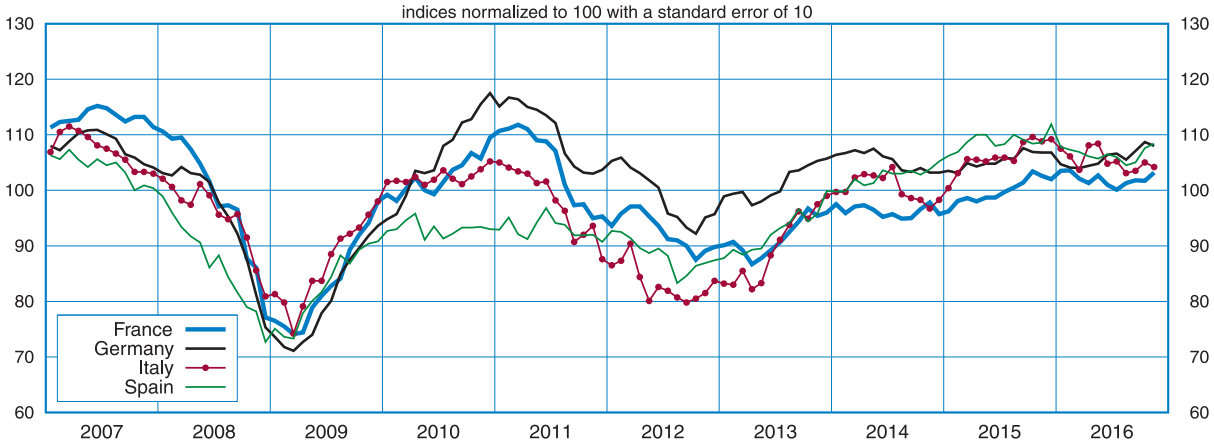
Growth is expected to remain robust

In Q3 2016 the economic activity of the Eurozone grew by 0.3%, as in Q2. It is set to pick up slightly to +0.4% in Q4, and should then maintain this pace throughout H1 2017. The business climate improved in the autumn (*Graph 1*), despite the rising political uncertainties caused in particular by the results of the British and Italian referendums and the American presidential election. The business climate thus remains clearly above its long-term average, especially in Spain and Germany.

Spain is expected to slow, while Germany should accelerate

The growth rates of Eurozone countries converged to a certain extent in Q3. Activity, although still buoyant, slowed slightly in Spain (+0.7% after +0.8%) while it accelerated in Italy (+0.3% after +0.1%) and grew modestly in Germany and France (+0.2%). Through to mid-2017, activity should rise in Germany (+0.5% per quarter in late 2016 and in H1 2017), driven by household spending in particular. In Spain, the catch-up effect is expected to run out of steam and growth should gradually weaken, down to +0.5% in Q2 2017.

1 - Business climate in the Eurozone



Source: European Commission (DG ECFIN)

In Italy, activity is likely to suffer from the wait-and-see attitude caused by the uncertainty surrounding the constitutional referendum in Q4 (+0.1%). If the business climate does not suffer from the political uncertainties generated by the winning "No" vote, it should improve moderately in H1 (+0.2% per quarter).

Purchasing power is likely to slacken due to the upturn in inflation

Assuming that oil prices level out at $50 per barrel of Brent crude, headline inflation should rise to an average of +1.1% in Q2 2017 after 0.0% in 2015 and +0.2% in 2016. This upturn should be driven primarily by energy prices, which are gradually picking up. Core inflation, i.e. excluding energy and food products, is expected to rise modestly from +0.8% in November 2016 to +0.9% in mid-2017, with the effects of the previous drop in commodity prices continuing to spread. However, employment should continue to grow strongly and wages are set to accelerate, especially in Germany and in Spain where the minimum wage will be raised in January. All in all, purchasing power looks likely to increase year-on-year by approximately +1.5% in H1 2017, compared to +2.0% on average in 2016.

Consumption should hold firm, buoyed by German household expenditure

Thanks to the good performance of purchasing power (*Graph 2*), private consumption should pick up slightly again, to +0.4% per quarter through to mid-2017 (after +0.3% in Q3 and +0.2% in Q2). This acceleration should originate primarily from Germany, where households are benefiting from a favourable labour market and new increases in social benefits. The savings ratio should remain virtually stable, levelling out at 12.0% in mid-2017, after increasing significantly between mid-2015 (11.6%) and mid-2016 (12.1%).

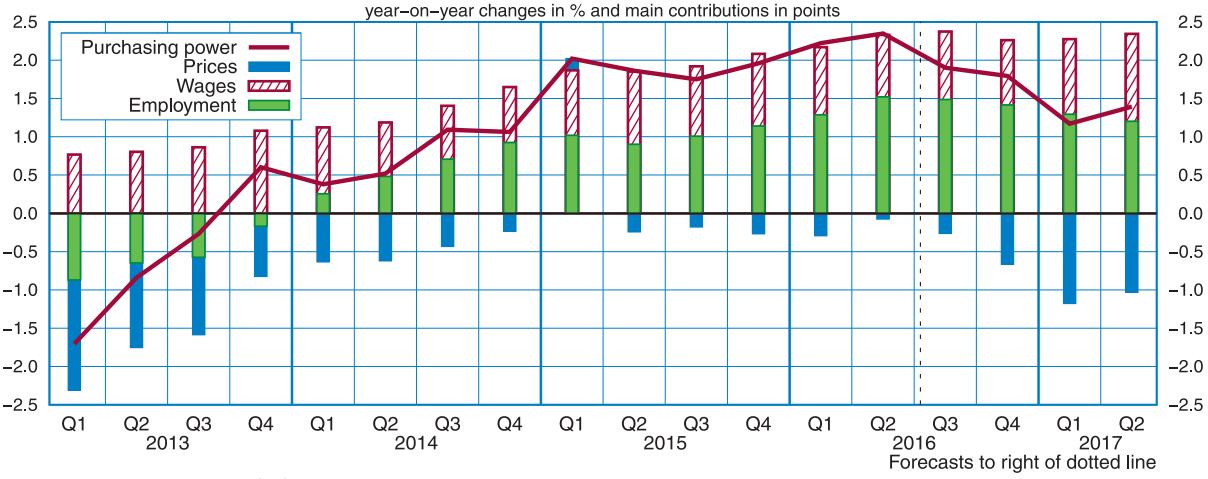
Construction gathers pace

Investment in capital goods came to a standstill in the summer of 2016 but is expected to pick up to +1.0% per quarter in H1 2017. Indeed, the production capacity utilisation rate has continued to rise, reaching its highest level in eight years in late 2016; in addition, financing terms remain very favourable despite a slight rise in interest rates. Investment in construction, which accelerated in the summer, should continue to grow strongly between now and mid-2017 (+0.6% on average per quarter), as suggested by the upward trend in building permits; throughout 2016 as a whole, it should return to growth in France and Italy while remaining vigorous in Spain and Germany.

Exports are expected to benefit from the recovery of demand from the United States and emerging countries

After remaining almost unchanged in Q3 (+0.1%), Eurozone exports should accelerate through to mid-2017 (+0.8% per quarter), in line with world demand for the region's products: the drop in British demand, against a backdrop of an anticipated investment slowdown and a depreciating pound, should be more than offset by the renewed vigour of demand from the United States and emerging countries. Imports are also likely to be robust (on average +1.0% per quarter), driven by domestic demand, with the result that foreign trade should make a neutral contribution to the economic activity of the Eurozone from late 2016 to mid-2017. ■

2 – Households' purchasing power in the Eurozone



Source: Eurostat, INSEE calculations

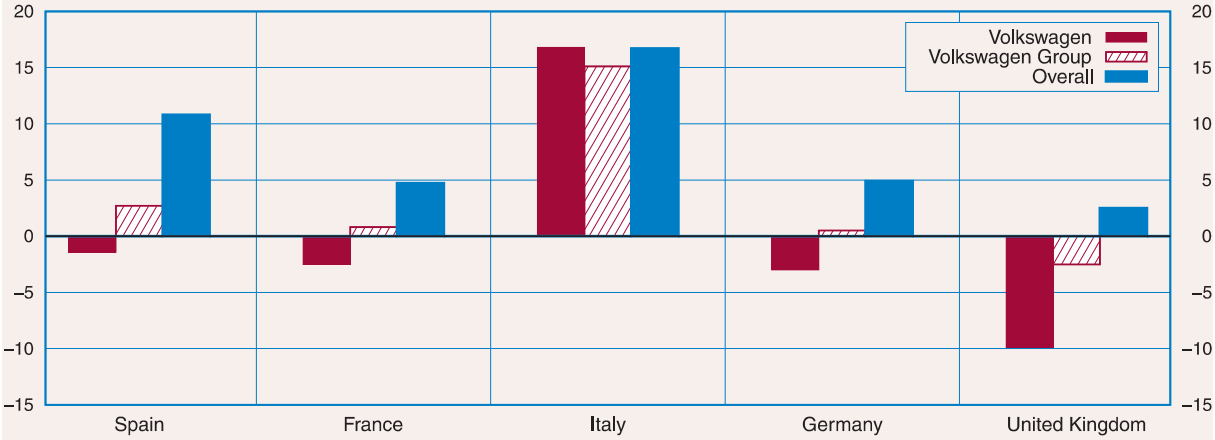
Since the exposure of its diesel engine fraud, the Volkswagen Group has been losing European market share to other carmakers based in Germany and Spain

In September 2015 the American Environmental Protection Agency revealed that the Volkswagen Group had used technologies to fraudulently reduce pollutant emissions during monitoring tests. This announcement led to the filing of numerous complaints against the German group, which estimates the cost of damages at up to $20 billion.

Since September 2015, the Volkswagen Group's Europe market share has dropped by one point

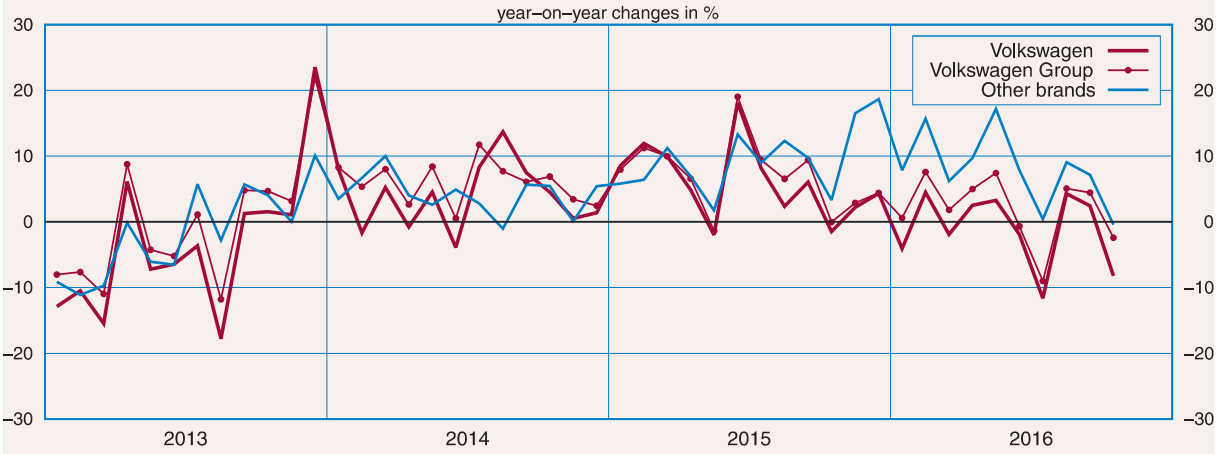
While passenger car sales have been picking up sharply for all manufacturers since autumn 2015, a marked slowdown has been observed in the number of registrations of vehicles manufactured by the Volkswagen Group (which, in addition to the eponymous marque, also includes Audi, Seat, Skoda, and others). In Western Europe, new vehicle registrations for the group and for Volkswagen alone have fallen, unlike those of other carmakers (*Graphs 1* and *2*). This is particularly true in Spain, Germany, France and the United Kingdom. In Italy, however, registrations have increased at the same rate as for the other automotive brands.

1 - Changes in Volkswagen group registrations and registrations of all automotive brands in 2016



Source: European Automobile Manufacturers Association

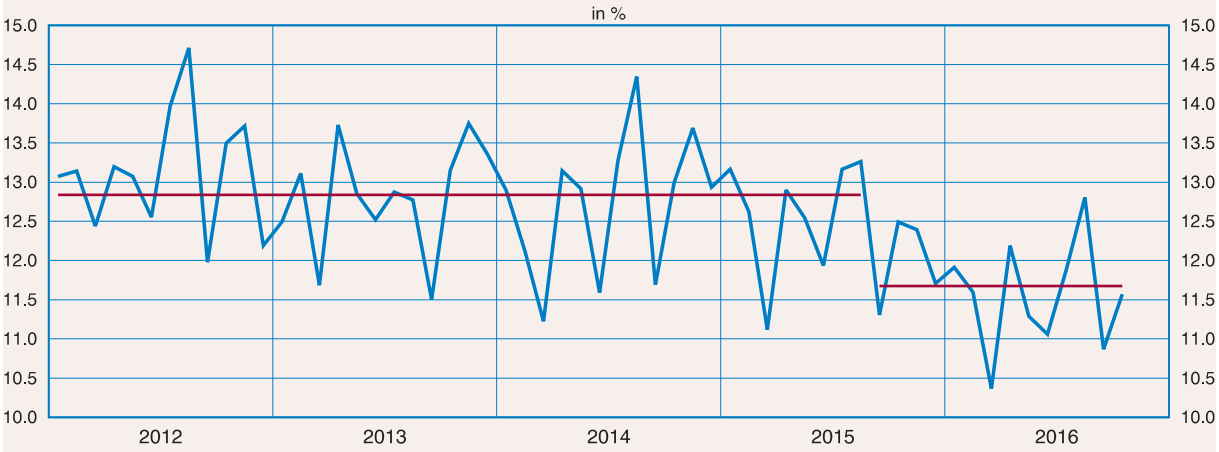
2 - Registrations in Western Europe



Source: European Automobile Manufacturers Association

As a result, the Volkswagen Group's Europe market share has dropped by one point on average since September 2015 against its average since 2011, with sales of Volkswagen's own cars accounting for the majority of this decline (*Graph 3*). However, it remains Europe's leading carmaker.

3 - Market shares of the Volkswagen brand in Europe



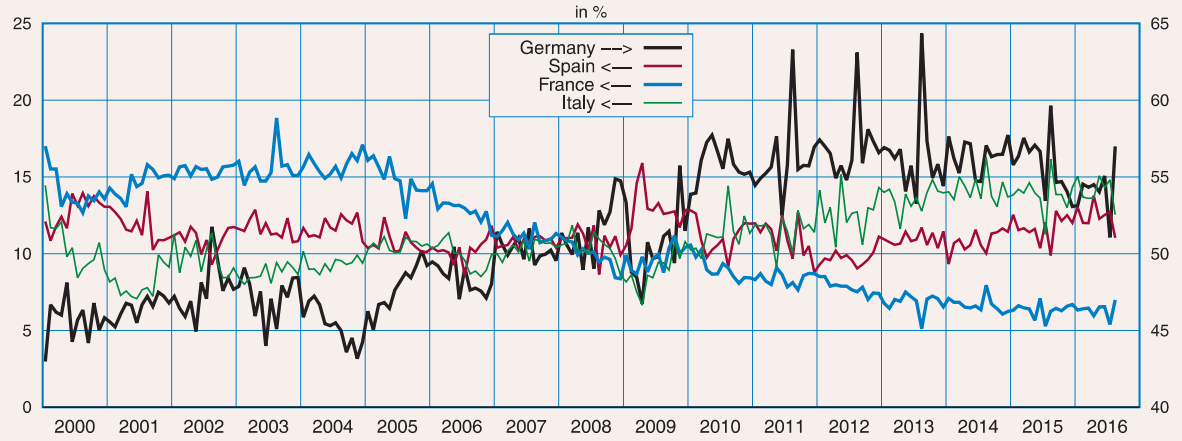
Source: European Automobile Manufacturers Association

A moderate impact on the German economy and a positive one for Spain

The Volkswagen Group's poor performance is partly reflected in German exports: the share of German passenger vehicle exports in those of the Eurozone dropped slightly (54% for the first nine months of 2016 compared to an average of 56% between 2010 and 2015), mainly to the benefit of Spain (*Graph 4*).

However, the impact on the German economy appears to be quite moderate: the country still has a clearly positive trade balance which surpassed that of its Eurozone partners in H1 2016, as only a quarter of the Volkswagen group's vehicles are produced in Germany. In addition, its competitors whose production is based mainly in Germany appear to have benefited from the damage to the Group's image: a sharp rise has been recorded in registrations of new Opel, BMW and Mercedes cars since September 2015. ■

4 - The country's share of passenger vehicle exports in Eurozone exports of passenger vehicles



Sources: Eurostat from custom data, Insee calculations

Germany

Robust growth

German activity slowed down in Q3 2016 (+0.2% after +0,4%), held back by a downturn in exports. However, private consumption accelerated, investment in construction bounced back and government consumption remained strong. Through to mid-2017, purchasing power gains should not weaken despite an anticipated upturn in inflation, and consumption should increase steadily, with a positive effect on all economic activity. All in all, growth is expected to rise to +0.5% per quarter between now and mid-2017. As an annual average, gross domestic product is set to rise by 1.8% in 2016 after +1.5% in 2015. The growth overhang for 2017 at the end of H1 is expected to be +1.6%.

Household expenditure looks set to rise significantly once more

In Q3 2016, German household consumption picked up (+0.4%) after a disappointing quarter in view of household purchasing power (+0.2%). Government consumption remained vigorous (+1.0% after +1.2%). Through to mid-2017, purchasing power gains are likely to be robust, in the order of +2.0% year on year, despite an expected rise in inflation. The employment situation should indeed remain very favourable with a low unemployment rate, wages boosted by the pay negotiations in the summer of 2016 and a rise in the minimum wage in January 2017. In addition, social benefits are likely to pick up in 2017 due to the increase in pensions and allowances paid to migrants. All in all, activity should accelerate, driven by consumption: +0.5% per quarter through to mid-2017. It should increase by 1.8% throughout 2016 as a whole, i.e. more than in 2015 (+1.5%). For 2017, the growth overhang is expected to be as high as +1.6% by mid-year.

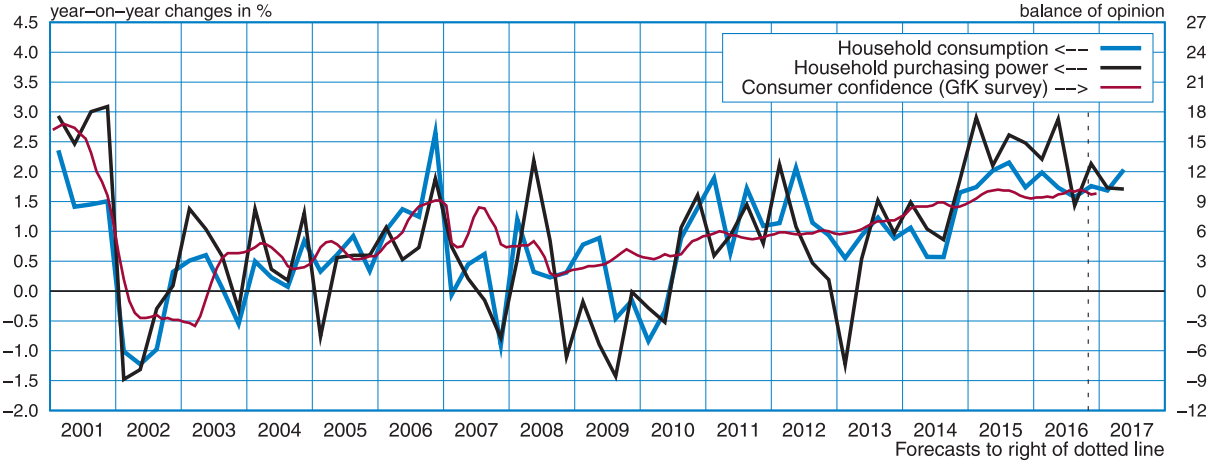
Investment should regain some vitality

After faltering in Q2 and Q3 2016 (–2.3% then –0.6%), equipment investment is expected to receive a boost between now and mid-2017 (+0.9% on average per quarter). Indeed, the business climate stabilised at a high level in November, especially business prospects, with the industrial capacity utilisation rate at its highest level since 2011. In addition, investment in construction should remain buoyant (approximately +1.0% per quarter through to mid-2017), as suggested by the recent rise in the number of building permits.

Foreign trade is expected to hamper growth slightly

Foreign trade hampered growth in Q3 (–0.3 points), as imports rose slightly (+0.2%) whereas exports slipped back (–0.4%). In Q4 2016 and in H1 2017, exports are unlikely to rise quite as quickly as imports, reflecting a more favourable economic outlook for Germany than that of its main partners. The contribution of foreign trade should therefore be slightly negative by mid-2017. ■

Strong consumption expenditure



Sources: Destatis, GfK survey, INSEE forecasts

Italy

The recovery is confirmed but should remain tentative

In Q3 2016, Italian activity picked up again (+0.3% after +0.1%). Activity in Q4 is likely to slow down slightly (0.1%) with investors playing a waiting game before the constitutional referendum on 4 December. All in all, GDP is expected to increase by 0.9% in 2016, i.e. slightly up on 2015 (+0.6%). In H1 2017, domestic demand is likely to give a moderate boost to activity (+0.2% per quarter).

Investment in construction picks up after a decade of crisis

In 2016, investment in construction should increase for the first time in ten years (+1.0% after –0.8%). It should continue to rise significantly between now and mid-2017: the business climate in the sector is improving (*Graph*) and real estate transactions are picking up. The growth overhang for 2017 should therefore already be +0.9% by mid-year.

Equipment investment should remain very buoyant

Equipment investment was very dynamic in Q4 2016: +3.0% after nine consecutive quarters of vigorous rises (+1.0% on average). Conditions remain favourable: demand is rising, enterprises have restored their self-financing capacities, credit terms have eased and the additional depreciation scheme (in force until the end of 2017) should be strengthened in January for investments in new technologies. However, this investment is likely suffer temporarily from the wait-and-see attitude prevailing prior to the constitutional referendum on 4 December (+0.1% in Q4). It should then pick up again (+1.0% on average per quarter) if the business climate does not suffer on account of the political uncertainties generated by the winning "No" vote. All in all over the year, it should remain very vigorous in 2016 (+4.7% after +4.3%) and its mid-year overhang in 2017 should still be strong (+3.5%).

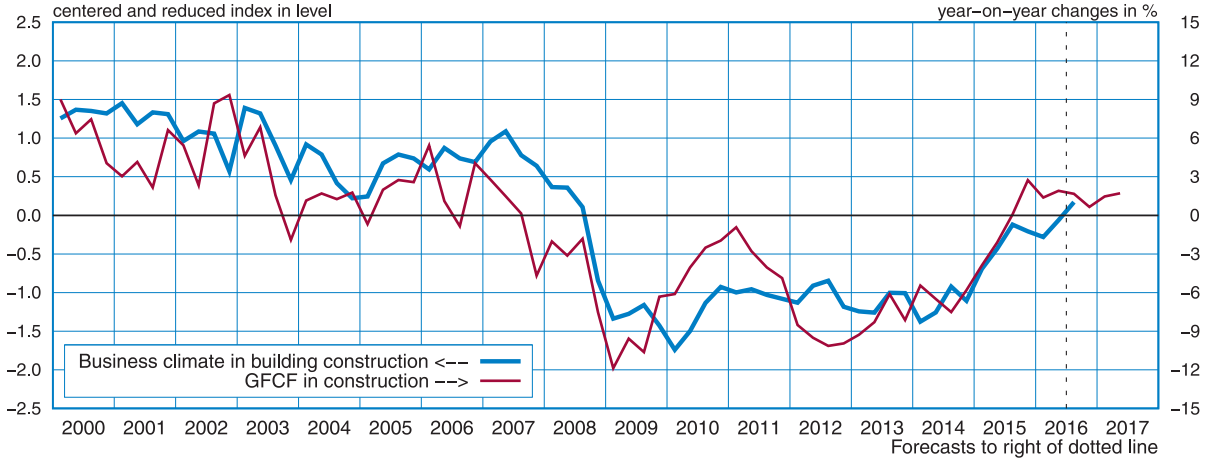
Consumption should grow slightly

In Q3 2016, household consumption remained sluggish (+0.1%), despite the previous decline in unemployment and net gains in household purchasing power over the last year. Very little improvement is expected between now and mid-2017 (+0.2% on average per quarter), as the nominal wage rise is likely to be offset by a slight upswing in inflation. However, a drop in property tax in late 2016, followed by a raise in pensions in 2017, should help to boost purchasing power.

Three earthquakes rocked Italy between August and October 2016 and new public spending will be required to repair the significant damage to property. Similarly, increased spending is required for rescuing and accommodating the growing number of refugees. All in all, government consumption should increase in 2016 (+0.6%), for the first time since 2011. It should rise again moderately in early 2017.

All in all, growth is likely to be weak in Q4 2016 (+0.1%) and then pick up only slightly in early 2017 (+0.2% per quarter), driven by domestic demand. Trade should make hardly any contribution. The growth overhang for 2017 is expected to reach +0.6% at the end of Q2, after +0.9% throughout the whole of 2016. ■

Construction emerges from a decade of depression



Sources: Istat, INSEE forecasts

Spain

GDP on the road back to its pre-crisis level

In Q3 2016, Spanish gross domestic product slowed slightly (+0.7%, after +0.8%). Over the coming quarters, activity should remain dynamic but is likely to be hampered by domestic demand. Growth should hold firm at +0.7% in Q4 before reaching +0.6% in Q1 2017 and +0.5% in Q2. In this way GDP should return to its level of early 2008 by next spring.

Consumption is set to slow in early 2017

Household consumption looks likely to remain buoyant in 2016 (+3.1% as an annual average, after +2.9%), driven by vigorous employment, low inflation and a slight recovery in wages. It should remain dynamic at the end of 2016 (+0.7%) and then slow down in early 2017 (+0.6% in Q1 then +0.5%), particularly consumption of motor vehicles, penalised by the end of the scrappage bonus in the summer. Indeed, purchasing power is expected to slow down slightly (*Graph*), undermined by an upturn in inflation (+1.5% over one year to mid-2017 compared to –1.0% in mid-2016) due to its energy component and an increase in taxes on alcohol and tobacco. In addition, employment should decelerate slightly. Its previous rapid rise originated partly from the tourism sector, the expansion potential of which is becoming more limited. The unemployment rate, while still high, should continue to fall, down to 18.0% in mid-2017: 2 points below its mid-2016 level and 8 points below its peak in early 2013. However, wages are likely to be boosted by a sharp rise in the minimum wage in January 2017 (+8%).

Government consumption bounced back in summer after shrinking in spring. It should subsequently slow down significantly, as the scale of the budget deficit (5.2% of GDP in 2015) should prompt the new government, appointed after ten months of political deadlock, to limit spending.

Productive investment is set to run out of steam

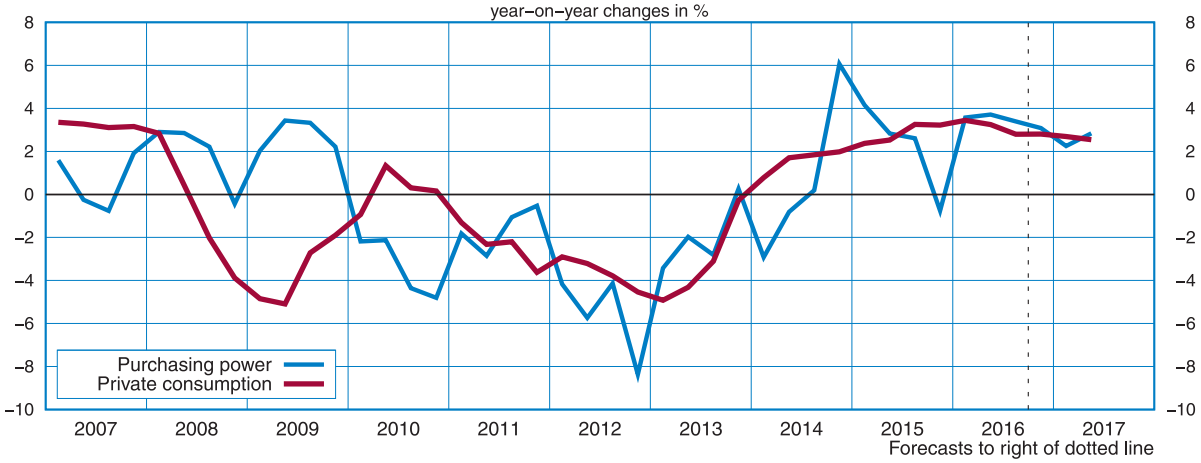
Benefiting from favourable financing terms, investment in capital goods is set to remain dynamic over the forecasting period, after stalling during the summer. However, it is likely to grow less quickly than in H1 2016: the investment rate is nearing its 2008 level and the catch-up process is running out of steam. On the other hand, the sharp upswing in building permits suggests a sharp rise in investment in construction.

Foreign trade is expected to stop driving growth

Despite Spanish growth being stronger than that of its main trading partners, foreign trade fostered growth in the first three quarters of 2016 due to weak imports. These imports should bounce back in late 2016 and foreign trade is likely to hamper growth slightly before becoming neutral in H1 2017.

All in all, with domestic demand slowing, activity should be held back slightly while remaining robust: from +0.7% in Q4 2016 to +0.5% in Q2 2017. On average over the year, gross domestic product should grow by 3.2% in 2016, as in 2015. In the spring of 2017, it is expected to return to the same quarterly level recorded in early 2008 and its growth overhang for the year should already stand at +2.1%. ■

Consumption should slow slightly in the wake of purchasing power



Sources: INE, INSEE forecasts

United Kingdom

Awaiting Brexit

In Q3 2016 the British economy remained buoyant (+0.5% after +0.7%), despite fears aroused by the Brexit referendum result. However, activity is expected to slow at the end of 2016 (+0.3%) and in early 2017 (+0.3% in Q1 followed by +0.2% in Q2), in the wake of domestic demand. Indeed, inflation should rise, driven by the strong depreciation of the pound; this is likely to handicap household purchasing power and with it consumption. In addition, investment is expected to weaken due to the wait-and-see attitude of the business community before the clarification of the Brexit procedures. The mid-year growth overhang for 2017 is expected to stand at +1.1%, after +2.0% over 2016 as a whole.

Households are suffering from a sharp surge of inflation

After the Brexit vote on 23 June, the pound depreciated significantly: the real effective exchange rate fell back by 14% on average between May and November. Fuelled by this depreciation and the upturn in energy prices, another rise in inflation is expected, up to +2.2% over one year to mid-2017 compared to +0.1% one year earlier. In addition, employment is likely to slow down considerably, as suggested by the drop in hiring prospects reported in the business tendency surveys. All in all, the purchasing power of British households is expected to slow significantly between now and mid-2017, and their confidence has been waning since the pro-Brexit vote (*Focus*). Household consumption should slow after being surprisingly vigorous in the summer (+0.7%): +0.3% in Q4, followed by +0.1% per quarter on average until mid-2017.

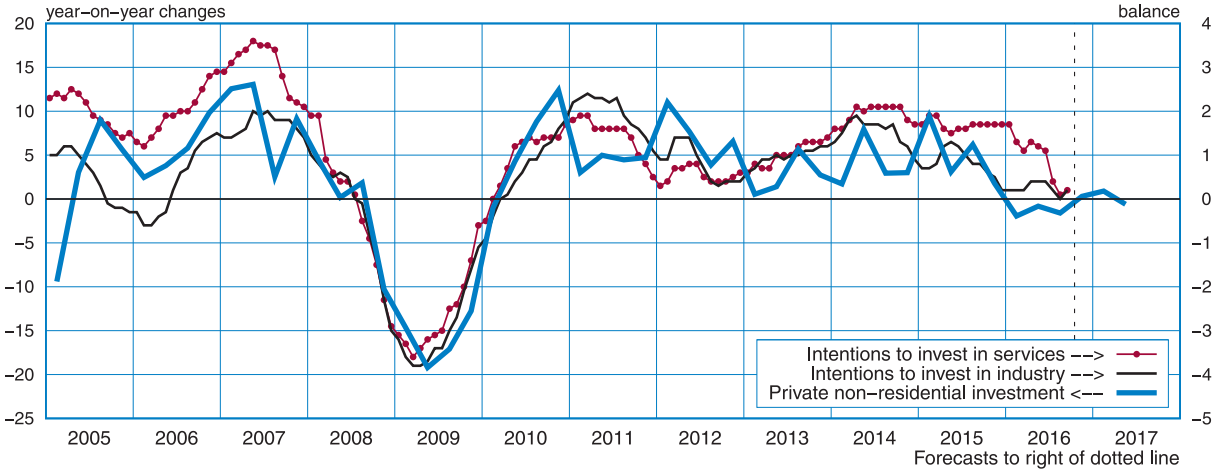
Private investment is likely to edge down

Since the spring, residential investment by households has been falling due to the impact of a new tax on purchases of second homes introduced in April, compounded by the post-referendum wait-and-see attitude. It should fall again between now and mid-2017. Enterprises, for their part, are revising their investment intentions downwards in both services and industry (*Graph*), and corporate investment should drop through to mid-2017 after holding firm in the summer of 2016 (+0.9%). Only government investment is likely to increase over this timeframe, boosted by a budgetary stimulus. The mid-year growth overhang for total investment is expected to be +0.3% for 2017, a marked slowdown compared with 2016 (+1.2%) and 2015 (+3.4%).

Foreign trade is likely to be the main driver of fast-slowing activity

British exports rebounded slightly in Q3 (+0.7% after –1.0%). They should remain vigorous through to mid-2017 (+0.9% on average per quarter), boosted by price competitiveness gains resulting from the depreciation of the pound, and by the buoyancy of foreign demand. Imports, on the other hand, are likely to remain almost unchanged over the period. Foreign trade should therefore be the main driver of British activity which is clearly losing momentum: it should contribute +0.2.points on average per quarter to GDP growth of +0.3% in late 2016 and early 2017, followed by +0.2% in Q2. The mid-year growth overhang for 2017 is expected to be +1.1%, after +1.7% one year earlier. ■

Business leaders have been revising their investment intentions significantly downwards since the Brexit referendum result



Sources: ONS, Bank of England, INSEE forecasts

What are the short-term consequences of the Brexit referendum?

Following the pro-Brexit vote, several risks and as many channels for transmitting this political shock to the real economy could be envisaged in the short term: an exchange rate shock with the depreciation of the pound; negative wealth effects through the fall in prices of real estate or financial assets; a financial shock in the form of a rise in interest rates or a tightening of financing conditions for private agents if confidence in British banks were lost; an uncertainty shock if companies were to delay purchases.
In the longer term, the impact of Brexit is expected to spread through other channels, trade-related in particular, if the nature of the new relationship between the United Kingdom and the rest of Europe were to be substantially altered, in particular if customs tariffs were increased or if the European financial passport were withdrawn from banks.

In the short term, more fear than actual harm in the financial sphere

Among the risks, some have not come to pass in the short term. In particular, in the financial sphere share prices, after a brief dip, soon returned to their pre-vote level, in the United Kingdom as elsewhere in Europe. Similarly, the volatility of the stock market indices only rose temporarily and then only to a limited extent. Concerning financing conditions, the reaction of the British monetary authorities led to a slight drop in sovereign yields and private interest rates before they rose again as part of the general upward trend in November. Finally, in surveys the banks are not reporting any more restrictions in supply conditions.

The pound has depreciated substantially

The pound depreciated in the run-up to the vote, in particular against the Euro, which went from £0.75 to in January to £0.79 in June 2016. It plummeted in the aftermath of the referendum due to massive sales of currency-denominated assets, with £0.90 to €1 in October, before appreciating again in November. All in all, the real effective exchange rate (REER), measured as the weighted sum of exchange rates with the main trading partners, fell by 16% between January and November 2016 (*Graph 1*).

Prices of imported goods, expressed in sterling, therefore increased whilst export prices, expressed in foreign currencies, fell. In the medium term, this development is favourable to the British economy as it boosts exporters' price competitiveness: the long-term REER elasticity of British exports is in the order of –0.5 (Borey & Quille, 2013): thus on average a 16% drop in the REER is expected to induce an 8% increase in exports. However, the wait-and-see attitude caused by the prospect of trade negotiations is expected to moderate exports, which are only expected to grow a little faster (+0.9% per quarter on average from now until mid-2017) than foreign demand (+0.7%).

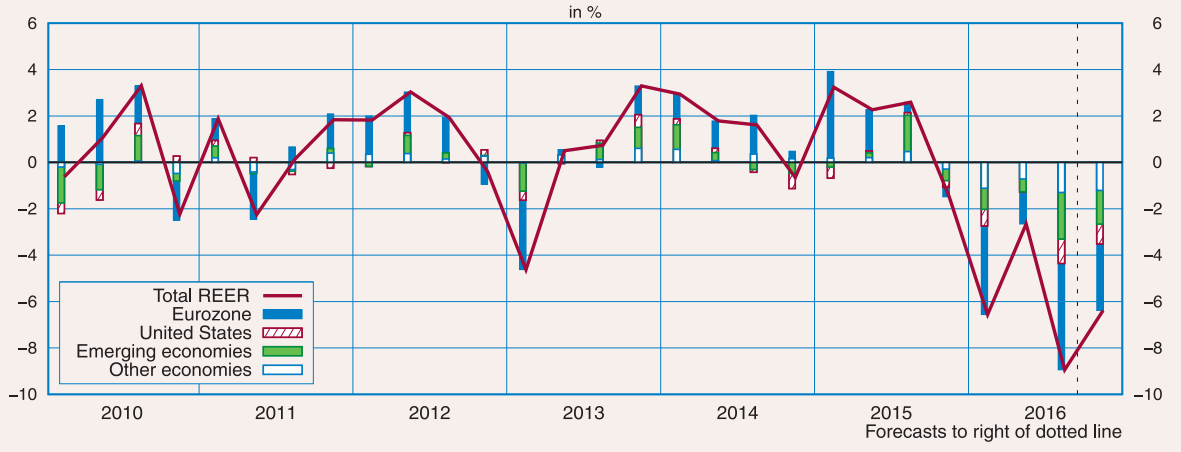
The rise in inflation is eroding households' purchasing power

On the other hand, the fall in the value of the pound has made imports more expensive, petroleum products in particular. Energy prices therefore rose by 2.5% in Q2 and then 1.3% in Q3. The depreciation of the pound accounts for almost three quarters of this increase. In addition, as 41% of manufactured goods consumed in the United Kingdom are imported, the depreciation is also causing an acceleration in core inflation. Overall, inflation rose from 0.2% in January 2016 to +0.9% in October and is expected to reach +2.2% in June 2017. In comparison, inflation in the Eurozone increased from +0.3% in January 2016 to +0.5% in October, and is expected to rise to +1.0% by mid-2017 (*Graph.2*).

The depreciation of the pound increases production costs, which will eventually compound its impact on inflation

In the short term, the depreciation of the pound has above all handicapped manufacturers, by making their intermediate consumptions more expensive. According to the Office for National Statistics, of the 7.2% year-on-year increase in producer prices in September, 4.7 points can be explained by the increase in the prices of their imported components.

1 - Quarterly variations in the real effective exchange rate of the pound and contribution of currencies



Source: INSEE

Initially, the increase in intermediate consumption prices is expected to adversely affect companies' margins, before being passed on to consumer prices. The impact on consumer prices will ultimately depend on the speed with which companies pass on the increase in their production costs to their sale prices.

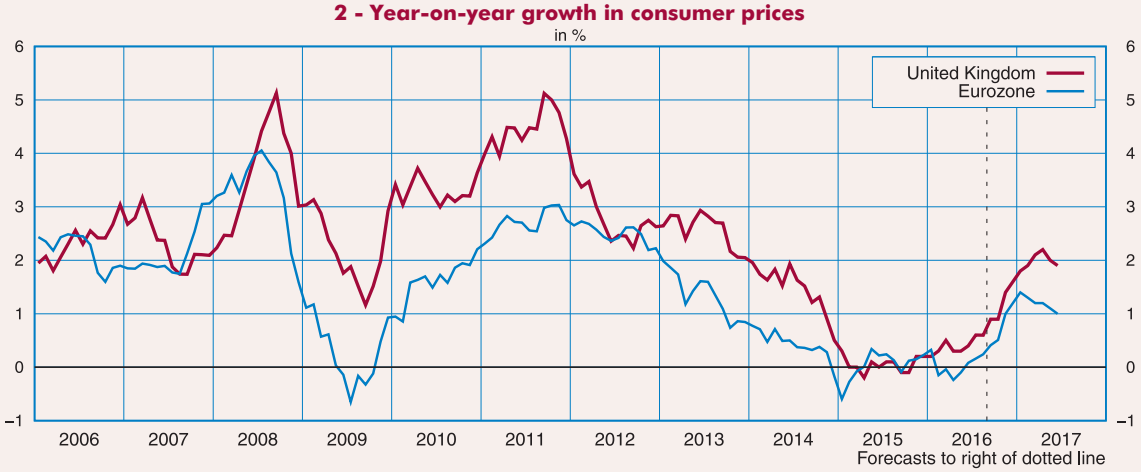
Households are "over-consuming" a little due to expected price rises

Economic outlook surveys on households indicate that many more British people than usual expect prices to rise in the coming months (*Graph 3*). Faced with the prospect of an upsurge in inflation that will reduce their purchasing power, households have little inclination to save and more of them deem it an appropriate time to make major purchases. Indeed, retail sales surged in July (+2.0%), stabilised over the next two months and then increased strongly again in October (+1.9%). This vigour mainly stems from purchases of computers (+25.6% in October year on year) and music and video equipment (+7.4%), products that are virtually all imported. National accounts data confirm the buoyancy of household consumption in Q3 (+0.7%). This rush to beat the currency effects is expected to be only temporary and consumption is expected to slip back quickly to a level more in line with purchasing power by mid-2017, as the inflation shock makes itself felt.

The uncertainty shock is expected to adversely affect investment

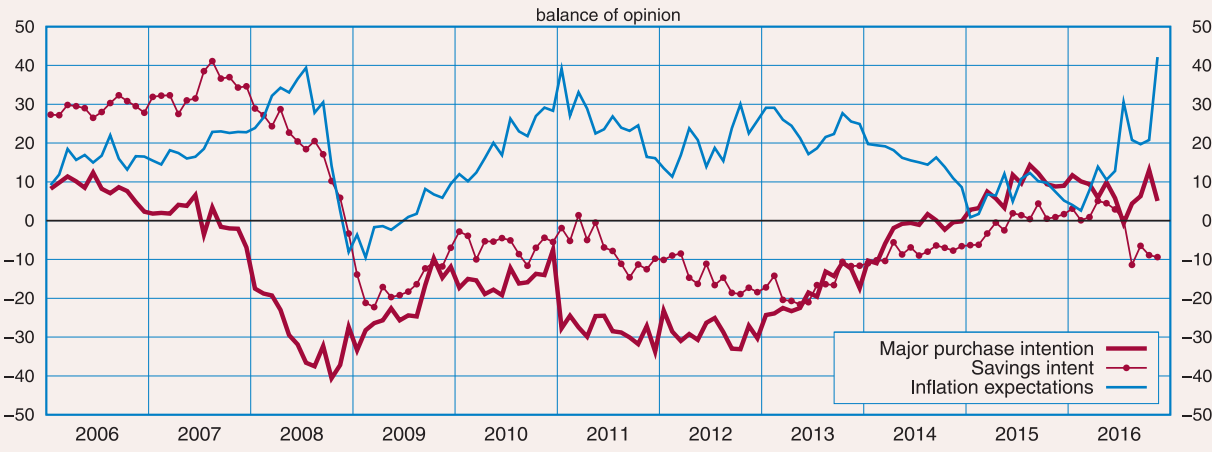
The first estimate of the quarterly accounts for Q3 show that corporate investment has held up (+0.9% after +1.0%). But uncertainties surrounding the conditions of Brexit are expected to lead investors to play a waiting game which will have a negative effect on their purchases through to mid-2017, and this is expected to last for as long as the exit conditions are not clarified. According to the Bank of England's surveys, investment intentions are at their lowest level, in particular in the service industries. Thus several business federations (for example the British Bankers' Association in the United Kingdom, the Verband der Automobilindustrie in Germany) have announced their wish to relocate a part of their productive activity to the rest of the European Union if the Brexit negotiations lead to the introduction of trade barriers that are too high (increases in customs tariffs or withdrawal of the European financial passport). In addition, according to an estimate produced by the CEBR Institute in November, based on a survey of 1,015 leaders of companies representative of the British economy, a third of firms have decided to postpone or abandon investment projects for reasons connected to Brexit.

2 - Year-on-year growth in consumer prices



Sources: ONS, Eurostat, INSEE forecasts

3 - Household behaviour surveys



Source: European Commission (DG ECFIN)

Nevertheless, other determinants also play a role in investments and are expected to mitigate this effect; in particular, order books remain full, financing conditions are largely favourable and the production capacity utilisation rate remains high in industry.

Property prices have held up so far

The buoyancy of the British property market kept the British economy extremely vigorous from mid-2013 to mid-2016, directly via the contribution of household investment, and indirectly via the wealth effects generated by the increase in property prices (*Cornuet et al.*, 2016). In April the application of Stamp Duty (equivalent to notary's fees in France) to ownership transfers involving second homes caused a substantial increase in transactions, followed by a collapse, which has contributed to a reversal in the home investment trend over the last two months. Apart from this effect, the outlook for prices and volumes on the property market does not seem to have seen a downturn since the referendum, according to economic outlook surveys (*Graph 4*).

Property prices have slowed slightly since the referendum, according to the Nationwide index, but do not seem to be going towards a clear turning point (*Graph 5*). Through to mid-2017, prices will likely tend to stabilise, which would remove any prospect of a slump in household expenditure via "wealth effects". ■

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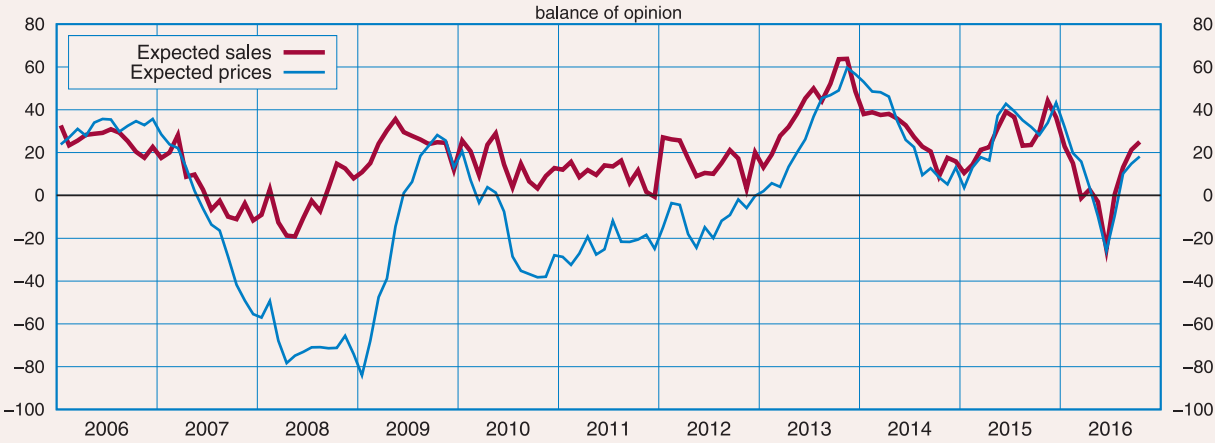
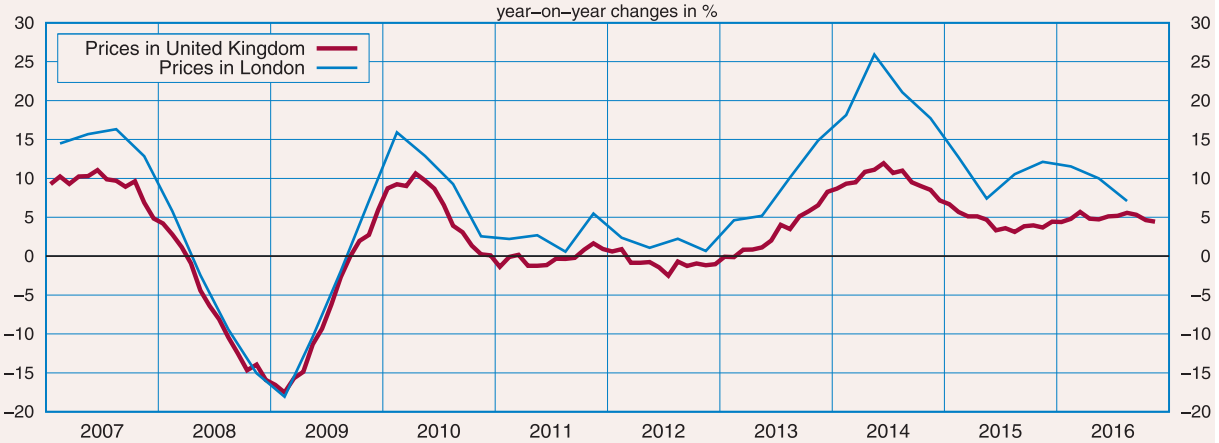
Cornuet F., **Hauseux Y.** and **Pramil J.** (2016), "Les raisons d'une croissance plus forte au Royaume-Uni qu'en France de mi-2013 à mi-2016", *INSEE Analyses* n° 27.

4 - Survey of estate agents



Source: RICS

5 - Changes in property transaction prices



Source: Nationwide

United States

Growth enjoying momentum

In Q3 2016, activity picked up (+0.8% after +0.4%) despite a slight slowdown in domestic demand: exports accelerated sharply and changes in inventories positively affected growth (+0.1 points after five consecutive quarters of destocking. In Q4 growth should remain strong (+0.6%), driven by revitalised domestic demand. Nevertheless, on average over the year, activity should slow (+1.6% after +2.6%), handicapped by the decline in corporate investment, especially in the oil sector.
Growth is expected to slacken again slightly in H1 2017 (+0.5% per quarter): with household purchasing power undermined by an upturn in inflation, household consumption is likely to slow down slightly while corporate investment should continue to increase moderately. The changes in economic policy announced after the presidential election may only have a limited impact on the economy before mid-2017.

Activity is back on track

In Q3 2016, industrial output picked up after three quarters of decline. The business climate this autumn is positive in both industry and services and the production capacity utilisation rate has been rising slightly since June. New rig counts have been increasing since the summer after slumping between late 2014 and mid-2016. Hence activity gathered momentum in Q3 (+0.8% after +0.4%), after being adversely affected since mid-2015 by a destocking cycle and the contraction of private investment, particularly in mining and oil structures (*Focus* and *Graph*). Changes in inventories are expected to be neutral through to mid-2017. Corporate investment should rise moderately again, with an expected mid-year growth overhang for 2017 of +1.4% compared to –0.6% in 2016. American growth is therefore expected to remain robust: +0.6% at end 2016 and then +0.5% per quarter in H1 2017, taking annual growth up to +1.6% in 2016 (after +2.6% in 2015) and the mid-year growth overhang to +1.8% for 2017.

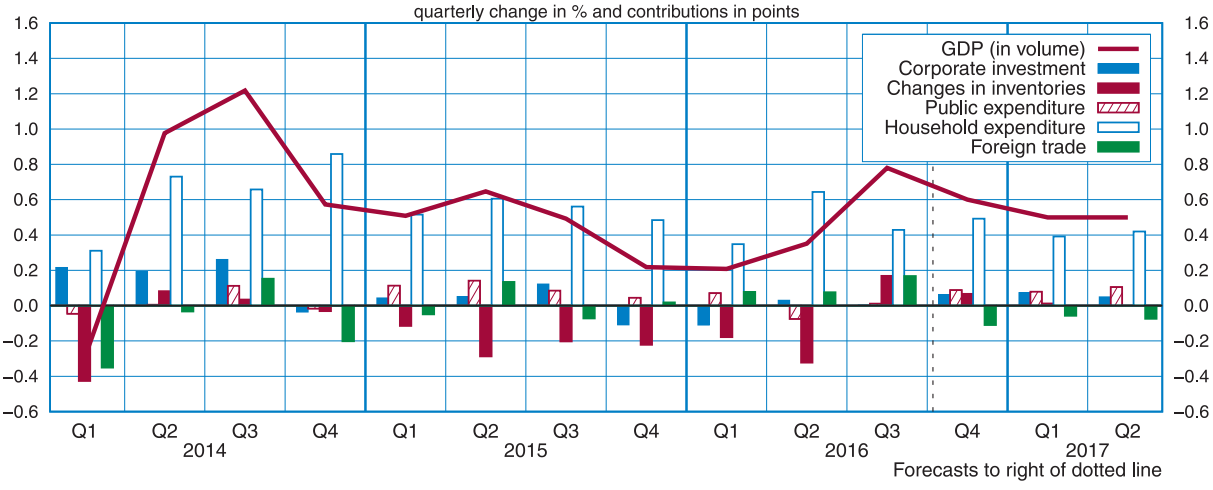
Household purchasing power should slacken slightly, along with household consumption

Due to the past decline in growth, employment is expected to slacken slightly but should remain sufficiently vigorous for the unemployment rate to stabilise below 5.0% over the forecasting period. In addition, inflation is likely to rise gradually, to +2.1% over a year to mid-2017, due to its energy component. All in all, household purchasing power is expected to slacken slightly. Household consumption should decelerate as a consequence, while remaining strong (+0.7% in Q4 and then +0.5% per quarter in early 2017).

Foreign trade should have an almost neutral effect on growth through to mid-2017

Exports picked up sharply in Q3 2016 (+2.4%, after +0.4%), driven by exceptional agricultural exports to South America in particular. They should stagnate at the end of 2016 and then grow at almost the same rate as world demand for American products between now and mid-2017 (+0.6% per quarter), despite the past appreciation of the dollar. After remaining almost stable for a year, imports picked up slightly in Q3 (+0.5%) and should steadily accelerate to reach +0.9% in Q2 2017. All in all, foreign trade should have an almost neutral effect on growth. ■

Corporate expenditure should once again encourage American growth



Sources: BEA, INSEE forecasts

The downturn in the mining industry explains a large part of the slowdown in American activity since 2015

Between 2005 and 2014, mining activity grew significantly in the United States

In terms of value added, mining in the United States accounts for approximately 2.0% of gross domestic product (GDP). A little more than half of the production is oil and gas, about 20% is other mineral ores, a quarter is support services for these extraction activities, the rest consisting of chemicals, plastics and other petroleum derivatives.

From 2005 to 2014, in spite of a few jolts mining grew strongly in the United States, with the deployment of the innovative techniques for extracting oil and gas known as fracking. These techniques are used to exploit at a reduced cost deposits that lie underneath hard rock, which were previously difficult to access. The quantities of crude oil and natural gas extracted have therefore surged in ten years (*Graph 1*), following a leap in the horizontal rig count, i.e. mainly the sites where fracking techniques are used (*Graph 2*)[1].

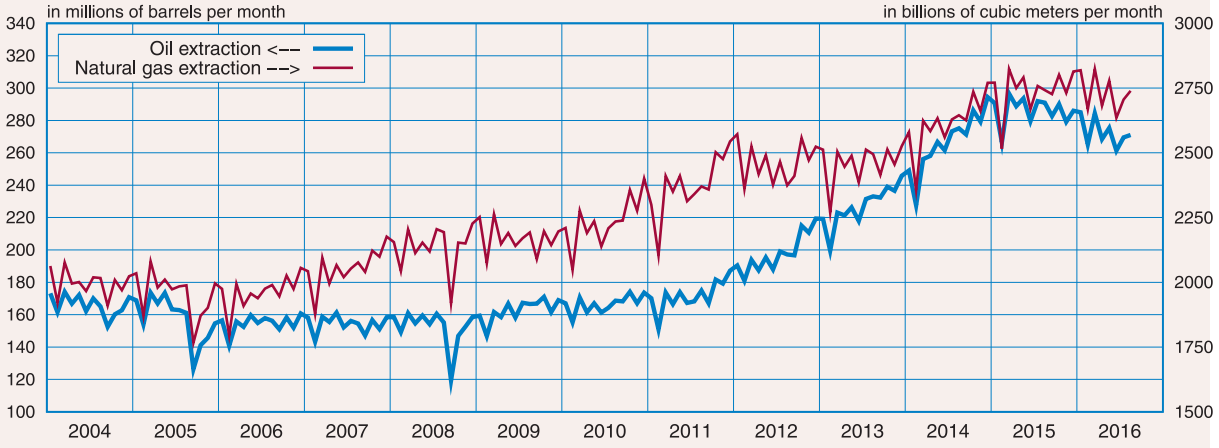
As a result, since 2005 the value added of the mining industry has increased by 56% in volume terms, that is, more than three times faster than economic activity overall: it increased sharply until 2014, before slipping back in 2015. In addition, the United States' trade deficit in mining products fell considerably, from 1.7% of GDP in 2005 to 0.7% in 2015; only 5% of this fall is a result of the decline in oil prices over this period.

Mining activity contributed strongly to American growth between 2005 and 2014

Between 2005 and 2014, on average mining contributed +0.2 points to GDP growth each year, mainly via the direct effect of the increase in the value added of the industry (*Graph 3*). Since 2011 the spread of technical innovations has led to an acceleration in investments in the mining industry.

1. cf. focus « A sharp downturn in American oil production expected by the end of 2016 », Conjoncture in France, june 2016.

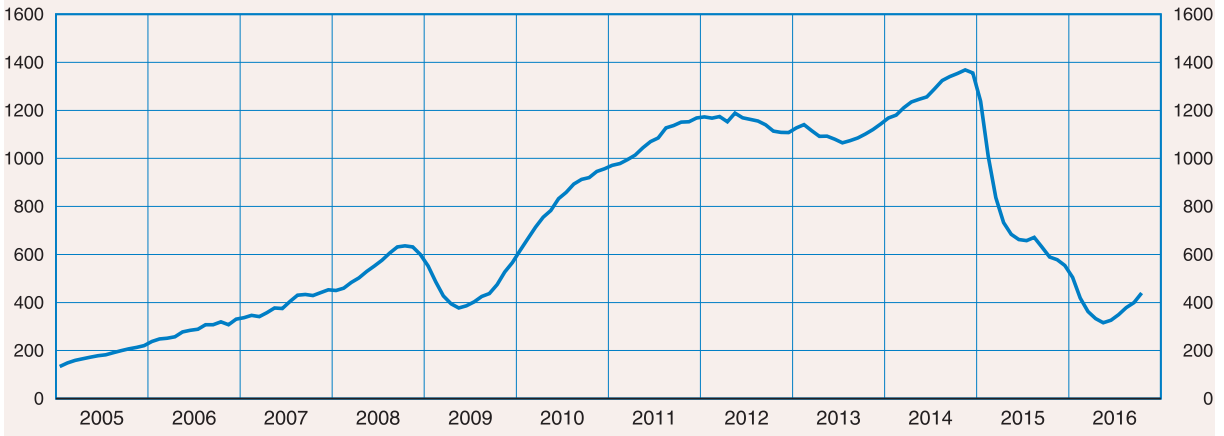
1 - Oil and gas outputs in the United States



Source: AIE

2 - Horizontal rigs commissioned in the United States

in number per month



Source: Backer-Hugs

Thus between 2011 and 2014, the mining industry's contribution to GDP growth rose to reach an average of +0.4 points each year.

Since 2015, mining has caused a loss of 0.7 points of cumulative growth

From mid-2014 to the beginning of 2016, oil prices fell by almost 70%; the price of a barrel of Brent crude fell on average from $109.7 to $33.7, although it has recovered a little to stabilise at around $50.

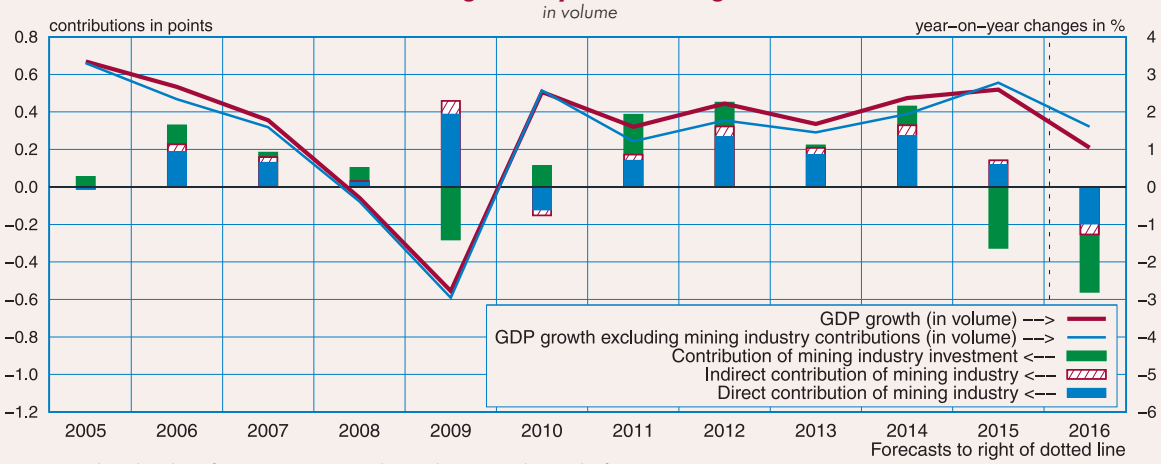
Against this backdrop, numerous rigs commissioned in the previous years found themselves producing at a higher cost than the price of the hydrocarbons extracted. Mining activity has therefore decreased sharply, falling by 12.3% in 2015 and 5.3% in 2016 (carry-over effect at mid-year). Likewise, mining industry investment has collapsed, plummeting by 27.8% in 2015 and 35.8% in 2016 (carry-over effect at mid-year).

However, the fall in mining sector investments is expected to ease in H2 2016: with the stabilisation of oil prices, the new rig count is actually increasing again slightly. This is expected to limit the extent of the decline in mining activity over the next few quarters.

All in all, the mining industry caused a loss of 0.2 GDP points in 2015 out of a total growth rate of 2.6% and is expected to have taken its toll in 2016: assuming that it does not weigh any more heavily in H2, it is likely to have led to the loss of 0.6 points of growth in 2016 (+1.6%). It is therefore an important factor of the slowdown seen in the American economy in 2016.

Cumulatively over the different periods, mining activity is thought to have contributed 2.3 points of growth between 2005 and 2014 and then removed 0.7 points of growth since 2015. ■

3 - Contribution of the mining industry to economic growth in the United States



How to read it: the data for 2016 are growth overhangs at the end of Q2.
NB: for investment, the last point observed was in 2014, and the data presented after that date are the result of INSEE estimates.
Sources: Bureau of Economic Analysis, INSEE calculations

The method

Variations in mining activity have a knock-on effect on economic growth via the industry's value added, its intermediate consumption and its investments

Variations in the value added of the mining industry first of all have a direct effect on GDP, defined as the sum of values added of all branches of the economy.

In addition, in order to produce, the mining industry uses intermediate consumptions purchased from other branches, which in turn use other intermediate consumptions. This indirect effect is measured based on intermediate input tables (IITs) produced by the Bureau of Economic Analysis, which list the intermediate consumption content of each major branch of activity: they allow the calculation, for one dollar produced by the mining industry, of the volume of intermediate consumption mobilised at each production stage, and therefore the indirect contribution of that branch to GDP growth. The calculation consists of normalising the IIT so that, for each branch, the volume of intermediate consumption necessary is expressed as a percentage of total production, then of considering it as a square matrix and inverting it. In practice, for the United States this type of inverse IIT is provided directly by the Bureau of Economic Analysis. The calculations for this Focus were made using the IITs for 2013.

Finally, mining industry investment in various assets has a direct effect on GDP, which in the "expenditure approach" is the sum of the final uses of products. The sum of these three contributions serves to identify the way in which fluctuations in mining activity have contributed to economic growth in the United States. ■

Japan

Inflation remains low as the yen appreciates

Japanese activity slowed in the summer (+0.3% after +0.5%). Moderate rises are forecast: +0.2% to +0.3% per quarter until mid-2017. It should be driven by the upturn in household consumption (+0.4% per quarter) in the wake of household purchasing power which should be boosted by a favourable labour market. Government investment should be galvanised by a new fiscal stimulus plan. However, the appreciation of the yen is likely to put an end to export expansion. In addition, it has led to a general drop in prices: inflation was negative for six months before lifting slightly above positive in October 2016.

The appreciation of the yen has caused prices to fall and is likely to slow down exports

In November, the yen had appreciated by 11% since the start of 2016, bringing down the prices of imported products. In October, prices had risen by 0.2% year on year after six consecutive months of decline due to the drop in the prices of manufactured products (*Graph*). Consequently, inflation remains low. In addition, the continuous rise of the yen against the dollar is adversely affecting exports as it has made Japanese products less competitive: after rebounding in the summer, they are set to stagnate in late 2016 and early 2017 before recovering slightly in Q2 2017.

Consumption should pick up slightly thanks to purchasing power gains

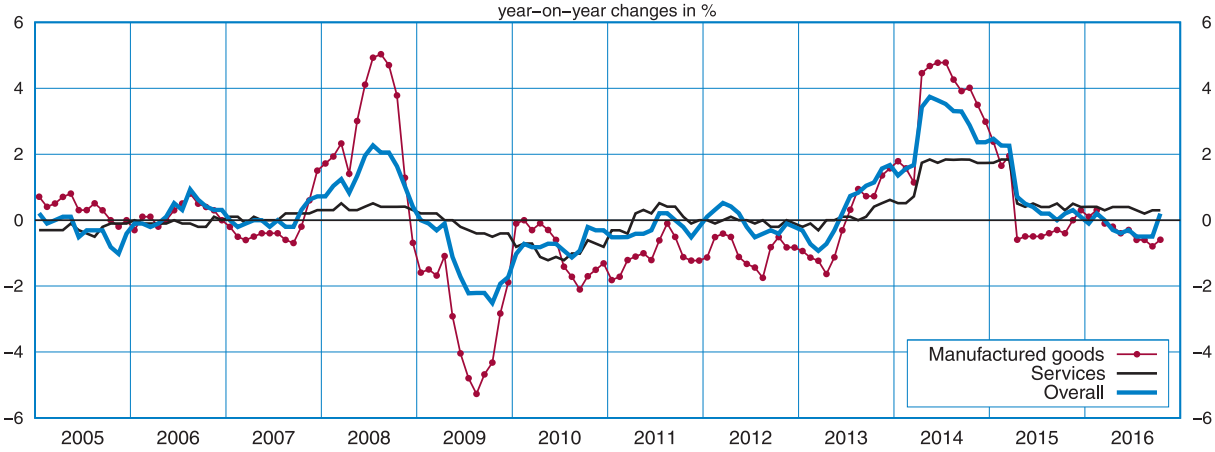
Private consumption has recovered moderately since the start of the year (+0.3% in Q3 after +0.2%). A slight acceleration is expected to follow over the forecasting period (+0.4% per quarter until mid-2017). Indeed, Japanese households have benefited from an upturn in their purchasing power for the past year, much of which has been saved, and low inflation has fostered new purchasing power gains. In addition, payroll should increase further, driven by vigorous employment and a slight rise in basic wages. However, household investment is likely to continue to decline, as reflected by the previous drop in new housing starts.

Government investment is set to increase strongly

The Abe government has announced a 28,100-billion-yen stimulus plan including 7,500 billion (1.5% of GDP) in new spending. This is likely to boost government investment, which should see a revival in its momentum (forecast of +1.0% to +1.5% per quarter).

All in all, activity should slacken slightly in late 2016 (+0.2% after +0.3%) due to exports, and gross domestic product should grow by 1.0% over the year as a whole (after +1.2% in 2015). In early 2017 activity is expected to grow moderately (+0.2% then +0.3%), so that the growth overhang should rise to +0.9% by mid-year. ■

In October, inflation picks up but remains low



Source: Macrobond, Japanese Statistics Bureau

Emerging economies

The short-term outlook is slowly improving

In the emerging economies, the short-term outlook has been improving since the summer of 2016, peaking at its highest level for two years in the autumn while remaining well below its average over the last fifteen years. Overall, growth in these countries is expected to rise gradually between now and mid-2017 and their imports should pick up.

In China, activity slowed slightly in Q3 2016, with exports slumping in particular. Growth is likely to start rising from Q4, with domestic demand boosted by substantial government support. On average over the year, the Chinese economy is expected to grow by +6.6% in 2016, once again lower than the previous year (+6.8%). In early 2017 China's foreign trade is expected to return to a pace more in line with its activity.

In Brazil the recession should ease. Consumption is still falling but less sharply than previously. However, exports edged down once again in the summer. In 2016 the downturn in activity is expected to be similar in scale to that of 2015 (–3.6% after –3.8%), but it should ease significantly in early 2017. The Russian recession should be much less severe than in 2016 (–0.5% after –3.7%) and a tentative return to growth is expected for activity in early 2017, boosted by the recovery of foreign trade. In Turkey, political tensions have continued to damage the business climate and are prompting investors to adopt a wait-and-see attitude. However, these tensions should ease and the Turkish economy is expected to return to more sustained growth in early 2017. Lastly, growth should remain dynamic in Eastern European countries and India.

In China domestic demand remains buoyant

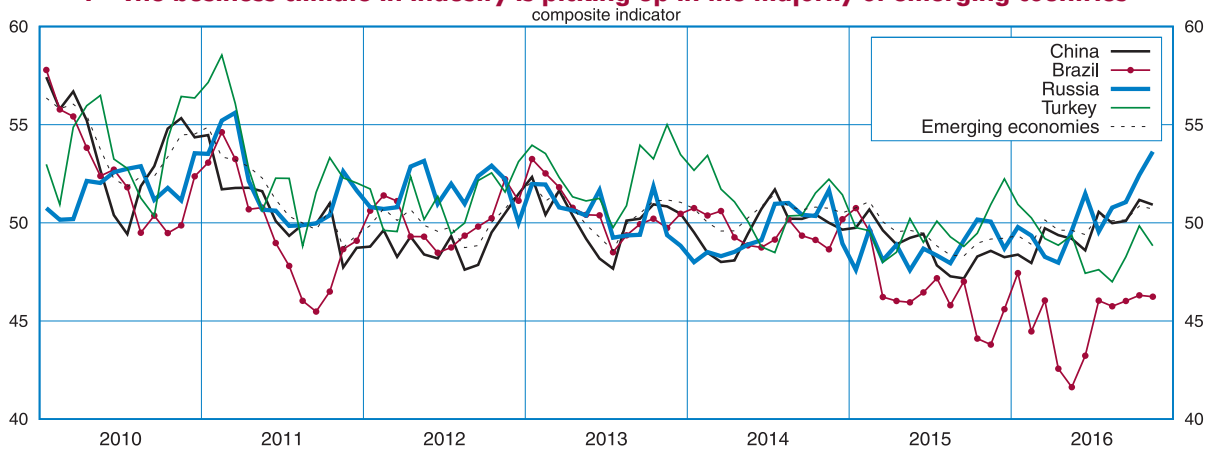
In China, activity slowed slightly in Q3 2016 (+1.5% after +1.7%). Most importantly, Chinese exports plummeted (–1.9% after +1.3%), especially those of assembled products made from components imported for processing, with the result that imports also slowed down sharply (–0.1% after +2.3%), which limited the negative contribution of foreign trade to growth.

Domestic demand is likely to remain buoyant: the business climate is picking up in the manufacturing sector (*Graph.1*), car registrations are accelerating sharply and investment in construction is picking up strongly. However, corporate investment in equipment should continue to slow despite a favourable monetary policy, largely due to the fact that many sectors are suffering from unutilised production capacity. All in all, the Chinese economy is expected to return to a growth rate of +1.7% per quarter through to mid-2017. As an annual average, growth is expected to weaken slightly again in 2016 (+6.6% after +6.8%) and the mid-year growth overhang for 2017 should stand at +5.1%. Both exports and imports are expected to increase again at a pace more in line with activity in early 2017, and their mid-year growth overhang should be positive.

In Brazil, the recession should ease

In Brazil industrial output and exports shrank again in Q3 2016, after bouncing back in Q2. However, the decline in household consumption

1 - The business climate in industry is picking up in the majority of emerging countries



Source: Markit

is easing, as inflation has fallen sharply since the start of 2016 (*Graph 2*) and household purchasing power has stopped declining. As a result, and in line with domestic demand, activity should continue to fall but at an increasingly diminishing rate. In 2016 gross domestic product (GDP) is expected to decrease by 3.6% (after –3.8% in 2015), and the growth overhang at the end of H1 2017 should be –1.4%.

Russia should see the return of tentative growth driven by foreign trade

Russian activity stabilised in the summer of 2016 and is likely to stagnate again in Q4. Retail trade in particular has been picking up slowly since the spring because lower inflation has eased the pressure on household purchasing power, and the upturn in commodity prices has been breathing new life into the Russian economy since the start of the year. On average over the year, the recession is expected to be much less severe in 2016 (–0.5% after –3.7%).

Driven by the slow recovery of external trade, GDP should return to tentative growth in H1 2017.

Central and Eastern European countries and Turkey: temporary weakening of otherwise sustained growth

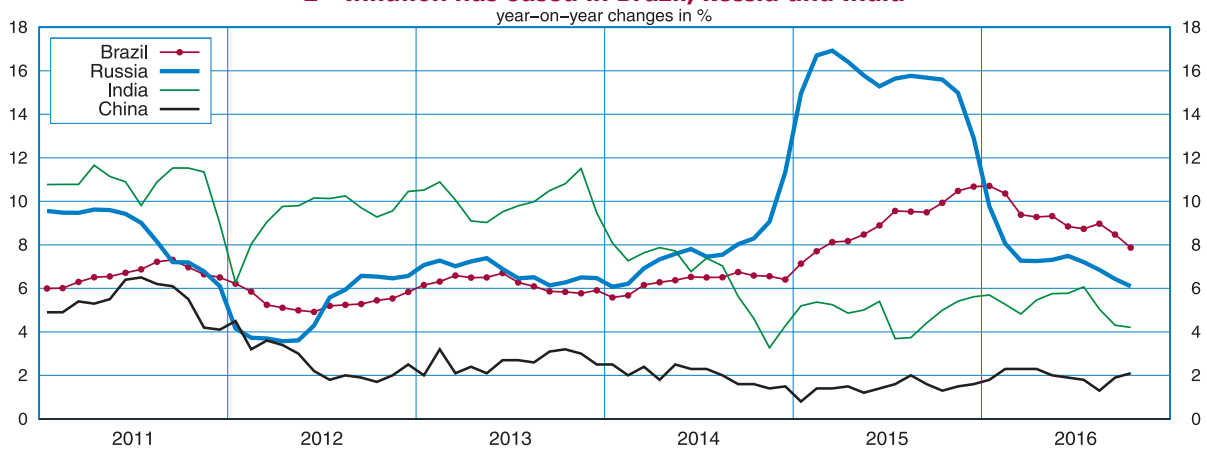
After faltering in Q2, Turkish growth should remain weak in Q3, hit by political uncertainty. Industrial output fell again in Q3. However, in line with a business climate that has picked up slightly, growth should then regain its previous momentum. Over 2016 as a whole, activity is expected to slow significantly (+2.6% after +4.0% in 2015).

In Eastern Europe economic activity is likely to remain buoyant, boosted by demand from the Eurozone. However, it slackened slightly in the summer due to a downturn in industrial output. In reaction to this, activity is expected to accelerate in Q4 and growth should remain robust in early 2017. All in all, activity in 2016 should grow by 3.1%, i.e. not quite as quickly as in 2015 (+3.7%).

India should suffer briefly from the "banknote crisis"

India continues to enjoy sustained growth: +7.3% year on year in Q3. The unexpected withdrawal of 500- and 1,000-rupee banknotes from circulation, as part of the government's measures to combat money laundering from the black economy, led to major industrial action in an economy in which the vast majority of transactions are still carried out in cash. Consequently, the business climate deteriorated significantly in November, especially in the service sector. However, domestic demand should be buoyed by strong government consumption, the drop in food prices and the promised wage rise for civil servants. Therefore, the "banknote crisis" should only lead to a temporary slowdown in activity. ■

2 - Inflation has eased in Brazil, Russia and India



Sources: national statistical institutes

Statistical French Appendix

Goods and services: sources and uses at chain-linked previous year prices

billion euros and percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross domestic product (GDP)	522.3	522.3	524.3	526.2	529.4	528.7	530.0	531.9	533.7	535.9	2095	2120	
% change	0.6	0.0	0.4	0.4	0.6	–0.1	0.2	0.4	0.3	0.4	1.2	1.2	1.0
Imports	167.6	168.2	170.7	174.6	175.0	172.1	176.3	176.8	178.3	180.3	681.1	700.2	
% change	2.2	0.4	1.5	2.3	0.3	–1.7	2.5	0.2	0.9	1.1	6.4	2.8	2.7
Total resources	1140	1140	1147	1156	1162	1158	1166	1170.7	1175	1183	4583	4657	
% change	0.9	0.0	0.6	0.8	0.6	–0.4	0.8	0.4	0.4	0.6	2.1	1.6	1.4
Households' consumption expenditures	277.4	277.7	279.2	279.1	282.1	282.1	282.2	283.7	284.6	285.5	1113	1130	
% change	0.5	0.1	0.5	–0.1	1.1	0.0	0.0	0.5	0.3	0.3	1.5	1.5	1.0
General government's consumption expenditures*	137.1	137.6	138.1	138.6	139.2	139.7	140.1	140.6	141.1	141.6	551.4	559.6	
% change	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4	1.5	1.5	1.1
Government's individual consumption expenditures	82.9	83.2	83.5	83.8	84.3	84.6	85.1	85.3	85.7	86.0	333.4	339.2	
% change	0.2	0.4	0.3	0.5	0.5	0.4	0.6	0.3	0.4	0.4	1.6	1.8	1.3
Government's collective consumption expenditures	43.7	43.8	43.9	44.1	44.2	44.3	44.3	44.4	44.5	44.6	175.5	177.2	
% change	0.3	0.2	0.4	0.3	0.2	0.3	–0.1	0.3	0.2	0.3	1.0	0.9	0.7
Gross fixed capital formation (GFCF)	111.9	111.7	112.7	114.0	115.3	115.4	115.6	116.2	116.9	117.5	450.3	462.5	
% change	0.5	–0.2	0.9	1.2	1.2	0.0	0.2	0.5	0.7	0.5	0.9	2.7	1.5
of which: Non-financial enterprises (incl. unincorp. enterprises)	*62.6*	*63.1*	*63.5*	*64.4*	*65.7*	*65.5*	*65.3*	*65.6*	*66.2*	*66.5*	*253.6*	*262.1*	
% change	*1.1*	*0.7*	*0.7*	*1.5*	*1.9*	*–0.2*	*–0.4*	*0.5*	*0.8*	*0.5*	*2.7*	*3.4*	*1.4*
Households	*25.2*	*25.2*	*25.2*	*25.3*	*25.4*	*25.5*	*25.6*	*25.8*	*26.0*	*26.1*	*100.9*	*102.3*	
% change	*0.0*	*0.1*	*0.1*	*0.4*	*0.3*	*0.4*	*0.6*	*0.6*	*0.6*	*0.6*	*–0.8*	*1.4*	*1.9*
Government	*18.4*	*17.7*	*18.2*	*18.4*	*18.4*	*18.5*	*18.7*	*18.8*	*18.8*	*18.8*	*72.7*	*74.4*	
% change	*–0.8*	*–3.6*	*2.6*	*1.5*	*–0.1*	*0.4*	*1.1*	*0.3*	*0.1*	*0.2*	*–3.9*	*2.3*	*1.1*
Exports	157.4	160.0	159.5	160.7	159.9	159.7	160.5	160.9	162.7	164.5	637.5	641.1	
% change	1.7	1.7	–0.3	0.7	–0.5	–0.1	0.5	0.3	1.1	1.1	6.0	0.6	2.4
Contributions to GDP growth: (in percentage points)													
Domestic demand excluding inventory changes**	0.4	0.1	0.6	0.3	0.9	0.1	0.1	0.5	0.4	0.4	1.4	1.8	1.1
Inventory changes**	0.3	–0.5	0.4	0.5	–0.1	–0.7	0.7	–0.1	–0.1	0.0	0.1	0.1	0.0
Net foreign trade	–0.2	0.4	–0.6	–0.5	–0.2	0.5	–0.6	0.0	0.0	0.0	–0.3	–0.7	–0.1

Forecast

Manufactured goods: sources and uses at chain-linked previous year prices

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Actual production	0.9	–0.2	0.4	0.7	0.1	–1.0	0.6	0.1	–0.2	0.7	1.5	0.3	0.5
Value added	1.0	0.8	0.6	0.3	–0.2	–0.5	0.1	0.3	0.4	0.4	2.4	0.2	0.8
Intermediate consumption	0.9	–0.7	0.3	0.8	0.2	–1.2	0.8	0.0	–0.5	0.9	1.2	0.3	0.3
Imports	2.1	1.3	2.0	2.7	1.3	–1.1	1.9	0.2	1.2	1.2	6.4	4.9	3.0
Taxes on products excluding subsidies	1.0	0.2	0.9	0.4	1.1	0.0	–0.3	0.4	0.2	0.4	2.4	1.8	0.6
Trade and transport margins	1.2	0.2	1.0	0.5	1.1	–0.4	0.2	0.5	0.4	0.4	3.2	1.9	1.1
Total resources	1.3	0.3	1.0	1.2	0.7	–0.8	0.8	0.3	0.3	0.8	3.2	2.0	1.3
Intermediate uses	0.7	0.0	0.6	0.5	0.7	–0.3	0.3	0.3	0.2	0.6	1.6	1.4	1.0
Households' consumption expenditures	0.4	0.5	0.8	–0.2	1.4	–0.1	–0.1	0.6	0.3	0.4	2.0	1.8	1.0
General government's individual consumption expenditures	0.8	0.6	–0.3	1.6	1.2	1.2	1.6	1.0	1.0	1.0	5.1	4.4	3.6
Gross fixed capital formation (GFCF)	0.8	–2.2	4.0	3.3	2.7	0.2	–2.6	0.4	1.1	0.5	2.1	5.6	0.5
Non-financial enterprises (incl. unincorp. enterprises)	0.9	0.5	1.7	3.1	3.8	–0.3	–3.2	0.4	1.3	0.5	3.0	5.3	0.2
Other	0.2	–18.7	21.0	4.4	–3.6	3.9	1.5	0.2	0.2	0.2	–3.3	7.5	2.3
Inventory changes contributions to manufactured production*	*0.8*	*–0.8*	*1.0*	*1.0*	*0.4*	*–2.2*	*1.3*	*–0.4*	*–0.5*	*0.1*	*0.3*	*0.4*	*–0.6*
Exports	1.9	2.3	–0.6	1.3	–1.2	0.8	1.1	0.4	1.1	1.3	6.6	1.4	3.2
Domestic demand excluding inventory changes*	0.6	0.0	0.9	0.5	1.1	–0.1	–0.1	0.4	0.3	0.5	1.9	2.0	1.0

Forecast

**Changes in inventories include acquisitions net of sales of valuables*

Goods and services: sources and uses, chain-linked previous year prices index

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross domestic product (GDP)	0.3	–0.1	0.3	0.3	0.4	–0.1	0.1	0.1	0.2	0.2	0.6	0.8	0.4
Imports	–1.6	1.2	–1.6	–1.3	–1.8	0.5	0.4	0.9	0.4	0.2	–3.0	–2.4	1.5
Total resources	–0.4	0.5	–0.4	–0.2	–0.6	0.1	0.2	0.4	0.2	0.1	–0.6	–0.5	0.7
Household's consumption expenditures	–0.1	0.2	–0.1	0.0	–0.1	0.1	0.1	0.3	0.4	0.2	–0.2	0.0	0.8
General government's consumption expenditures	–0.1	0.0	–0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.2	–0.1	0.2	0.5
Gross fixed capital formation (GFCF)	–0.2	0.0	0.0	0.4	0.1	0.2	0.2	0.3	0.1	0.1	–0.3	0.7	0.5
of which: Non-financial enterprises (incl. unincorp. enterprises)	*–0.2*	*0.2*	*0.0*	*0.4*	*0.2*	*0.1*	*0.2*	*0.2*	*0.1*	*0.1*	*–0.2*	*0.8*	*0.5*
Households	*0.2*	*–0.3*	*–0.1*	*0.5*	*–0.1*	*0.3*	*0.2*	*0.3*	*0.1*	*0.1*	*0.2*	*0.6*	*0.6*
Exports	–0.3	0.7	–0.7	–0.2	–1.0	–0.2	0.3	0.5	0.3	0.2	–0.4	–1.2	0.9
Domestic demand excluding inventory changes*	–0.1	0.1	–0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.2	–0.2	0.2	0.7

Forecast

**Changes in inventories include acquisitions net of sales of valuables*

Manufactured goods: sources and uses, chain-linked previous year prices index

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Actual production	–1.1	1.0	–1.0	–0.6	–1.1	0.1	0.1	0.2	0.2	0.2	–1.9	–1.6	0.6
Value added	0.0	0.2	–0.2	0.8	0.7	–0.6	0.0	–0.4	0.1	0.3	–0.1	0.8	–0.2
Intermediate consumption	–1.5	1.3	–1.4	–1.2	–1.8	0.4	0.2	0.4	0.2	0.2	–2.6	–2.7	0.9
Imports	–0.6	0.9	–1.5	–0.9	–1.5	0.3	0.4	0.6	0.3	0.1	–1.9	–2.2	1.1
Total resources	–0.7	0.8	–1.0	–0.6	–1.0	0.2	0.2	0.3	0.3	0.1	–1.5	–1.5	0.8
Intermediate uses	–1.0	1.0	–1.6	–1.3	–1.9	0.4	0.2	0.2	0.2	0.2	–2.3	–2.9	0.7
Households' consumption expenditures	–0.8	0.4	–0.6	–0.1	–0.6	0.3	–0.1	0.3	0.5	0.1	–1.5	–0.7	0.8
General government's individual consumption expenditures	–1.2	–1.0	–1.1	–0.7	–0.3	–0.9	–0.7	–0.5	–0.8	–1.2	–3.6	–2.8	–2.6
Gross fixed capital formation (GFCF)	0.5	0.1	–0.1	0.2	–0.1	–0.2	0.3	0.2	0.0	0.0	0.6	0.2	0.3
of which: Non-financial enterprises (incl. unincorp. enterprises)	0.5	0.2	–0.2	0.2	0.0	–0.1	0.4	0.2	0.1	0.1	0.8	0.2	0.4
General government	0.0	–2.0	1.8	1.2	0.0	–0.2	0.0	0.2	0.1	0.1	–0.5	1.0	0.2
Exports	–0.6	1.3	–1.2	–0.4	–1.0	–0.1	0.1	0.6	0.3	0.1	–0.7	–1.4	0.8
Domestic demand excluding inventory changes*	–0.8	0.7	–1.1	–0.7	–1.2	0.3	0.0	0.2	0.3	0.1	–1.8	–1.8	0.6

Forecast

**Changes in inventories include acquisitions net of sales of valuables*

Production by sector at chain-linked previous year prices

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agriculture	–1.3	–1.1	–0.8	–0.9	–1.0	–0.4	–0.5	1.3	2.6	1.9	–2.2	–2.6	4.8
Manufacturing	0.9	–0.2	0.4	0.7	0.1	–1.0	0.6	0.1	–0.2	0.7	1.5	0.3	0.5
Energy, water and waste	3.7	–1.8	1.3	–0.2	0.8	0.8	–2.5	0.0	0.3	0.2	1.8	0.2	–0.6
Construction	–0.5	–0.2	–0.7	0.6	0.4	–0.3	1.0	0.4	0.3	0.4	–2.2	0.8	1.4
Trade	1.1	0.4	0.7	0.5	1.2	–0.4	0.2	0.5	0.4	0.5	3.0	2.0	1.2
Market services excluding trade	0.5	0.1	0.5	0.7	0.9	–0.1	0.9	0.5	0.4	0.5	1.6	2.2	1.6
Non market services	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	1.0	1.2	0.9
Total	0.6	0.0	0.4	0.5	0.6	–0.2	0.5	0.4	0.3	0.5	1.3	1.4	1.2

Forecast

Investment (non-financial incorporated and unincorporated enterprises) at chain-linked previous year prices

percentage changes from previous period and previous year

working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Manufactured goods	0.9	0.5	1.7	3.1	3.8	–0.3	–3.2	0.4	1.3	0.5	3.0	5.3	0.2
Construction	0.1	0.4	–0.3	0.8	0.4	–0.4	0.8	0.3	0.2	0.2	–0.3	1.2	0.9
Other	1.9	0.9	0.6	0.6	1.2	0.0	1.3	0.8	0.8	0.7	4.2	3.1	2.6
Total	**1.1**	**0.7**	**0.7**	**1.5**	**1.9**	**–0.2**	**–0.4**	**0.5**	**0.8**	**0.5**	**2.7**	**3.4**	**1.4**

Forecast

Changes in inventories (per product) at chain-linked previous year prices

Contributions (in percentage points)

working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	0.0	–0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2
Manufactured goods	0.3	–0.3	0.4	0.4	0.1	–0.7	0.4	–0.1	–0.2	0.0	0.1	0.2	–0.2
Energy, water and waste	0.1	–0.1	0.1	0.2	–0.1	–0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0
Other (construction. services)	0.0	0.0	0.0	0.0	–0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**0.3**	**–0.5**	**0.4**	**0.5**	**–0.1**	**–0.7**	**0.7**	**–0.1**	**–0.1**	**0.0**	**0.1**	**0.1**	**0.0**

Forecast

Imports (CIF) at chain-linked previous year prices

percentage changes from previous period and previous year

working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	0.1	0.7	1.4	–0.8	2.8	–0.3	2.6	1.5	0.5	0.5	1.3	4.6	3.2
Manufactured goods	2.1	1.3	2.0	2.7	1.3	–1.1	1.9	0.2	1.2	1.2	6.4	4.9	3.0
Energy, water and waste	7.2	–9.2	1.3	9.4	–6.5	–13.9	24.9	–3.0	–2.0	2.0	6.7	–2.4	4.3
Total goods	2.5	0.2	1.9	3.3	0.7	–1.9	3.4	0.0	0.9	1.2	6.3	4.4	3.1
Total services	2.6	1.5	0.7	–0.8	–1.5	–1.4	–0.6	1.1	1.0	0.8	9.7	–2.4	1.8
Total*	**2.2**	**0.4**	**1.5**	**2.3**	**0.3**	**–1.7**	**2.5**	**0.2**	**0.9**	**1.1**	**6.4**	**2.8**	**2.7**

Forecast

*Including territorial correction

Exports (FOB) at chain-linked previous year prices

percentage changes from previous period and previous year

working-day and seasonally adjusted data

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	–0.9	3.8	–0.7	–6.0	6.3	1.6	–17.5	–2.0	2.0	1.5	6.8	–6.2	–7.8
Manufactured goods	1.9	2.3	–0.6	1.3	–1.2	0.8	1.1	0.4	1.1	1.3	6.6	1.4	3.2
Energy, water and waste	–6.8	1.8	–4.0	–4.9	–2.9	2.8	4.0	–10.0	3.0	3.0	–9.4	–6.7	–0.2
Total goods	1.6	2.3	–0.7	0.9	–0.9	0.8	0.5	0.1	1.2	1.3	6.3	0.9	2.8
Total services	2.9	0.2	0.5	0.3	0.8	–3.4	0.4	1.0	1.0	0.8	8.4	–0.8	1.7
Total*	**1.7**	**1.7**	**–0.3**	**0.7**	**–0.5**	**–0.1**	**0.5**	**0.3**	**1.1**	**1.1**	**6.0**	**0.6**	**2.4**

Forecast

*Including territorial correction

Households' consumption expenditures at chain-linked previous year prices

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	–0.5	1.3	–0.3	–0.6	1.2	–1.6	–0.8	1.2	0.4	0.2	–0.3	–0.4	0.7
Manufactured goods	0.4	0.5	0.8	–0.2	1.4	–0.1	–0.1	0.6	0.3	0.4	2.0	1.8	1.0
Energy, water and waste	7.3	–5.2	2.4	–2.3	2.6	3.0	–3.4	1.9	0.7	0.5	2.1	1.6	1.5
Trade	–0.4	–0.2	–0.1	–0.1	1.9	–0.4	0.3	0.5	0.0	0.0	–0.5	1.6	0.4
Market services excluding trade	0.2	0.2	0.3	0.4	0.7	–0.2	0.4	0.3	0.3	0.3	1.1	1.4	0.9
Non market services	0.0	0.1	0.2	0.3	0.7	0.2	0.6	0.4	0.4	0.4	0.7	1.6	1.4
Territorial correction	10.9	–0.3	8.8	6.5	–0.5	–5.0	–2.8	–1.0	0.0	0.0	–11.3	2.8	–3.5
Total consumption expenditures	0.5	0.1	0.5	–0.1	1.1	0.0	0.0	0.5	0.3	0.3	1.5	1.5	1.0
Total consumption	0.4	0.2	0.5	0.1	0.9	0.1	0.1	0.5	0.3	0.4	1.5	1.6	1.1

Forecast

Household income

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross operating surplus	0.6	–0.3	0.2	0.5	0.4	0.1	0.4	0.4	0.5	0.5	1.0	1.2	1.4
Unincorporated enterprises	1.8	–0.5	0.2	0.0	0.2	–0.6	0.2	0.5	0.5	0.5	2.4	–0.1	1.2
Households excluding unincorporated enterprises	–0.1	–0.1	0.3	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.1	2.0	1.6
Gross wages and salaries	0.6	0.4	0.5	0.6	0.7	0.3	0.5	0.6	0.6	0.6	1.6	2.1	1.7
Net interests and dividends	–0.4	0.0	–0.4	0.1	0.6	0.3	0.4	0.2	–0.1	–0.2	–1.2	0.9	0.1
Social benefits (in cash)	0.3	0.4	0.4	0.6	0.4	0.4	0.5	0.4	0.5	0.5	1.9	1.9	1.5
Total ressources	0.5	0.3	0.4	0.5	0.5	0.3	0.4	0.5	0.5	0.5	1.5	1.8	1.5
Income and wealth taxes	–0.4	0.8	–1.3	0.9	0.9	0.5	–0.9	1.4	0.7	0.4	1.7	1.4	1.6
Households' contributions	0.9	0.7	0.5	0.8	0.7	0.4	0.3	0.5	0.8	0.4	2.0	2.3	1.7
Total charges	0.1	0.8	–0.6	0.9	0.8	0.5	–0.4	1.0	0.7	0.4	1.8	1.8	1.7
Gross disposable income (GDI)	0.6	0.2	0.7	0.5	0.5	0.3	0.7	0.3	0.4	0.5	1.4	1.8	1.5
Consumption deflator	–0.1	0.2	–0.1	0.0	–0.1	0.1	0.1	0.3	0.4	0.2	–0.2	0.0	0.8
Real gross disposable income (GDI)	0.7	0.0	0.8	0.5	0.6	0.2	0.6	0.1	0.0	0.3	1.6	1.8	0.6
Social benefits (in kind)	0.2	0.4	0.3	0.5	0.5	0.4	0.6	0.5	0.5	0.6	1.6	1.9	1.8
Adjusted gross disposable income	0.5	0.2	0.6	0.5	0.5	0.3	0.7	0.4	0.4	0.5	1.5	1.8	1.5

Forecast

Main ratios (households)

working-day and seasonally adjusted data, in percentage points

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Saving ratio	14.4	14.3	14.5	14.9	14.5	14.6	15.1	14.7	14.5	14.5	14.5	14.7	14.5
Financial saving ratio*	5.3	5.3	5.5	5.9	5.7	5.6	6.1	5.6	5.3	5.3	5.5	5.7	5.3
Weight of taxes and social contributions**	21.4	21.5	21.3	21.3	21.4	21.4	21.2	21.4	21.4	21.4	21.4	21.4	21.4
Gross wages and salaries/gross disposable income (GDI)	62.2	62.3	62.2	62.3	62.4	62.5	62.3	62.5	62.6	62.6	62.3	62.4	62.6
Social benefits (cash)/gross disposable income (GDI)	35.3	35.3	35.3	35.3	35.3	35.4	35.3	35.3	35.3	35.3	35.3	35.3	35.3

Forecast

*Savings excluding dwelling/gross disposable income (GDI)

**Taxes and social contributions/gross disposable income (GDI) before taxes and social contributions

Operating account of non-financial corporations and unincorporated enterprises

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Value added	1.0	–0.3	0.9	1.0	1.3	–0.6	0.4	0.5	0.5	0.6	2.1	2.3	1.4
Subsidies	20.9	0.5	0.6	0.6	3.0	2.8	2.5	1.1	2.2	1.1	22.4	7.8	6.0
Total ressources	1.5	–0.3	0.8	1.0	1.3	–0.5	0.5	0.5	0.6	0.6	2.6	2.4	1.5
Compensation of employees	0.3	0.4	0.7	0.8	0.9	0.1	0.4	0.7	0.6	0.6	1.5	2.5	1.9
of which: Gross wages and salaries	0.7	0.4	0.6	0.7	0.9	0.3	0.5	0.7	0.6	0.6	1.7	2.4	1.9
Employers' social contributions	–0.9	0.5	1.0	1.0	1.2	–0.4	0.3	0.6	0.8	0.6	0.8	2.6	1.7
Taxes on production	–1.4	0.6	0.6	–0.1	–0.3	–0.2	0.5	0.0	0.7	0.7	0.0	0.1	1.4
Total charges	0.2	0.5	0.7	0.7	0.8	0.1	0.5	0.6	0.6	0.6	1.4	2.3	1.8
Gross operating surplus	3.9	–1.5	1.1	1.5	2.2	–1.5	0.5	0.3	0.4	0.6	4.9	2.7	1.0
Unincorporated entreprises	1.8	–0.5	0.2	0.0	0.2	–0.6	0.2	0.7	0.7	0.6	2.4	0.0	1.6
Non-financial corporations	4.6	–1.8	1.4	2.0	2.8	–1.8	0.6	0.2	0.3	0.6	5.7	3.6	0.8

Forecast

Non-financial corporations' income account

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Value added	1.1	–0.2	0.9	1.1	1.4	–0.6	0.4	0.5	0.5	0.6	2.3	2.6	1.3
Subsidies	21.7	–0.4	0.1	0.6	3.8	3.5	3.0	1.3	2.6	1.3	20.1	8.9	7.0
Total ressources	1.5	–0.2	0.9	1.1	1.5	–0.5	0.5	0.5	0.6	0.6	2.7	2.7	1.5
Compensation of employees	0.3	0.5	0.7	0.8	1.0	0.1	0.5	0.7	0.6	0.6	1.6	2.5	1.9
Taxes	4.1	–1.1	–0.1	4.3	–7.5	1.9	–0.7	0.0	0.4	0.6	–0.5	–3.8	1.0
of which: Taxes on production	*–1.3*	*0.6*	*0.6*	*–0.1*	*–0.3*	*–0.2*	*0.5*	*0.0*	*0.7*	*0.7*	*0.0*	*0.2*	*1.4*
Corporate taxes	*13.7*	*–3.7*	*–1.1*	*11.4*	*–17.9*	*5.6*	*–2.7*	*0.0*	*0.0*	*0.3*	*–1.2*	*–9.9*	*0.2*
Net interests and dividends	–6.4	–5.5	–3.8	–1.0	1.2	0.3	–0.6	–0.7	1.3	1.6	–14.9	–3.2	1.7
Other net charges	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.9	0.9	2.8	2.2	2.4
Total charges	0.2	–0.2	0.3	1.0	0.0	0.3	0.3	0.5	0.7	0.7	0.0	1.4	1.8
Gross disposable income	7.6	–0.6	3.6	1.5	7.4	–3.6	1.4	0.4	0.1	0.4	15.9	8.2	0.4

Forecast

Decomposition of non-financial corporations' profit share

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Profit share (in %)	31.7	31.2	31.3	31.6	32.0	31.7	31.7	31.6	31.6	31.6	31.4	31.8	31.6
Profit share % change	1.1	–0.5	0.1	0.3	0.4	–0.4	0.1	–0.1	–0.1	0.0	1.0	0.3	–0.2
Contributions to profit share variation													
Productivity (+)	0.4	–0.1	0.1	0.1	0.4	–0.3	0.1	0.1	0.1	0.1	0.8	0.3	0.2
Real wages (–)	–0.5	–0.1	–0.3	–0.3	–0.4	0.0	–0.1	–0.1	0.0	–0.2	–1.2	–0.9	–0.2
Employers' social contributions rate (–)	0.3	0.0	–0.1	–0.1	–0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Ratio of value added price and consumption price (+)	0.3	–0.3	0.4	0.4	0.4	–0.3	0.0	–0.1	–0.2	0.0	0.8	0.7	–0.3
Other	0.6	–0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.5	0.3	0.2

Forecast

Main ratios (non-financial corporate sector)

working-day and seasonally adjusted data, in percentage points

	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Wage costs / Value added (VA)	65.7	66.1	66.0	65.7	65.5	65.9	65.9	66.1	66.2	66.2	65.9	65.9	66.2
Taxes on production / VA	5.4	5.5	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.3	5.3
Margin ratio (GOS* / VA)	31.7	31.2	31.3	31.6	32.0	31.7	31.7	31.6	31.6	31.6	31.4	31.8	31.6
Investment rate (GFCF** / VA)	22.6	22.9	22.8	23.0	23.2	23.3	23.2	23.3	23.4	23.4	22.9	23.2	23.4
Saving ratio (savings / VA)	19.5	19.4	19.9	20.0	21.2	20.5	20.8	20.7	20.7	20.6	19.7	20.8	20.6
Tax pressure (Income taxes / gross disposable income before taxes)	15.4	15.0	14.4	15.6	12.4	13.4	12.9	12.9	12.9	12.9	15.1	12.9	12.9
Self–financing ratio (cash earnings)***	86.1	84.9	87.3	86.9	91.4	88.1	89.5	89.2	88.4	88.1	86.3	89.5	88.2

Forecast

*Gross operating surplus
**Gross fixed capital formation
***Savings / Gross fixed capital formation

Countries Accounts

Eurozone[1]	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.4**	**0.4**	**0.3**	**0.5**	**0.5**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**1.5**	**1.6**	**1.3**
Private consumption (56%)	0.4	0.5	0.4	0.4	0.7	0.2	0.3	0.4	0.4	0.4	1.7	1.7	1.3
Investment (20%)	1.6	0.0	0.7	1.3	0.4	1.2	0.2	0.7	0.8	0.8	2.3	2.9	2.3
Public consumption (21%)	0.4	0.4	0.4	0.6	0.6	0.4	0.5	0.3	0.3	0.4	1.4	1.9	1.1
Exports (45%)	1.4	1.1	0.3	0.8	0.2	1.2	0.1	0.8	0.8	0.8	4.8	2.3	2.4
Imports (41%)	2.2	0.8	1.1	1.5	–0.1	1.2	0.2	0.9	1.0	1.0	5.5	3.1	2.9
Contributions to GDP growth													
Domestic demand excluding inventories	0.6	0.3	0.5	0.6	0.6	0.4	0.3	0.5	0.5	0.5	1.7	1.9	1.4
Changes in inventories	0.0	–0.2	0.2	0.2	–0.2	–0.2	0.1	0.0	0.0	0.0	–0.1	–0.1	0.0
Foreign trade	–0.3	0.2	–0.3	–0.3	0.1	0.0	–0.1	0.0	0.0	0.0	–0.1	–0.2	–0.1

Forecast

Consumer prices in Eurozone

changes in a % and contributions in points

	Q3 2016		Q4 2016		Q1 2017		Q2 2017		Annual averages	
CPI groups (2015 weightings)	yoy	cyoy	yoy	cyoy	yoy	cyoy	yoy	cyoy	2016	2017*
All (100.0%)	**0.3**		**0.7**		**1.3**		**1.1**		**0.0**	**1.2**
Food (including Alc. and Tobacco) (19.6%)	1.1	0.2	0.9	0.2	1.4	0.3	1.3	0.3	1.0	1.4
Energy (10.6%)	–5.1	–0.5	–0.4	0.0	4.7	0.5	2.5	0.2	–6.9	3.6
"Core" inflation (69.8%)	0.8	0.6	0.8	0.6	0.9	0.6	0.9	0.6	0.8	0.9

Forecast

** The 2017 figure is the growth overhang at the end of H1*

France (21%)[2]	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.6**	**0.0**	**0.4**	**0.4**	**0.6**	**–0.1**	**0.2**	**0.4**	**0.3**	**0.4**	**1.2**	**1.2**	**1.0**
Private consumption (55%)	0.5	0.1	0.5	–0.1	1.1	0.0	0.0	0.5	0.3	0.3	1.5	1.5	1.0
Investment (22%)	0.5	–0.2	0.9	1.2	1.2	0.0	0.2	0.5	0.7	0.5	0.9	2.7	1.5
Public consumption (24%)	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4	1.5	1.5	1.1
Exports (29%)	1.7	1.7	–0.3	0.7	–0.5	–0.1	0.5	0.3	1.1	1.1	6.0	0.6	2.4
Imports (31%)	2.2	0.4	1.5	2.3	0.3	–1.7	2.5	0.2	0.9	1.1	6.4	2.8	2.7
Contributions to GDP growth													
Domestic demand excluding inventories	0.4	0.1	0.6	0.3	0.9	0.1	0.1	0.5	0.4	0.4	1.4	1.8	1.1
Changes in inventories	0.3	–0.5	0.4	0.5	–0.1	–0.7	0.7	–0.1	–0.1	0.0	0.1	0.1	0.0
Foreign trade	–0.2	0.4	–0.6	–0.5	–0.2	0.5	–0.6	0.0	0.0	0.0	–0.3	–0.7	–0.1

Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2014.
yoy: year-on-year
cyoy: contributions year-on-year

1. Eurozone excluding Ireland, as this country's accounts present a break in series in Q1 2015
2. Share in Eurozone GDP in 2014

Sources: Eurostat, INSEE

Germany (29%)[1]	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.2**	**0.5**	**0.2**	**0.4**	**0.7**	**0.4**	**0.2**	**0.5**	**0.5**	**0.5**	**1.5**	**1.8**	**1.6**
Private consumption (55%)	0.4	0.4	0.6	0.4	0.6	0.2	0.4	0.5	0.5	0.5	1.9	1.8	1.6
Investment (20%)	0.5	0.1	0.1	1.6	1.6	–1.6	0.0	0.9	1.0	0.9	1.1	2.0	2.0
Public consumption (19%)	0.4	1.0	0.7	1.2	1.1	1.2	1.0	0.6	0.6	0.6	2.8	4.2	2.2
Exports (46%)	1.0	1.6	0.0	–0.7	1.4	1.2	–0.4	0.8	0.8	0.8	4.6	2.2	2.0
Imports (39%)	1.4	0.4	1.1	0.6	1.5	0.1	0.2	1.0	1.0	1.0	5.0	3.1	2.7
Contributions to GDP growth													
Domestic demand excluding inventories	0.4	0.5	0.5	0.8	0.9	0.0	0.4	0.6	0.6	0.6	1.8	2.2	1.7
Changes in inventories	–0.1	–0.5	0.2	0.2	–0.2	–0.1	0.0	0.0	0.0	0.0	–0.4	–0.2	0.0
Foreign trade	–0.1	0.6	–0.5	–0.6	0.0	0.5	–0.3	–0.1	0.0	–0.1	0.1	–0.2	–0.1

Forecast

Italy (16%)[1]	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.3**	**0.3**	**0.1**	**0.2**	**0.4**	**0.1**	**0.3**	**0.1**	**0.2**	**0.2**	**0.6**	**0.9**	**0.6**
Private consumption 61(%)	0.2	0.7	0.6	0.4	0.4	0.2	0.1	0.2	0.2	0.3	1.5	1.4	0.7
Investment (17%)	0.9	0.2	0.4	0.9	0.6	0.0	0.8	0.1	0.7	0.6	1.1	2.0	1.7
Public consumption (19%)	–0.8	–0.2	0.4	0.5	0.1	–0.3	0.2	0.2	0.2	0.2	–0.6	0.6	0.5
Exports (30%)	1.6	1.2	–1.4	1.5	–1.2	2.1	0.1	0.7	0.7	0.7	4.0	1.3	2.3
Imports (27%)	3.4	1.3	0.0	1.4	–1.1	1.3	0.7	0.8	1.0	0.9	5.8	1.8	3.0
Contributions to GDP growth													
Domestic demand excluding inventories	0.2	0.4	0.5	0.5	0.4	0.1	0.3	0.2	0.3	0.3	1.0	1.3	0.8
Changes in inventories	0.6	–0.1	0.0	–0.3	0.1	–0.2	0.1	–0.1	0.0	0.0	0.0	–0.3	–0.1
Foreign trade	–0.4	0.0	–0.4	0.1	–0.1	0.3	–0.1	0.0	–0.1	0.0	–0.4	–0.1	–0.1

Forecast

Spain (10%)[1]	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**1.0**	**0.8**	**0.9**	**0.8**	**0.8**	**0.8**	**0.7**	**0.7**	**0.6**	**0.5**	**3.2**	**3.2**	**2.1**
Private consumption (58%)	0.5	0.9	1.0	0.7	0.8	0.7	0.6	0.7	0.6	0.5	2.9	3.1	2.1
Investment (20%)	2.4	2.3	0.7	0.9	0.9	1.1	0.1	0.9	0.9	0.9	6.0	3.7	2.6
Public consumption (19%)	1.2	0.5	0.4	0.6	0.4	–0.6	1.0	0.4	0.2	0.1	2.0	1.4	1.0
Exports (33%)	1.3	0.9	2.2	0.5	0.5	3.1	–1.3	1.1	0.9	0.9	4.9	4.1	2.5
Imports (30%)	1.3	1.7	2.3	0.6	0.1	2.0	–1.8	1.4	1.0	1.0	5.6	3.1	2.4
Contributions to GDP growth													
Domestic demand excluding inventories	1.0	1.1	0.8	0.7	0.7	0.5	0.6	0.7	0.6	0.5	3.2	2.8	1.9
Changes in inventories	–0.1	0.0	0.1	0.1	0.0	–0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Foreign trade	0.0	–0.3	0.0	0.0	0.1	0.4	0.1	–0.1	0.0	0.0	–0.1	0.4	0.1

Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2014.
1. Share in Eurozone GDP in 2014

Sources: Eurostat, Destatis, Istat, INE, INSEE forecast

United States of America	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.5**	**0.6**	**0.5**	**0.2**	**0.2**	**0.4**	**0.8**	**0.6**	**0.5**	**0.5**	**2.6**	**1.6**	**1.8**
Private consumption (68%)	0.6	0.7	0.7	0.6	0.4	1.1	0.7	0.7	0.5	0.5	3.2	2.7	2.0
Private investment (16%)	0.9	1.1	1.4	0.0	–0.2	–0.3	–0.2	0.5	0.9	0.8	4.0	0.5	1.7
Government expenditures and public investment (18%)	0.6	0.8	0.5	0.3	0.4	–0.4	0.1	0.5	0.4	0.6	1.8	0.9	1.2
Exports (13%)	–1.5	0.7	–0.7	–0.7	–0.2	0.4	2.4	0.0	0.6	0.6	0.1	0.7	2.4
Imports (17%)	1.4	0.7	0.3	0.2	–0.2	0.1	0.5	0.6	0.8	0.9	4.6	0.7	2.2
Contributions to GDP growth													
Domestic demand excluding inventories	0.7	0.8	0.8	0.4	0.3	0.6	0.4	0.6	0.5	0.6	3.1	2.1	1.8
Changes in inventories	0.3	–0.1	–0.1	–0.1	–0.1	–0.3	0.1	0.0	0.0	0.0	0.2	–0.4	0.0
Foreign trade	–0.4	0.0	–0.1	–0.1	0.0	0.0	0.2	–0.1	0.0	–0.1	–0.7	0.0	0.0

Forecast

United Kingdom	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.3**	**0.5**	**0.3**	**0.7**	**0.4**	**0.7**	**0.5**	**0.3**	**0.3**	**0.2**	**2.2**	**2.0**	**1.1**
Private consumption (62%)	0.8	0.6	1.0	0.4	0.7	0.9	0.7	0.3	0.2	0.0	2.6	2.7	1.0
Investment (17%)	1.7	0.9	0.9	–1.3	–0.1	1.6	1.1	–0.3	–0.3	–0.2	3.4	1.2	0.3
Public consumption (23%)	0.5	1.0	0.3	0.1	0.6	0.2	0.3	0.2	0.4	0.5	1.4	1.5	1.1
Exports (28%)	2.2	–1.1	–0.3	4.3	0.1	–1.0	0.7	1.0	0.9	0.9	4.5	2.7	2.4
Imports (30%)	3.4	–1.7	0.5	2.6	0.2	1.3	–1.5	0.5	0.2	0.2	5.4	2.3	0.4
Contributions to GDP growth													
Domestic demand excluding inventories	0.9	0.8	0.8	0.1	0.5	0.8	0.7	0.2	0.2	0.1	2.5	2.2	0.9
Changes in inventories	–0.2	–0.5	–0.3	0.2	–0.1	0.5	–0.8	0.0	0.0	0.0	0.1	–0.2	–0.4
Foreign trade	–0.4	0.2	–0.3	0.4	0.0	–0.7	0.6	0.1	0.2	0.2	–0.4	0.1	0.5

Forecast

Japan	Quarterly change in %										Annual change in %		
	2015				2016				2017		2015	2016	2017 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**1.5**	**–0.1**	**0.2**	**–0.4**	**0.7**	**0.5**	**0.3**	**0.2**	**0.2**	**0.3**	**1.2**	**1.0**	**0.9**
Private consumption (60%)	0.5	–0.5	0.5	–0.8	0.4	0.2	0.3	0.4	0.4	0.4	–0.5	0.4	1.2
Investment (21%)	0.7	–0.5	0.5	–0.5	–0.2	1.7	0.1	0.4	0.3	0.4	0.2	1.0	1.4
Public consumption (21%)	0.9	0.1	0.4	0.7	1.3	–1.1	0.3	0.3	0.3	0.3	1.6	1.5	0.6
Exports (15%)	1.6	–3.7	2.1	–0.6	0.8	–1.3	1.6	0.0	0.0	0.5	3.0	0.2	0.8
Imports (17%)	0.3	–2.5	2.5	–0.9	–1.2	–0.9	–0.4	1.0	1.2	1.2	0.1	–1.9	2.5
Contributions to GDP growth													
Domestic demand excluding inventories	0.6	–0.3	0.5	–0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.1	0.8	1.1
Changes in inventories	0.6	0.4	–0.2	–0.1	–0.1	0.2	–0.3	0.0	0.0	0.0	0.6	0.0	0.0
Foreign trade	0.2	–0.2	–0.1	0.1	0.3	–0.1	0.3	–0.1	0.2	–0.1	0.5	0.4	–0.3

Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2014.

Sources: BEA, ONS, Japan Cabinet Office, INSEE forecast