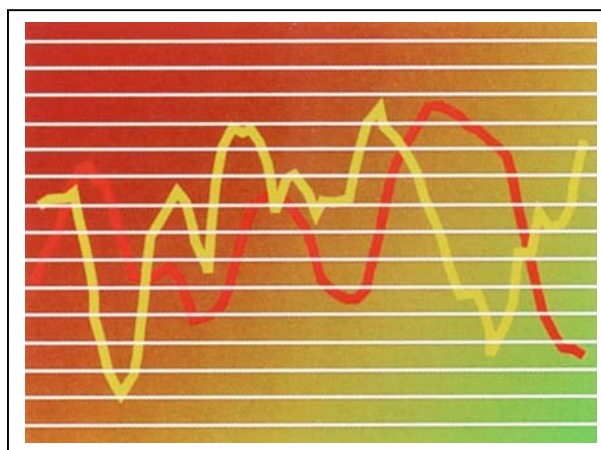


***CONJONCTURE* IN FRANCE**

THE RECESSION GOES ON



MARCH 2009

CONJONCTURE IN FRANCE

March 2009

THE RECESSION GOES ON

THE RECESSION GOES ON

GENERAL OUTLOOK	7
----------------------------------	---

REVIEW OF THE PREVIOUS FORECAST	21
--	----

SPECIAL ANALYSIS

• Subprimes: from the financial crisis to the economic crisis.	23
--	----

FRENCH DEVELOPMENTS

• France's international environment	43
• Consumer prices	48
• Employment	51
• Wages	54
• Household income	57
• Household consumption and investment	61
• Corporate investment and inventory	64

Focus

• Automobile production gearing down: its role in the recession	16
• A better understanding of foreign trade trends by country using a world trade forecast	46

STATISTICAL FRENCH APPENDIX	69
--	----

The recession goes on

In Q4 2008, the decline in worldwide activity was more pronounced than expected in December's Conjoncture in France: -1.8% in the advanced economies, instead of -0.9%; and -1.2 % in France instead of -0.8%. Industrial activity and world trade, in particular, shrank very sharply.

The recession is expected to carry on through H1 2009: world trade continued to fall back in January, and the business climate as shown in the business tendency surveys worsened again in February. In France, for example, the business climate is now at a historic low.

Activity should therefore decline again in Q1 2009, in France (-1.5%) as in all the advanced economies (-1.7%). However, a less marked fall is expected in Q2 (-0.6 % in France, -0.7 % in the advanced economies) as the stimulus plans kick in. The rise in unemployment is likely to become more pronounced in most countries: for example, the unemployment rate should reach 8.8% in Metropolitan France in Q2, against 7.3% one year earlier.

Property construction continues to fall very quickly in those countries that had seen excessive increases in prices and investment (the United States, Spain, Ireland and, to a lesser extent, France), with the possible exception of the United Kingdom. It is even starting to decline in countries that had avoided such excesses (Italy, Germany...) but which are nonetheless suffering from the deteriorating economic environment. Banks' assets are therefore continuing to lose value, prolonging the financial crisis.

Companies are expected to scale back their inventory and investments sharply. Financing conditions remain difficult and investment needs are also limited by the low utilisation level of installed capacities.

Household consumption is holding up better. It should even grow slightly in France: very low inflation, substantial increases in benefits and the measures in the stimulus plan should enable a slight progression in purchasing power, despite the fall in employment and, more generally, in earned income.

Consumption is expected to fall, however, in many countries. Incomes look set to fall more than in France, and the drop in financial markets and property prices is expected to bring about a sharper increase in household savings ratios. The drop in consumption, notably of durable goods, and the fall in corporate expenditure look set to cause a further contraction in world trade and in our exports.

The main uncertainties surrounding our scenario naturally concern developments in coming months in the financial system, which continues to be highly unstable, as well as the intensity of the adjustment of corporate expenditure and the extent of the impact of the stimulus plans.

Corporate investment is being weighed down by all the different driving factors, and could also decline more than expected. In contrast, support for growth from inventory, although it does remain improbable within the timescale of our forecast, cannot be entirely ruled out. Such is the case notably in France where the contraction in inventory seems to have been particularly severe at the end of 2008.

Finally, there are two uncertainties surrounding the impact of the stimulus plans. The first concerns the capacity of States to accelerate implementation of public investment. The second concerns the impact of the sums paid out to households: it is difficult to evaluate the extent to which these sums will be saved or consumed, in a context of great uncertainty as to households' income and assets. ■

Activity falls back and world trade declines

All-round recession

In Q4 2008, activity shrank sharply in the advanced economies (-1.8% after -0.3% in Q3). Households faced with the falling value of their assets and a deteriorating labour market continued to reduce their expenditure. In parallel, the low utilisation rate of production capacities and tighter financing conditions led companies to reduce their investment expenditure and employment sharply. France was no exception to the general rule, with a 1.2% fall in activity.

World trade declined at the end of 2008

At the end of 2008, the marked contraction in activity and demand went hand in hand with the 6.0% fall in world trade in Q4 2008 (see *Graph 1*). This quite exceptional slide is the largest recorded in the last 40 years. It particularly affected those economies that depend on exports for growth, notably Japan and Germany.

Shrinking export trade outlets trigger a fall in activity in the emerging economies

This decline in export outlets weighed down on activity in the emerging countries, with the economies of South-East Asia and Russia being particularly hard hit. Year on year, exports fell 17.5% in January in China, for example, where activity slowed down distinctly. They also dropped 20.5% in December for the other countries in South-East Asia, resulting in a collapse in investment (notably in South Korea, Thailand and Taiwan) and industrial output there, and a decline in GDP.

Financial markets still awaiting a return to normality

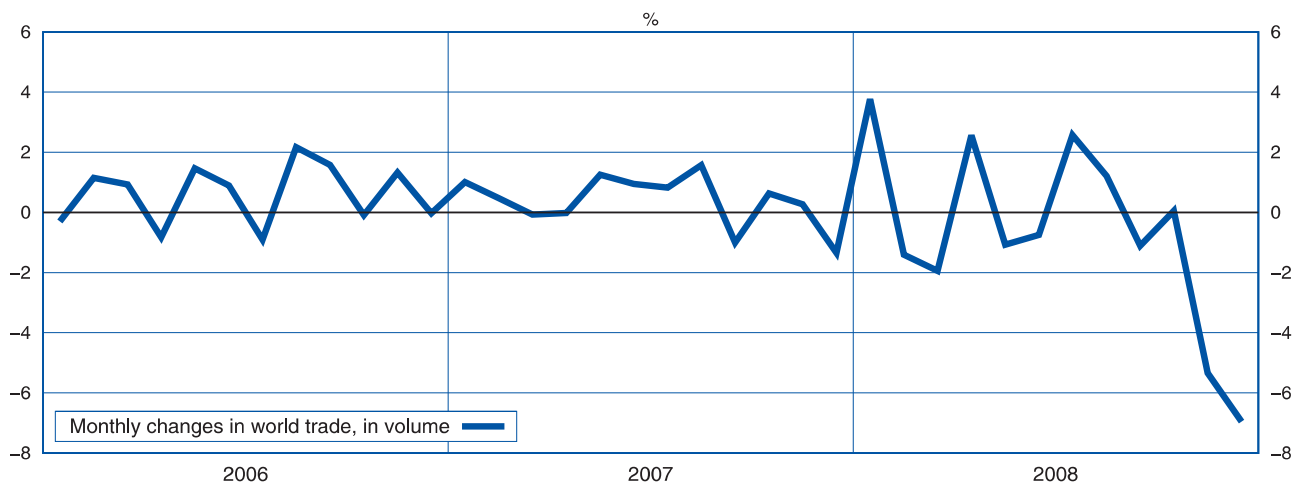
The central banks and States ever more strongly mobilised against the financial crisis

Since September 2008, the financial markets have remained badly disrupted. To enhance their fluidity, the main central banks have considerably reduced their base rates and made massive liquidity injections. On top of this, the Fed, Bank of Japan and Bank of England have decided to make direct purchases of private-sector securities, and the ECB has not ruled out doing so. At the same time, many States have intervened on a large scale to normalise the working of their financial systems, buying stakes, making loans, guaranteeing debts, and even nationalising financial institutions.

Easing of the markets remains limited

In the wake of these interventions, the working of the markets has improved, but only in a limited way. For example, interbank markets have eased up considerably compared with the height of the crisis at the time of the Lehman Brothers bankruptcy, the flight to quality seems to be easing off and the risk premiums demanded of private issuers have dropped back. Risk aversion remains at a high

1- World trade



Source: Central Plan Bureau of the Netherlands

level, however, and does not seem likely to subside in H1 2009. Financing conditions for households and companies alike are therefore expected to remain tight over our forecast horizon, even though the banks declare that they intend to tighten their lending policies less at the beginning of 2009.

The property market shows no signs of improving

The property crisis has not yet been curbed. In the United States, for example, prices have continued to fall, as have commencements and building permits, while housing stocks increased yet again in Q4 2008. In the United Kingdom, the fall in prices continues at a rate of 5% per quarter, while in Spain, stocks of unsold new homes are continuing to rise sharply. In Ireland, residential commencements have now dropped below the 1,000 units a month mark, against over 4,000 in 2007 and more than 6,000 from 2004 to 2006. In France, buyers are adopting a wait and see policy, and new housing stocks are swelling, while sales are clearly down: days to sale have now reached their highest level in the last 30 years. Household investment is therefore expected to carry on falling, and construction-sector activity should continue to weigh down severely on growth.

France and its main partners set to remain in recession

The world recession and decline in foreign trade likely to continue

Looking to the horizon of H1 2009, prospects look no brighter. The business tendency surveys have deteriorated even further in recent months, suggesting that the recession affecting the advanced economies is likely to continue (see Graph 2). In this context, world trade looks set to decline sharply, with negative effects on the activity of emerging countries. However, with the implementation of stimulus plans in many advanced economies and in certain emerging countries, notably China and Russia, the decline in activity should be less pronounced in Q2 than in Q1.

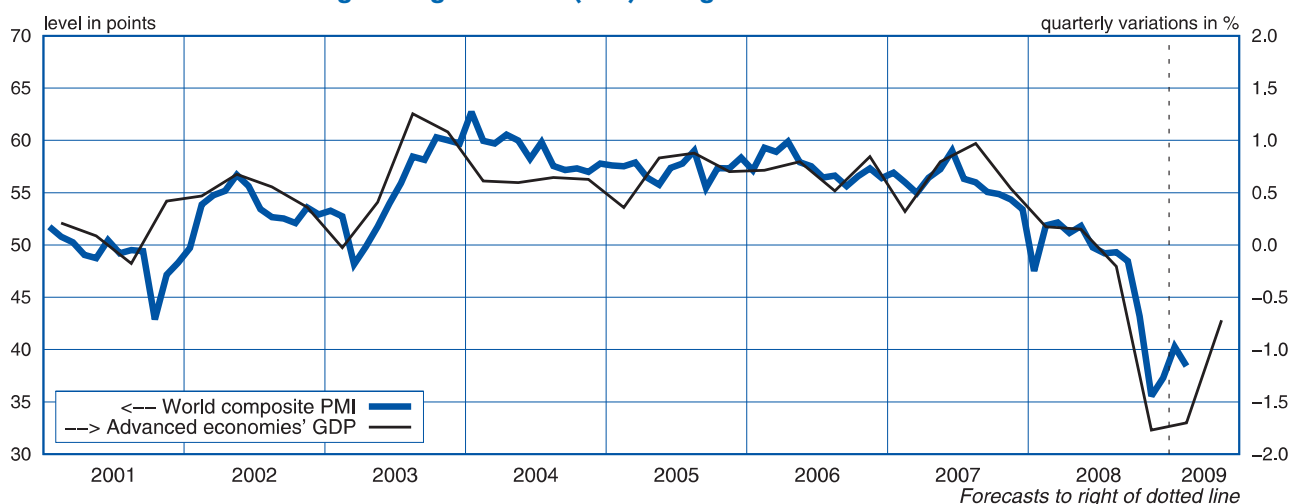
French exports set to fall sharply again

In a context of a general fall in activity, world demand for French output should be well down again in early 2009: it should plunge by 4.3% in Q1 2009, then a little less in Q2 (-2.9%). French exports will be considerably affected: after a fall of 3.7% in Q4, they should decline by 5.8% then by 2.5% over the first two quarters of 2009.

After its fall in Q4, French industrial output should be down again

The reduction in foreign trade outlets comes at the same time as a contraction in the domestic market: as suggested by business climate trends, worse today than in the 1993 recession, activity should continue to decline. In Q4 2008, manufacturing output suffered a sharp fall (-7.6%). The automobile sector, hit hard by the crisis and forced to scale back its stocks, was particularly hard hit

2 – Purchasing Managers' Index (PMI) and growth in the advanced economies



Source: DataInsight, INSEE calculations

General outlook

(-23.4%), as were intermediate goods (-10.5%). In the latest surveys on industry, the outlook is continuing to get worse (see Graph 3). They suggest that the fall in industrial output should continue in H1 2009 (-7.0% then -3.0% in Q1 and Q2 2009). Industrialists declare in particular that they would like to reduce their stocks even further, suggesting a further negative contribution of inventory to activity (-0.6 points in Q1 then -0.2 in Q2), after the strong trend towards running down inventory already recorded in Q4 2008 (contribution of -0.9 points to growth), notably in the automobile sector.

The outlook is also negative in services and construction

The business climate is also deteriorating in construction, in line with the general reduction in investment, and in services. Activity should therefore decline in these sectors, but less sharply than in industry.

Activity should be sharply down in France in H1

All in all, French economic activity should be well down again in H1 2009: the slide in GDP should come to 1.5% in Q1 then 0.6% in Q2. The less marked deterioration in activity in Q2 than might be expected at first sight can be explained by the stimulus plans recently introduced in France and our main partners. The growth overhang for 2009 at the end of Q2 should be very clearly negative (-2.9%).

The decline in investment should continue

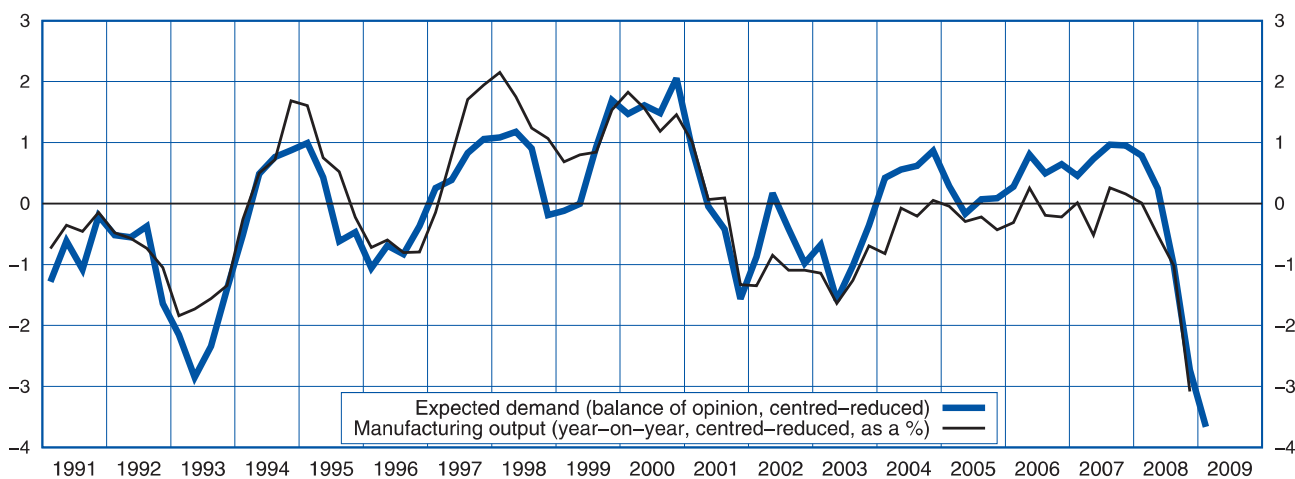
The fall in capacity utilisation rates looks likely to hold back productive investment

Faced with the prospects of weak demand, and the underutilisation of production capacities, companies look set to scale back their investments considerably. Capacity utilisation rates dropped by 6 points between October 2008 and January 2009, and now stand 8 points below their long-term average. Companies are also facing difficult financing conditions. The sharp drop in investments is announced by the latest survey of industrialists, who declare that their investment projects for 2009 are very sharply down. Consequently, the drop recorded in Q4 2008 is likely to be clearly amplified in early 2009 (-5.1 % in Q1 then -3.4% in Q2 for corporate investment). Regarding investment, the growth overhang for 2009 at the end of Q2 should therefore be clearly negative (-8.8%).

Household investment down again

Household investment, mainly on housing, is being held back by three factors: the now relatively large weight of housing investment as a share of income, lower expectations of price rises, meaning there is no longer the prospect of capital gains over time as was the case in previous years, and tighter lending conditions. It should drop through H1 by about 1% per quarter.

3 – Expected demand and manufacturing output



Source: INSEE

Inflation should continue to fall due to the decline in demand and oil prices

After a sharp fall, the oil price per barrel should fluctuate around \$40

Oil prices have fallen considerably since summer 2008, as the market has shifted to a surplus: demand from developed and emerging countries has fallen in the wake of world recession, while reductions in OPEC production quotas have only been partly applied. In H1 2009, there should continue to be an oil market surplus (see *Graph 4*): reductions in OPEC country quotas are likely to remain insufficient to compensate for the further decline in demand. Oil prices should therefore fall somewhat from their average level in January 2009 (\$44.6) and should fluctuate around \$40 to the time horizon of our forecast.

Inflation continues to fall

In all countries, inflation should be pushed down by two effects: the distinct fall in commodity prices, notably reducing energy prices and production costs, and the pressure on the margins of industrialists and distributors due to slackening demand. Ultimately, the fall in inflation should be clear. Already, the year-on-year rise in consumer prices was only 3.0% in January in the United Kingdom, 1.2% in the Euro Zone in February and 0.0% in the United States in January. However, core inflation, which excludes energy and food products from its calculation, although lower, remains positive almost everywhere.

But Japan should be the only advanced country in deflation

Japan is the exception: headline inflation there is zero, while core inflation is negative and Japanese wages are falling. The very gloomy prospects for activity there suggest that deflationary pressures should become more intense. Japan has never put deflation completely behind it, and now looks set to see it make a return.

The fall in inflation should also concern France

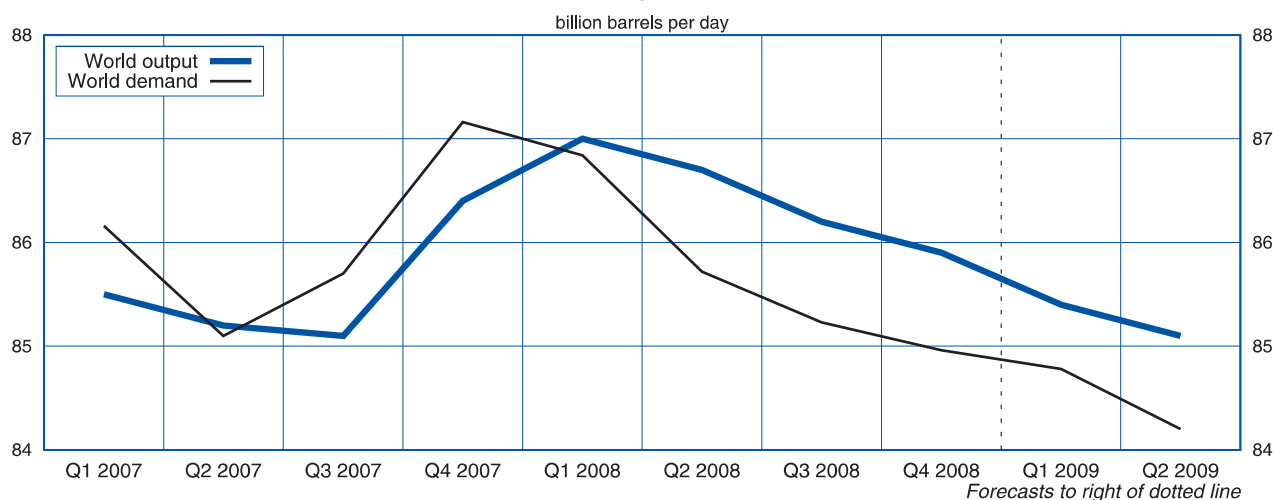
In France, the sharp drop in the price of energy products and, to a lesser extent, in that of foodstuffs, should also make inflation fall until the summer. Weak demand and falling prices for intermediate goods should also push core inflation downwards, falling to 1.4% year on year in June 2009 (see *Graph 5*). All in all, due to the scale of the fall in oil prices recorded since last summer, year-on-year consumer prices should be temporarily negative in June.

The labour market weakened by the recession

The decline in employment should be amplified in early 2009

Due to the marked contraction in activity since the end of 2008, the French labour market should shed large numbers of jobs in the early part of the year: over 330,000 jobs in H1 2009, after a fall of over 110,000 jobs in H2 2008. Non-agricultural market sectors should lose almost 390,000 jobs in H1 2009,

4 – World oil output and demand



after almost 160,000 in H2 2008. Industry, in particular, should continue to lose jobs quickly, while the number of workers in the construction sector should begin to fall in early 2009 (see Graph 6). This decline in employment should be partly made up for by an increase in the number of jobs in non-market sectors where non-subsidised employment should remain dynamic and subsidised employment should stop falling.

Unemployment set to continue rising

The fall in unemployment observed since 2006 came to a halt with the downturn in the economic situation in Q2 2008. Over the second half of 2008, unemployment made a sharp upswing in the wake of the many job losses related to shrinking activity. In early 2009, these losses look set to be even greater, with unemployment according to the ILO definition growing rapidly. For Metropolitan France, it is expected to reach an average of 8.8% in Q2 2009, representing a rise of 1.5 points within a year.

Consumption should continue progressing, but more weakly

Purchasing power should still be increasing in early 2009...

After slowing down sharply in 2008, in line with earned income, household purchasing power should still progress in H1 2009, but more weakly. It should still be penalised by the drop in earned incomes, as employment declines sharply and the rise in unemployment weighs down on wages. It should benefit, however, from the fall in inflation and the dynamism of welfare benefits, notably the increase in family benefit and retirement pensions, and payment of the active solidarity benefit.

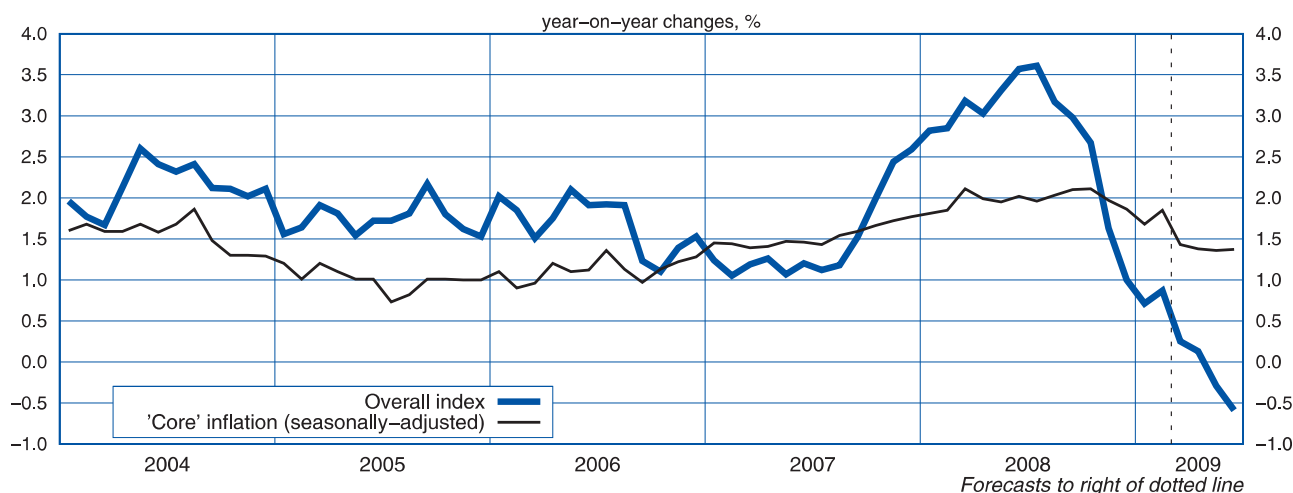
... and consumption should still increase slightly

Faced with the deteriorating labour market and uncertainties surrounding the economic situation, households are likely to be cautious and to increase their precautionary saving to a certain extent. The rise in the savings ratio should be limited, however, in a context where the bonus to replace old vehicles is providing an incentive for households to buy more cars. Consumption should therefore still increase in H1 2009, in marked contrast with all the other components of private demand. Its growth is likely to be small, however (+0.1% to +0.2% per quarter).

Imports should fall due to domestic demand

In H1 2009, French imports should continue the marked decline that began in Q4 2008, under the effect of the sharp falls in domestic demand and intermediate consumption included in exports. The fall in imports should be more limited than that in exports, however, and the contribution of foreign trade to growth should once again be negative in early 2009.

5 - Inflation and core inflation



Great uncertainty surrounding this forecast

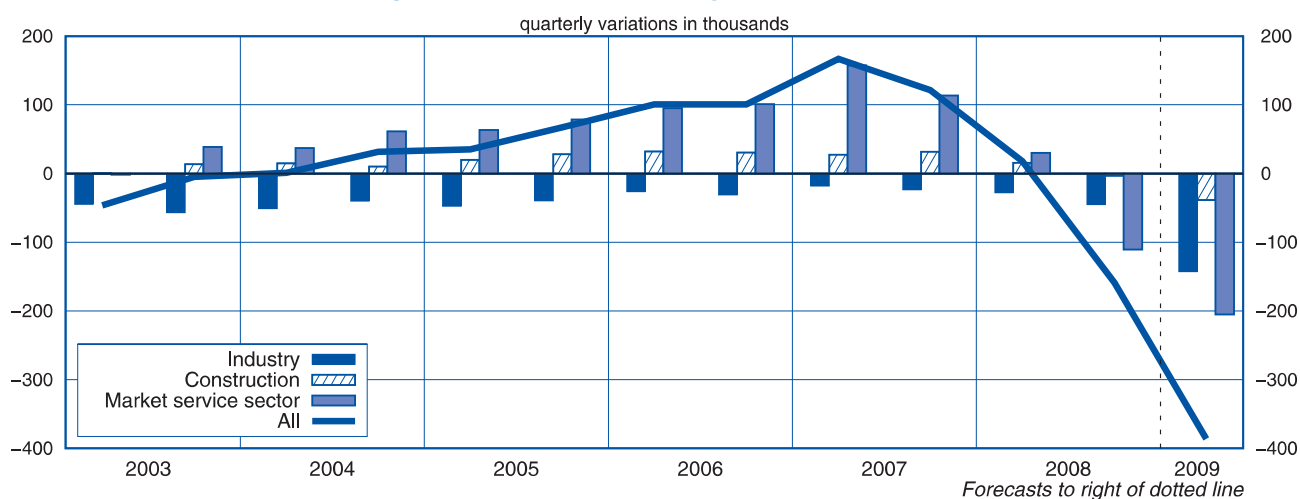
Development of the financial crisis still uncertain

The development of the financial situation and, consequently, of the behaviour of the banks, remains uncertain. While the massive interventions by central banks and States have allowed a certain improvement, it is still limited and tensions remain high. Signs of this are the volatility of financial markets and the renewed difficulties of some financial institutions, despite the fact that they have already benefited from significant aid. The current fall in activity is also weighing in turn on the financial institutions, through the fall in asset prices it is causing and the defaults on payment by companies and households, thereby increasing the losses the financial markets must cope with.

The impact of stimulus plans is difficult to evaluate

The impact on the economy of the plans implemented by developed countries and the main emerging economies is also difficult to evaluate precisely. On the one hand, the timescale for the implementation of public investment projects is uncertain. On the other, it is difficult to foresee the extent to which the rise in unemployment and uncertainties surrounding future revenues might encourage households to save the sums of money paid to them under these plans, rather than consuming them.

Finally, it is not certain to what extent the analysis tools constructed on the basis of "average" economic outlook trends are relevant in exceptional circumstances such as those we are currently experiencing. The uncertainty that is an inherent part of forecasting is therefore probably increased. ■

6 - Paid job creations in the non-agricultural market sectors

Key figures: France and its international environment

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

	2007				2008				2009		2007	2008	2009 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
International environment													
Advanced economy GDP	0.4	0.7	0.8	0.3	0.4	0.1	-0.3	-1.8	-1.7	-0.7	2.7	0.7	-3.7
Euro Zone GDP	0.7	0.4	0.6	0.4	0.7	-0.3	-0.2	-1.5	-1.8	-0.7	2.6	0.7	-3.6
Barrel of Brent oil (in dollars)	57.7	68.6	74.9	88.9	96.9	121.8	115.1	54.8	43.0	40.0	72.5	97.1	40.8
Euro-dollar exchange rate	1.31	1.35	1.38	1.45	1.5	1.56	1.5	1.32	1.30	1.30	1.37	1.47	1.30
World demand for French products	1.1	0.6	2.7	0.5	1.1	0.1	0.7	-4.4	-4.3	-2.9	5.0	2.3	-9.2
France - supply and use													
GDP	0.5	0.6	0.7	0.4	0.4	-0.3	0.1	-1.2	-1.5	-0.6	2.1	0.7	-2.9
Imports	2.1	2.1	1.0	-0.9	1.9	-0.4	1.1	-2.2	-3.3	-1.5	5.9	2.0	-5.6
Household consumption	0.6	0.9	0.8	0.6	0.0	0.1	0.1	0.5	0.2	0.1	2.5	1.3	0.6
Public and NPISH consumption	0.3	0.4	0.3	0.3	0.4	0.5	0.8	0.1	0.9	0.7	1.3	1.6	2.0
Total GFCF	1.1	0.8	0.7	1.2	0.6	-1.6	-0.2	-1.1	-3.3	-2.2	4.9	0.4	-6.2
of which: NFEs	1.8	1.3	1.3	1.4	0.6	-1.1	0.1	-1.5	-5.1	-3.4	7.3	1.5	-8.8
Households	0.5	0.3	0.3	0.5	0.7	-2.7	-0.6	-0.3	-1.0	-1.1	3.0	-1.1	-3.1
Exports	0.6	1.7	0.4	0.4	2.0	-1.9	1.0	-3.7	-5.8	-2.5	3.2	1.1	-10.2
Contributions:													
Domestic demand excluding change in inventories	0.6	0.7	0.7	0.7	0.2	-0.2	0.2	0.0	-0.4	-0.2	2.7	1.2	-0.5
Change in inventories**	0.3	0.0	0.2	-0.6	0.2	0.3	0.0	-0.9	-0.6	-0.2	0.2	-0.2	-1.4
Net foreign trade	-0.4	-0.2	-0.2	0.4	0.0	-0.4	0.0	-0.3	-0.5	-0.2	-0.8	-0.3	-1.0
France - situation of households													
Total employment (variation at end of quarter)	126	72	73	65	58	-34	-16	-97	-167	-166	335	-90	-
Non-agricultural market sector employment	108	59	64	58	42	-24	-42	-117	-197	-190	288	-141	-
Unemployment rate (quarterly average)	8.5	8.1	7.8	7.5	7.2	7.3	7.2	7.8	8.2	8.8	8.0	7.4	-
Consumer price index*	1.2	1.2	1.5	2.6	3.2	3.6	3.0	1.0	0.3	-0.6	1.5	2.8	-
Core inflation*	1.4	1.5	1.6	1.8	2.1	2.0	2.1	1.9	1.4	1.4	1.5	2.0	-
Household purchasing power	0.6	0.7	0.8	0.7	0.1	-0.3	0.1	0.7	0.2	0.3	3.3	1.2	0.9

Forecast— ovhg: overhang

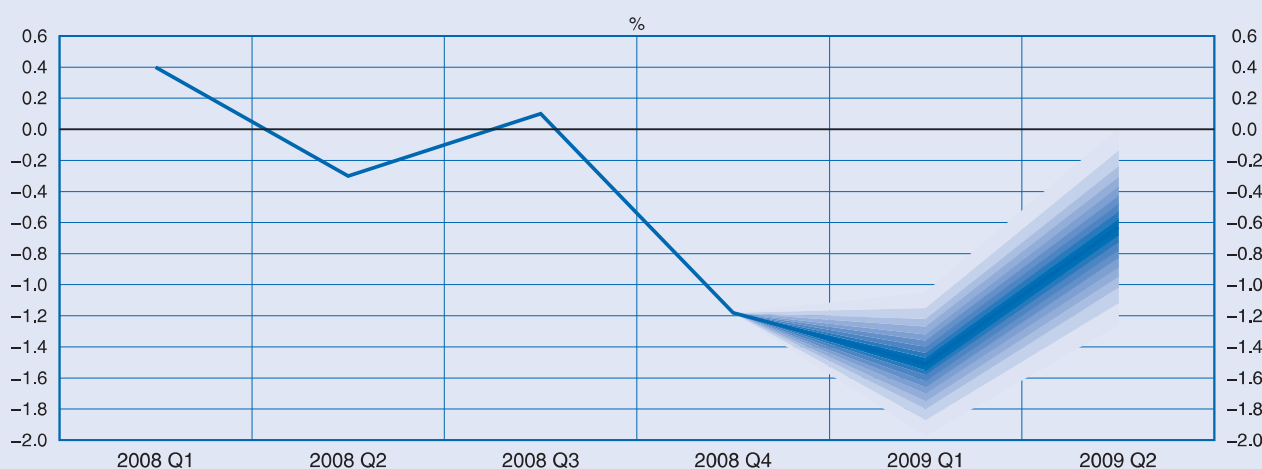
* Year on year on the last month of the quarter

** Inventory changes include acquisitions net of sales of valuables

Note: 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

Fan chart for Conjoncture in France



Source: INSEE

How to read it: The fan chart plots 90% of the likely scenarios around the baseline forecast (blue 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. As the bands widen, they therefore cover an ever-larger range of possible outcomes.

The width of these bands is based on the historical dispersion of INSEE forecasts at each of the horizons at stake, summarised by their standard deviation (for more details about the method, readers may refer to the INSEE Conjoncture in France for June

2008, pages 15 to 18). To take account of the particularly great uncertainty surrounding this forecast, the standard deviation calculated on the historical value for Q2 2009 has been increased from 0.33 to 0.38.

It can therefore be estimated that the first result published by the quarterly accounts for Q1 2009 has a 50% chance of being between -1.7% (lower limit of the fifth band from the bottom) and -1.3% (upper limit of the fifth band from the top). Likewise, it has a 90% chance of being between -2.0% and -1.0% in Q1 2009. The probability of the published figure being positive is almost nil. In the same way, for Q2 2009 it can be estimated that the first result published by the quarterly accounts has a 50% chance of being between -0.9% and -0.4%, and a 90% chance of being between -1.3% and 0. The probability of the figure being positive can be estimated to be about 5%. ■

Focus - Automobile production gearing down: its role in the recession

Automobile output in the main advanced economies fell throughout 2008, and particularly in Q4. In the United States, this fall in activity hit an automotive sector that had already been in crisis for over four years. In Europe, the drop in production was the result of shrinking demand and growing stocks in the course of the year.

In France, the fall in automobile production in Q4 2008 appears to have contributed about -0.5% to the fall in GDP. In Germany and Japan, the impact was probably much greater: -1.6% and -1.5%. This was a direct result of the collapse in exports and, indirectly, of the effects on output in other sectors, chiefly intermediate goods.

A global fall in automobile production

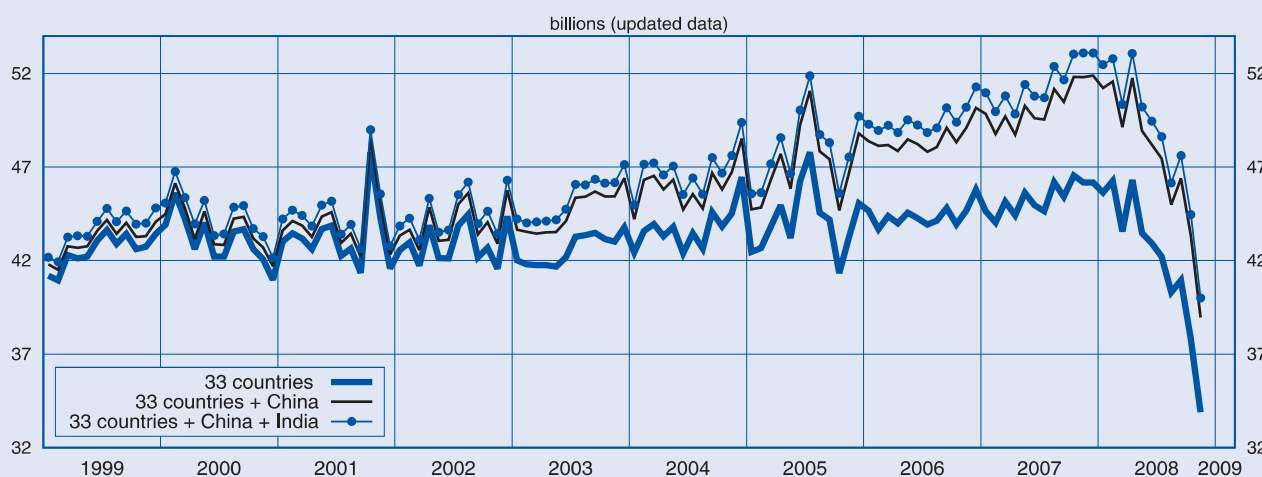
In the course of 2008, activity in the automobile sector shrank sharply in the main advanced economies. In Q4, production stood 20% to 40% below its level of Q4 2007, depending on the country (see Table 1). This fall in output came partly in response to

a sharp decline in vehicle registrations (see Graph 1): -35% in the United States, -17% in the Euro Zone and -14% in Japan in relation to Q4 2007. Initially, and until July 2008, households reduced their vehicle purchases as a result of the sharp rise in oil prices pushing up vehicle running costs; thereafter, they held back more for reasons of limited income and access to loans due to the worsening financial crisis and the entry into recession of the main advanced economies. Automobiles are durable goods for which people can choose to postpone their purchase, and for which they often take out loans.

In Japan, the sharp fall in domestic registrations was accompanied by a collapse in car exports, plunging by 59% between January 2008 and January 2009. In particular, exports to the United States, which represented one-third of Japanese exports in 2007, dropped by 75% (see Graph 2).

In the United States, the sharp drop in automobile activity in 2008 came in the wake of a long period during which production had been trying to adjust to declining demand (see Graph 3). In fact,

1 - World automobile registrations



Source: Coe-Rexecode

Table 1

All-round decline in automobile production (%)

	Germany	Spain	United States	France	Italy	Japan	United Kingdom
Quarterly variation in the industrial production index of the automobile sector							
2008Q1	1	-1	-4	-1	-6	0	0
2008Q2	-3	-6	-12	-6	2	0	-2
2008Q3	-3	-6	0	-3	-15	-2	-6
2008Q4	-17	-30	-16	-32	-21	-18	-20
Year on year change in the industrial production index of the automobile sector							
2008Q1	5	2	-4	2	-3	11	6
2008Q2	0	-5	-19	-3	-7	7	3
2008Q3	-5	-13	-20	-7	-24	4	-7
2008Q4	-21	-38	-30	-39	-36	-20	-25

Source: DataInsight, calculs INSEE

the first signs of saturation of the American auto market appeared back in 2004, with rising default rates on car loans and swelling inventory levels. Stocks were therefore already very high in December 2007 when the American economy went into recession. By March 2008, carmakers sharply reduced their production to cope with the contraction in demand on the one hand (-18% against March 2007), and their tighter financing terms on the other. In January 2009, American automobile production collapsed: it dropped by 40% from the average in Q4 2008 to stand at 61% of its January 2008 level; at the same time, the capacity utilisation rate fell to 25% in January (from 44% in December).

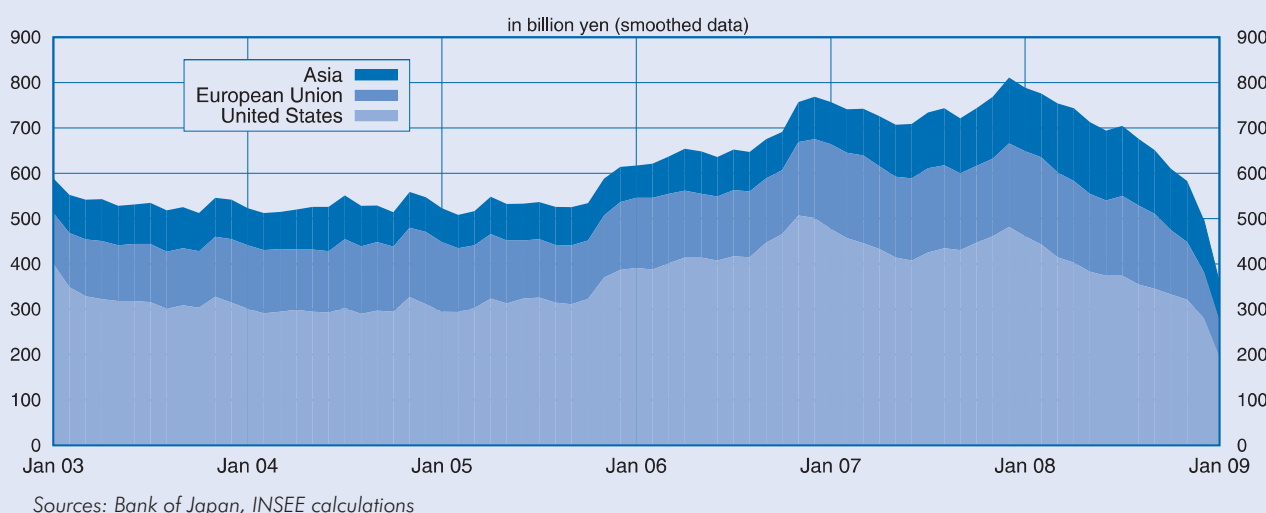
Unlike the United States, the automobile industry in the Euro Zone countries did not start the year 2008 burdened by high inventory levels or production overcapacity. Until the end of 2007, it benefited from dynamic demand in Spain and the countries of Central and Eastern Europe. Registrations then fell, with year-on-year figures going negative in January 2008 in Italy and

in March in Spain. This fall in demand hit production of the main automobile exporters in the Euro Zone, in particular France and Germany. French and German exports started to fall in May 2008. Carmakers in both countries reduced output straight away, although domestic demand remained buoyant until July in Germany and until September in France.

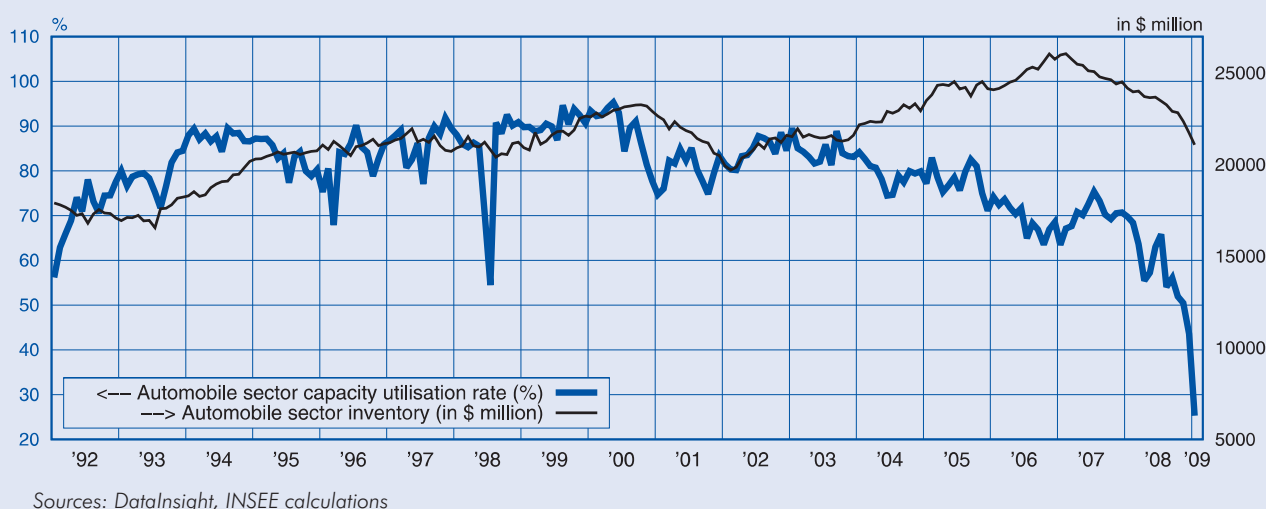
In France, automobile production contracted by more than 23% in Q4 2008. More than two-thirds of this was the result of a strong reduction in stocks (see Graph 4). In that quarter, in fact, household automobile consumption fell only slightly, by 1.2%, while investment in automobile products dropped a little more sharply. As for foreign trade, while exports fell by almost 21% in Q4 in the wake of the world trade collapse, imports declined by almost 15%.

Over 2008 as a whole, output of the French automobile branch dropped by almost 7%, after increasing by 2.1% in 2007. Final domestic automobile demand was buoyed up somewhat by the

2 – Collapse of Japanese automobile exports



3 - Inventory and production capacity utilisation



environmental incentive system, with France suffering a less pronounced fall in registrations than the other main advanced countries. However, this support for demand favoured imports more than domestic production. In 2008, the contribution of foreign trade to automobile production was clearly negative, with imports falling distinctly less than exports (-2.2% against -10.2% respectively).

A significant contribution to the drop in GDP

Measuring the impact of a sector such as automobiles on GDP involves evaluating its direct effect, through its own value added, and its knock-on effect, through the activity it induces in other sectors by its intermediate consumption. This total contribution is calculated from the direct contribution using a value added multiplier (*cf. technical appendix*). This multiplier will be all the larger when the production involves intermediate consumption that is rich in value added, and little in the way of imports.

To estimate the direct contribution to growth in GDP of a variation in automobile output, we multiplied the rate of change in the industrial production index by the weight of the automobile sector in the economy ⁽¹⁾ (see *Table 2*).

The total contribution ⁽²⁾ is obtained by multiplying the direct contribution by the value-added multiplier (see *Table 3*).

In the main advanced economies, the fall in automobile sector activity contributed clearly to the drop in GDP in Q3 and Q4 2008, in particular via its indirect effects.

In Q4, if the negative contribution was less in the United States, one reason is that the fall in output there was less than in the other countries: as the automobile crisis had started earlier there, it was less concentrated on 2008. Another reason is that the weight of the automobile sector in the American economy is lower. However, after the sharp contraction of January 2009, if automobile production were to level out thereafter, the contribution of automobile production to growth would fall to -1.3% for Q1 2009.

The strongly negative contribution observed in Germany in Q4 2008 is explained by the large weight of the automobile sector in the economy (about 3% of GDP), despite the fact that the drop in production was smaller there than in most other countries.

The impact of the fall in automobile production was comparable in Japan to that in Germany: the use of imports in automobile production is smaller there, but the weight of the sector in the Japanese economy is also a little less (2%).

Technical appendix: calculating the contribution of the automobile sector to growth in GDP

The value-added multiplier for automobile production can be estimated using the input-output tables supplied by the national accounts. For each sector in the economy, the "use table" in the input-output tables gives the details of the intermediate

(1) For France, the calculation of direct contribution was performed more precisely, using the value added figures from the quarterly accounts.

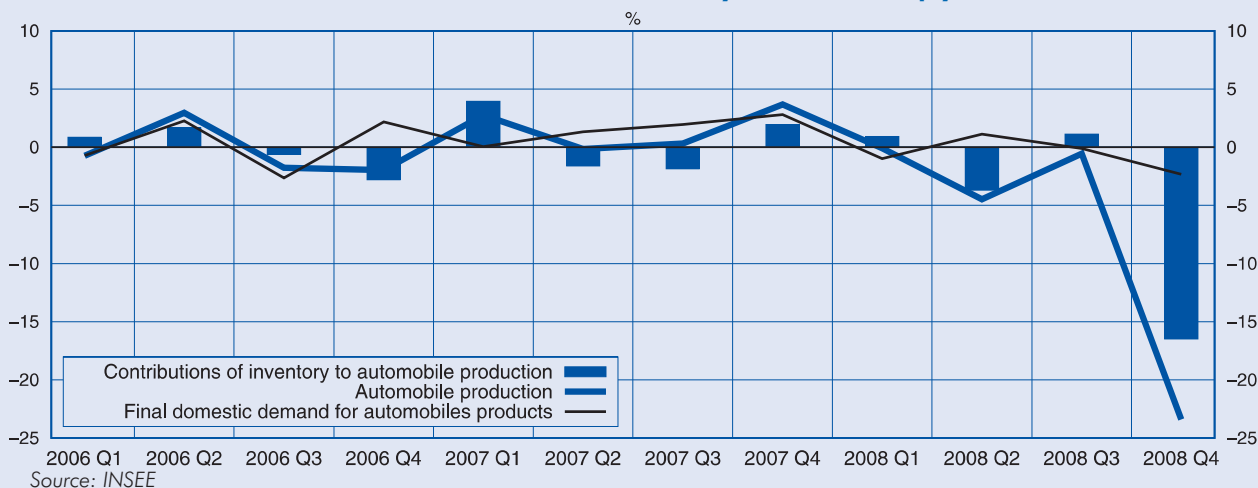
(2) This is a book contribution and does not take account of the effects of the macroeconomic returns via employment and wages.

Table 2
Direct contribution of automobile production to growth in GDP for the year 2008 (%)

	Germany	Spain	United States	France	Italy	Japan	United Kingdom
2008Q1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008Q2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0
2008Q3	-0.1	-0.1	0.0	0.0	-0.1	0.0	0.0
2008Q4	-0.5	-0.3	-0.1	-0.2	-0.1	-0.3	-0.1

Source: DataInsight, calculs INSEE

4 - The automobile sector in France: inventory run down sharply in Q4 2008



consumption used and the value added of the sector. The "supply table" provides, for each product, the total supply, domestic production and the quantity imported.

To simplify our calculations, we make the following approximations:

- the sectors and products are identifiable, and the production function is the same for all the products in the same branch;
- the imported share of each intermediate product is the same for all sectors and is equal to the imported share of the total supply of each product.

We will note n the number of products in the economy. Let IC be the square matrix of size $n \times n$ giving the detail for each product unit (in the columns) of its intermediate product consumption (in the rows) and M be the diagonal matrix of size n of the share of the total supply of each product that is imported into the economy. Finally, let a be the row vector of size n composed of 1, e the column vector of size n in which the component corresponding to the automobile sector has a value of 1 and the others a value of 0 and Id the identity matrix.

A unit of automobile sector production can be broken down as follows:

$$1 = \underbrace{a \times C \times e}_{\text{Intermediate consumption}} + \underbrace{VA_1}_{\text{value added of the first stage of production}}$$

$$= \underbrace{a \times M \times C \times e}_{\text{share of IC that is imported}} + \underbrace{a \times (Id - M) \times e}_{\text{share of IC that is produced domestically}} + VA_1$$

This breakdown of domestic production into value added and intermediate consumption, then into intermediate consumption produced domestically or imported, is repeated at each of the production stages. The value-added content of a unit of production of the automobile sector, in other words the sum of the value added from each stage in production, is therefore:

$$1 - a \times M \times IC \times [Id - (Id - M) \times IC]^{-1} \times e$$

The value-added multiplier we are seeking is calculated by dividing the value-added content of a unit of production by the share of value added in the first stage of production (noted VA_1 here).

In Japan, the high multiplier results from the fact that automobile production and its intermediate consumption make little use of imports (see Table 4). ■

Table 3

Total contribution of automobile production to growth in GDP for the year 2008 (%)

	Germany	Spain	United States	France	Italy	Japan	United Kingdom
2008Q1	0.1	0.0	-0.1	0.0	-0.1	0.0	0.0
2008Q2	-0.2	-0.2	-0.4	-0.1	0.0	0.0	0.0
2008Q3	-0.3	-0.3	0.0	0.0	-0.4	-0.1	-0.1
2008Q4	-1.6	-1.2	-0.5	-0.5	-0.5	-1.5	-0.5

Table 4

Automobile sector value added multipliers for the main advanced economies

	Germany	Spain	United States	France	Italy	Japan	United Kingdom
Multiplier	3.0	2.8	3.6	3.1	3.5	4.1	2.9

Source: DataInsight, OCDE, calculs INSEE

Review of the previous forecast

The contraction in GDP in Q4 turned out to be greater than had been thought (-1.2% against a forecast of -0.8% last December). Although the business tendency surveys did suggest that there would be a drop in activity, they did not foresee its scale, particularly in industry. In H1 2009, the decline in activity should be greater than that forecast in December, due to the continuing deterioration in the economic situation of our partners, and that shown in the main French business tendency surveys.

The contraction in manufacturing output surprised by its scale

In Q4 2008, GDP contracted by 1.2% (see Graph 1), which represents a difference of -0.4 points in relation to our last forecast (-0.8% in December's *Conjoncture in France*).

This forecasting error can be explained mainly by the very sharp contraction in manufacturing output in Q4 which was underestimated (-7.6% against a forecast of -4.0%). The fall in production was huge in some branches, notably the automobile industry with a slide of 23.4% in relation to the previous quarter. The scale of this fall in industrial output is very great in historic terms, given that manufacturing output had never contracted by

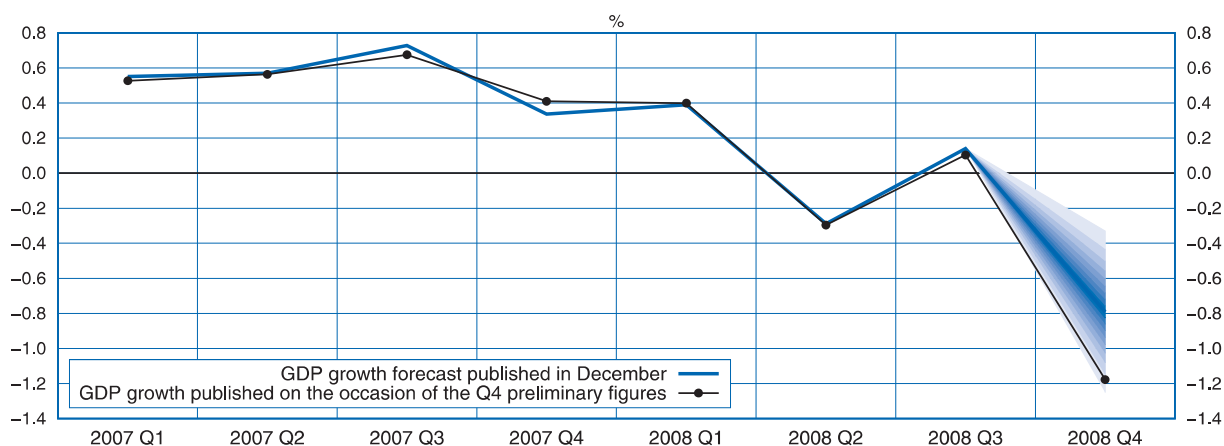
more than 2.2% in a single quarter in the last thirty years, including in the 1993 recession. It was therefore difficult to foresee using models based on average behaviour observed in the past or on business tendency surveys, which were certainly bad, but no more so than at their lowest point in 1993.

Also, when trends are very pronounced, estimating seasonal variation coefficients is also delicate and subject to considerable revision. For example, the monthly variation in the manufacturing output index in October was revised downwards by 1.2 points after the publication of December's *Conjoncture in France*, essentially due to revision of the correction for seasonal variations.

The rapid drop in production can be partly explained by large-scale running down of stocks. This destocking trend was foreseen, but its extent was also underestimated: variations in inventory contributed 3.0 points to the contraction in manufacturing output, against the figure of -1.2 points expected in December.

In contrast, domestic demand excluding inventory was slightly above our forecast, essentially because household consumption grew more than expected (+0.5% against +0.1 % forecast in December's *Conjoncture in France*). Investment contracted slightly less than expected (-1.1% against -1.6%).

1 - Fan chart for *Conjoncture in France* and actual growth



* Construction of the fan chart is explained in the box in the general outlook.
Source: INSEE

