CONJONCTURE in FRANCE

December 2019

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The issues of Conjonture 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.

ISSN 0766-6268
ISBN 978-2-11-151252-8

Printed from supplied documents by JOUVE - PARIS

Completed on 10 December 2019

A MIXED PICTURE

A mixed picture

2019 will have been marked by political and economic uncertainties that have weighed down not only on trade, but also on corporate investment and world growth more generally. Protectionist tensions in the US, uncertainties as to the course of the Brexit *process and questions surrounding the drivers of the Chinese economy, along with difficulties in the automotive sector against the backdrop of the energy transition, have largely contributed to clouding growth prospects.*

As 2019 draws to a close, however, the picture is not entirely bleak. After blowing hot and cold in the trade negotiations with China, the US would seem to be keener to come to an agreement before the upcoming presidential election. And while the United Kingdom and its European partners have been toing and froing for months between unfulfilled hopes and lassitude, the prospect of a no-deal Brexit *does seem to be fading.*

Although fears of a downturn in the overall outlook are easing, it is difficult to detect any general trend that is likely to give fresh impetus to the world economy. We will therefore have to settle for a mixed picture with some monetary and fiscal support measures, but also some contrasts or even a lack of coordination.

The most recent outlook indicators suggest that the economy of the Eurozone (and more particularly the German economy) is unlikely to slow down any further and should even accelerate through to mid-2020. The major Eurozone countries have all introduced measures to boost household income, each in their own way. Admittedly, as in the recent past, they are likely to contribute in part to an increase in savings, but with domestic demand holding up, Eurozone growth should be 0.3% in Q2 2020 (after +0.2% in the previous quarters).

French growth is likely to remain close to this level, but with a few nuances. Household confidence has recovered significantly over the past year with the acceleration in purchasing power, and their consumption should continue to progress at a regular pace, including at the end of 2019, despite the fall in transport expenditure due to the social movements. It is only in Q4 2019 that foreign trade should contribute to supporting growth, as exports accelerate at the end of the year in the wake of big aeronautics and shipbuilding deliveries, but they are likely to slow down again by a backlash effect in Q1 2020. Corporate investment may also decelerate and trends are likely to be contrasted between sectors, as in the rest of the Eurozone: services are likely to hold up but industrial output is likely to be at a standstill or even slip back, while construction could suffer from the slowdown in public works in the lead-up to the municipal elections.

All in all, French growth should stand at +0.3% in Q4 2019 and then slip back slightly to +0.2% in Q1 2020, before rising again to +0.3% in the following quarter, for an overhang of +0.9% by mid-2020, after +1.3% over 2019 as a whole. Employment is likely to slow down (almost 90,000 net job creations expected in H1 2020, against more than 260,000 over 2019 as a whole), but the unemployment rate should remain on a downward trend, falling by about 0.1 points per quarter (for a forecast of 8.2% in the spring). ■

General outlook

World trade prospects a little brighter, but economic growth slows

As tensions ease slightly, world trade set to regain a little momentum in early 2020

In September, the United States and China implemented a new series of customs tariff hikes. This escalation in protectionism contributed to slowing the dynamics of world trade in 2019, which is likely to rise by just 0.9%, after +4.6% in 2018. In October, the US authorities also increased customs duties on purchases of certain European products. However, the higher customs barriers to imports of French aircraft, wine and cheeses should only have a limited effect in the short term on deliveries and therefore on French activity (*Focus in the Foreign Trade sheet*). Protectionist tendencies would also appear to be declining, allowing hopes of an easing in this trade war. The US and China resumed their negotiations in the autumn and supporting economic activity is among their main objectives for 2020. World trade could therefore regain some impetus, with a growth overhang in mid-2020 of +1.1%.

Activity decelerates in the advanced economies

With the decline in the business climate, the gross domestic product (GDP) of the advanced economies is likely to slow down in 2019, like foreign trade, progressing by just 1.7% after +2.2% in 2018 (see *Key Figures*, below). This slowdown concerns both the United States and Europe.

German activity recovering progressively after stalling

German activity has picked up only moderately after falling back in the spring

The economic slowdown resulted in Eurozone GDP growth of +0.2% in Q3 (as in Q2, after +0.4% in Q1 2019). While French activity continued to grow at a regular pace of +0.3% per quarter, protectionist tensions hit German industrial output harder. German GDP fell back in Q2 (–0.2% after +0.5% in Q1) and then grew by just 0.1% in Q3, against a backdrop of a fall in equipment investment driven by that in industrial activity.

Spanish growth remained a little more sustained than that in France and much more than in Italy

Activity also slowed down in Spain (+0.4% in the spring and summer, after +0.5% in winter), while remaining a little more dynamic than in France. In Italy, growth remained almost flat (+0.1% per quarter since the beginning of the year), due in particular to consumption which is still sluggish. In France, household consumption and corporate investment remained relatively robust, offsetting the negative contributions to growth of foreign trade since the start of the year. Despite their different growth rates, all four countries have introduced fiscal policies to help boost purchasing power in 2019. For the moment, however, consumers have consumed only a part of these rises in real income and their savings have therefore increased (*Graph 1*).

Oil price stable at around $60 and interest rates still low

The Fed cut its base rates again in October

After two cuts already in 2019, the Fed reduced its US base rates again by one-quarter of a point in October. The European Central Bank (ECB) resumed its bond purchases in November, meanwhile, as core inflation remained well below 2% in the Eurozone (1.1% in October). After a low point over the summer, 10-year sovereign rates in the Eurozone showed a slight upturn, although still remaining negative for Germany and France. The exchange rate of the Euro has been at around $1.11 through the autumn (the rate taken for our forecasting assumption).

The slowdown in the world economy does not point to soaring oil prices

Despite the OPEC quotas, the US embargo on Iranian oil and Venezuela's production difficulties, the slowdown in the world economy should contribute to keeping Brent oil prices close to $60, the assumption taken for this forecast.

World growth to continue slowing

The economic slowdown likely to affect the United States...

In the United States, economic activity is likely to have slowed in 2019 (+2.3% after +2.9% in 2018) driven by the continued negative contribution of foreign trade (–0.3 points). In addition, the effects of the fiscal stimuli in 2018 are fading out, leading to a slowdown in household consumption (+2.6% in 2019 after +3.0%) and in private investment (+1.3% after +4.6%). In Q4 2019, US growth is likely to ease once again to +0.3%, after +0.5% in Q2 and in Q3 2019. Domestic demand is likely to slow down, while activity will still not be buoyed by foreign trade.

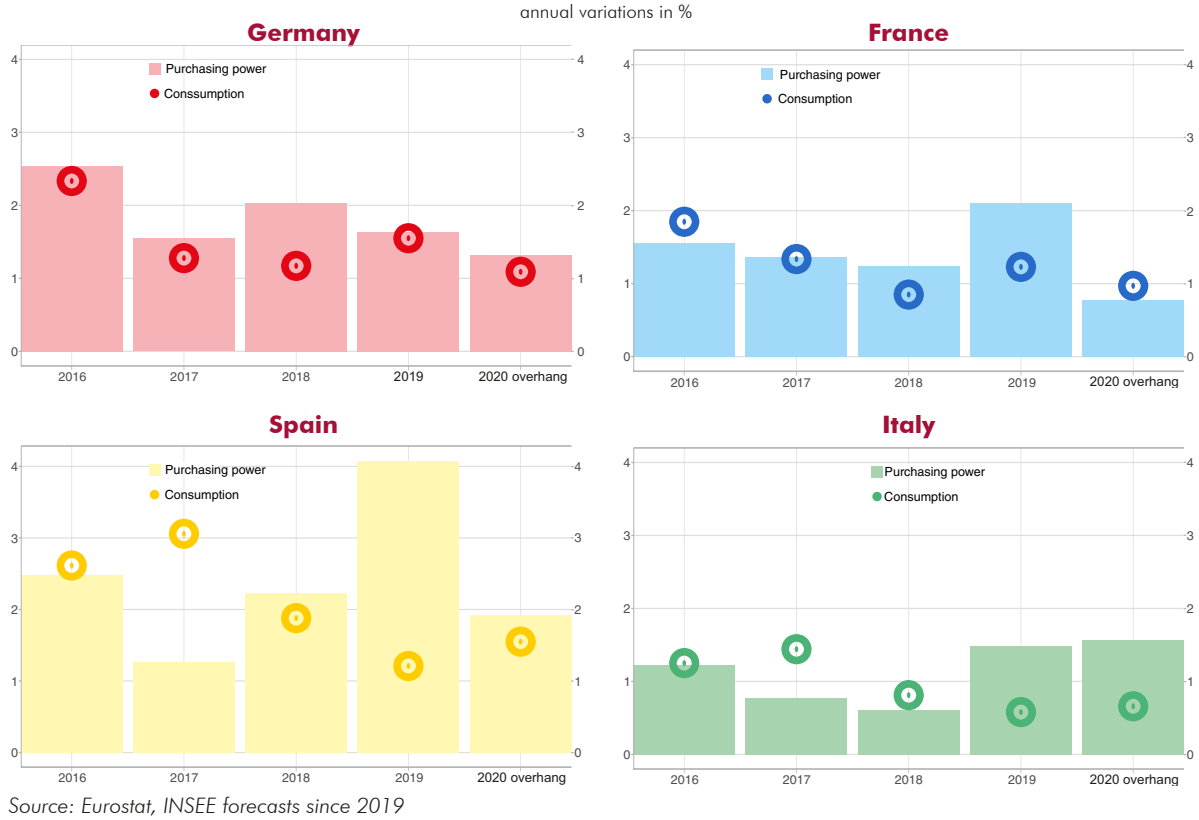
Japanese activity, meanwhile, is likely to suffer at the end of the year from a fall in consumption in the wake of October's two-point hike in consumption tax, before returning to moderate growth in H1.

... and the emerging economies

In China, the continuing slowdown in industrial production and weakening domestic demand are likely to weigh down once again on activity. Chinese exports should continue to slow significantly (overhang of +0.1% by mid-2020 after +2.2% in 2019 and +6.6% in 2018). The slowdown should also hit other large economies such as Russia, where growth is likely to fall to 1.4% in 2019 after 2.2%, and India, where it is likely to be more pronounced (+4.7% in 2019 after +7.4%). The slowdown in activity in Brazil in 2019 (+1.1% after +1.3% in 2018) should be more moderate, however. Profiting from a fall in inflation and a levelling out of its exchange rate, Turkey should confirm its economic upturn. In Argentina, the economic prospects are still looking bleak, due to rampant inflation and falling purchasing power. Finally, in the

1 - Gains in purchasing power should be more dynamic than consumption in 2019 in the main Eurozone countries

annual variations in %



Source: Eurostat, INSEE forecasts since 2019

countries of Central and Eastern Europe, the business climate is slipping in the wake of the slowdown in the Eurozone.

British growth set to be restrained once again by uncertainties around the terms of Brexit

Finally, activity in the United Kingdom is set to grow only barely (by around 0.0% to +0.1% per quarter) through to mid-2020 in a context of uncertainty over *Brexit* that is still preventing corporate investment from starting up again.

The progressive recovery in Germany should lead to moderate European growth

In Germany as elsewhere, industry is more fragile than services

In the main economies of the Eurozone, morale has deteriorated significantly among industrialists, falling much more than the business climate in services (*Graph 2*). According to the European Commission's business climate indicators, balances of opinion in industry have lost 20 points in the Eurozone since the start of 2018 and more than 30 points in Germany, against falls of just 7 and 8 points respectively in services. These difficulties in industry may have weighed down on household morale and therefore purchases (*Focus in the Germany sheet*). After this slump, hopes for an upturn in activity would appear to be being driven by domestic demand, notably household consumption which is likely to benefit from gains in purchasing power in 2019 and early 2020. This real income should also boost purchasing by households in Spain, France and Italy. Growth in GDP may start up again in Germany (rising from +0.0% at the end of 2019 to +0.3% in spring 2020), remain steady at +0.4% per quarter in Spain, but stand at just +0.1% per quarter in Italy.

French foreign trade set to continue weighing down on growth

Exports slowing

Since the start of 2019, French exports have been stagnating. Sluggish automobile deliveries and exports of services hit exports through to Q3, although they should accelerate in Q4, driven by aeronautics and shipbuilding deliveries (*Focus in the Foreign Trade sheet*). The pace of deliveries is likely to slow again with a backlash in H1, however, resulting in a growth overhang of +1.3% in mid-2020. The slowdown in exports should be quite pronounced when compared to 2019 (forecast of +2.1%) and 2018 (+3.5%).

The contribution of foreign trade to growth negative from 2019

Imports, meanwhile, have been much more dynamic than exports since the start of the year. They are set to continue growing by a little under 1% per quarter through to mid-2020, giving a mid-year growth overhang of 2.3% after a forecast figure of +2.5% for 2019.

The contribution of foreign trade to growth should therefore be negative in 2019 (–0.2 points of GDP) and the overhang for 2020 also negative (–0.3 points).

French growth likely to be hit by the fall in industrial production

The business climate remains at high levels in construction and services, but is falling in industry

As in the Eurozone, the rather positive overall business climate in France hides divergences between the main sectors of activity (*Graph 3*). In services and in the wholesale and retail trade, the climate indicator remains in positive territory, at around 105. In industry, however, its deterioration over the past two years brought it down to its long-term average (100) in November 2019, a figure that had not been seen since June 2015. The climate in building, meanwhile, has now spent one year at highs (above 110) not seen since 2008.

Production in services robust once again

Like the sectoral business climates, production is likely to be more sustained in market-sector services (around +0.5% per quarter in early 2020, *Graph 4*) than in industry where the fall in activity is set to continue through to the start of 2020. In construction, avowed optimism at the moment among entrepreneurs is likely to be tempered in coming quarters by the marked slowdown in public works activity. Municipal investments are likely to dry up at the approach of the elections next March (*Special Analysis on the Municipal Election Cycle*), bringing production and employment to a halt in part of the sector.

French growth between +0.2% and +0.3% per quarter through to mid-2020

All in all, French GDP is set to grow by 0.3% in Q4 2019, as is also suggested by the new "continuous" GDP forecasts established as we completed this edition (*Special Analysis on Continuous Forecasting of French Economic Growth*). It should then grow by 0.2% in Q1 and 0.3% in Q2 2020 (*Graph 5*). After annual growth of +1.3% in 2019, the GDP growth overhang should stand at +0.9% in mid-2020.

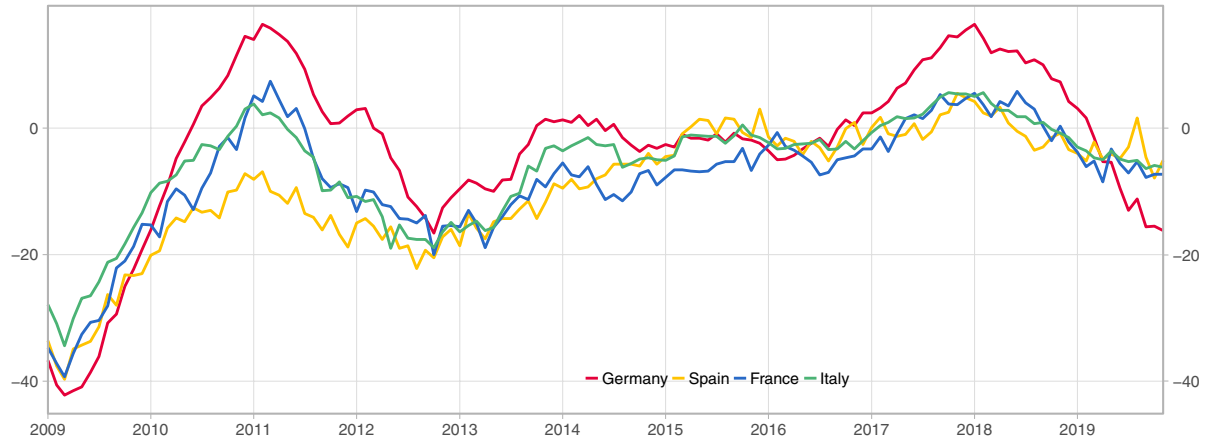
Employment set to slow down but unemployment to remain on its downward trend

About 88,000 jobs created in H1 2020

After being particularly dynamic in H1 2019 (+170,000), total employment is likely to slow down in H2 2019 (+94,000) and then in H1 2020 (+88,000). In the non-agricultural market sectors, services excluding temporary employment should once again make the main

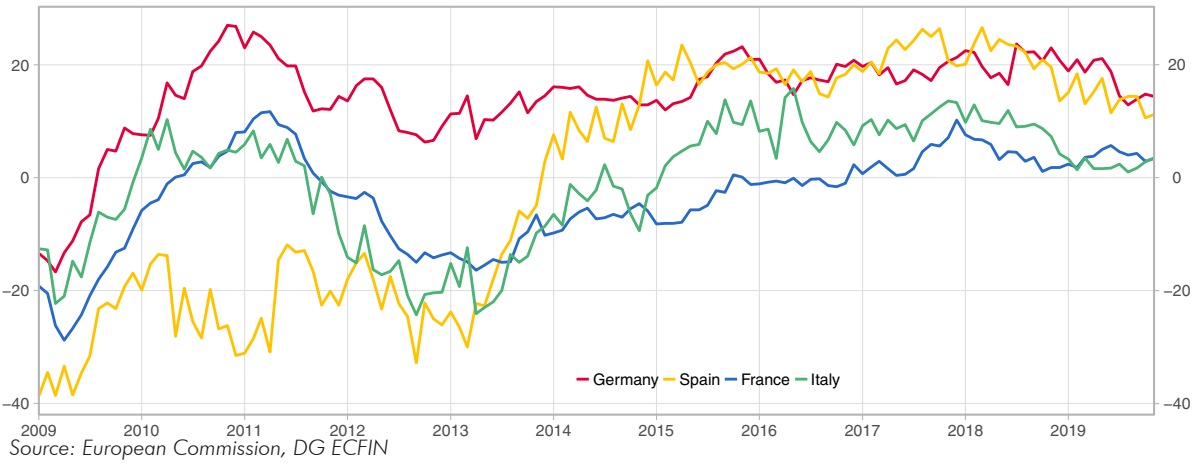
2 - In the main Eurozone countries, the business climate in industry deteriorated more than that in services

Confidence indicator in industry



Source: European Commission, DG ECFIN

Confidence indicator in services



Source: European Commission, DG ECFIN

contribution to growth in employment (+61,000 then +68,000 in H1 2020), while temporary employment continues to fall back slightly through to mid-2020 and industrial employment increases slightly. In the non-market sector, subsidized employment is likely to start falling again after being almost stable in H1 2019. Non-market job creations should, however, offset the reductions in the number of subsidised contracts (*Focus in the Employment sheet*), driving a slight increase in employment in the sector as a whole.

The downward trend in the unemployment rate to continue

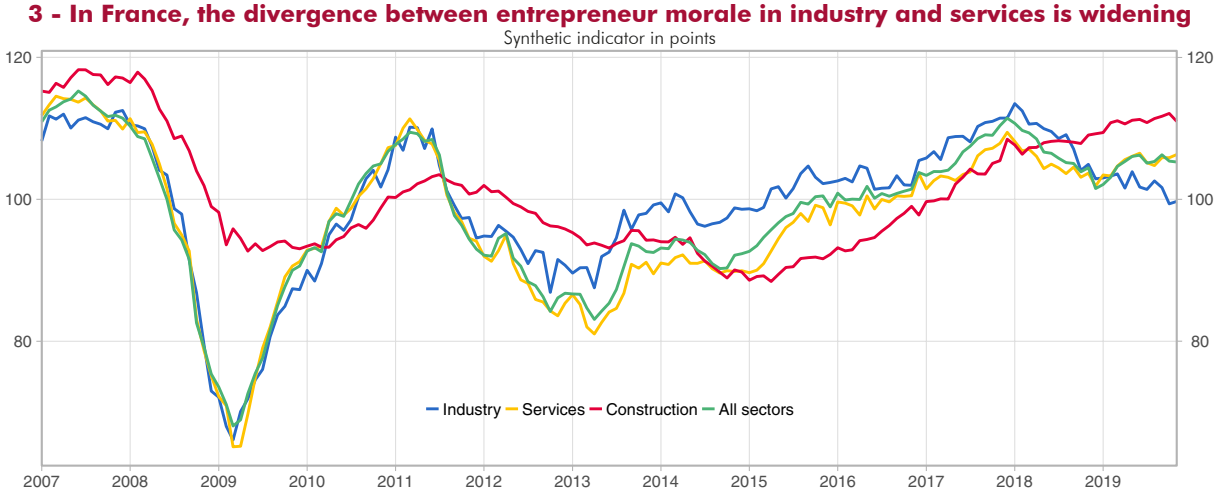
Employment is slowing but the upward trend in the active population continues to ease. Leaving aside the statistical uncertainties from one quarter to another, the unemployment rate is likely to fall again by around 0.1 points per quarter, reaching 8.2% in spring 2020 against 8.5% one year earlier.

Household consumption set to continue progressing steadily

Inflation to remain slightly above 1% in H1 2020

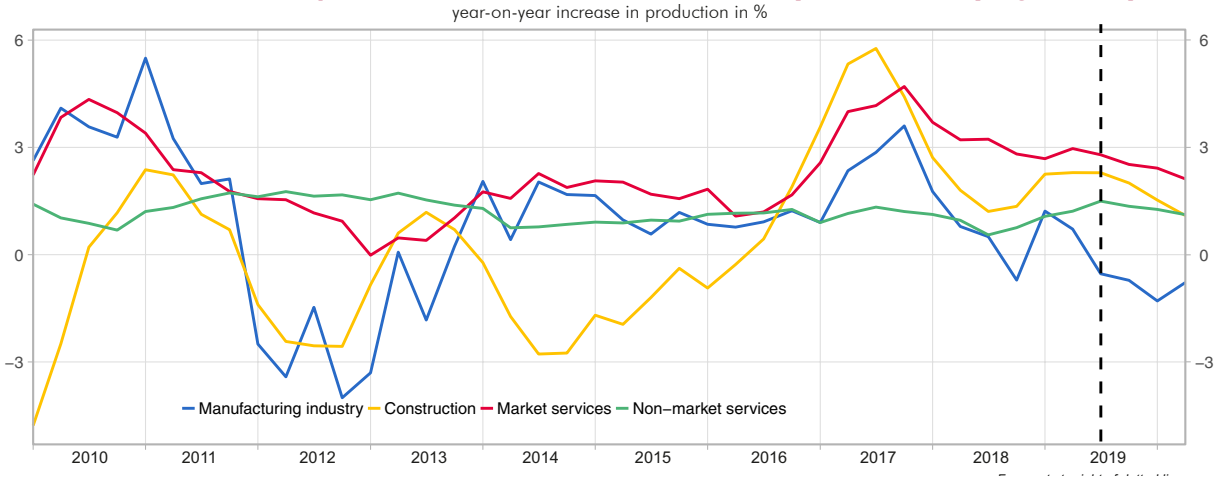
In June 2020, inflation is likely to return to a level (+1.1%) close to that in November 2019 (+1.0%), after rising to +1.4% in February 2020. The effects of price rises in certain sectors (indirect taxation on tobacco, tighter terms on the automobile bonus-penalty system, eco-tax on flights departing from France, reduction in the duration of the sales to four

3 - In France, the divergence between entrepreneur morale in industry and services is widening



Source: INSEE, business surveys

4 - Growth rates of production in the main sectors of activity in France vary significantly



Source: INSEE, national accounts

weeks) are likely to be offset by the weak trend in core inflation which should be close to 1% over the forecast period.

In H1 2020, wages to benefit from a repeat of the exceptional bonus

Wages should be buoyed in H1 2020 by a repeat of the exceptional bonus that boosted the average wage per capita at the start of 2019, although it is likely to be on the condition that a profit-sharing agreement has been implemented, which should reduce the scope of the companies concerned. Excluding the effect of bonuses, basic wages should continue to grow during the forecasting period by about 0.4% per quarter, as in Q3 2019.

After a dynamic 2019, household income is likely to progress less quickly in early 2020

In 2019, the purchasing power of the gross disposable income of households is likely to increase strongly (+2.1% after +1.2% in 2018, representing +1.6% after +0.7% per consumption unit). In addition to dynamic employment and wages, other contributions to this rise have come from reductions in housing tax, an increase in the activity bonus, exemptions from tax and social contributions on overtime for employees and reductions in the CSG social contribution for certain categories of households. After falling sharply at the end of 2018, household confidence indicators have shown a marked upturn in 2019 (*Focus in the Household Income sheet*). The second wave of housing tax reductions should boost household income in Q4, with reductions in income tax taking over from early 2020. The growth overhang in real household income should be +0.8% in mid-2020, or +0.4% per consumption unit.

Household consumption to keep up its pace

In Q4 2019, household consumption should be affected on a one-off basis by lower expenditure on energy and transport services, due to the social movements in October and November. Conversely, it is likely to be buoyed by an upturn in food consumption. At the start of 2020, it should keep up a growth rate of +0.3% per quarter. In parallel, the household savings ratio should reach 15.2% at the end of 2019, before falling back slightly to 14.7% in Q2 2020.

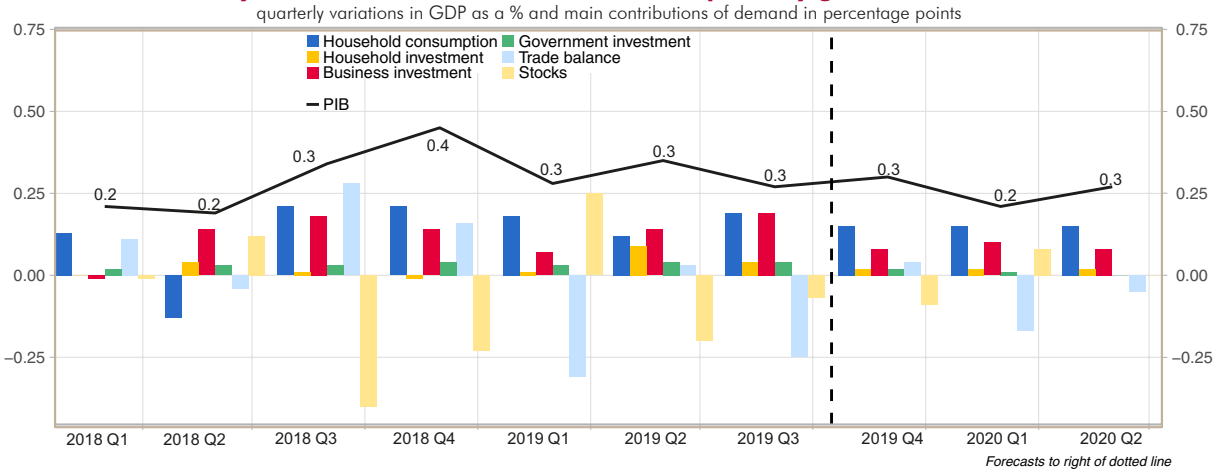
Corporate investment less dynamic in 2019

Entrepreneurs remain cautious on investment prospects

Corporate investment was buoyed temporarily in Q3 (+1.4%) in anticipation of a change to automobile standards which boosted expenditure on manufactured goods. The latter are then likely to stall in Q4, but corporate investment in services should remain dynamic at the end of 2019. In a slightly less buoyant macroeconomic environment, corporate investment is likely to slow down to +0.7% in Q1 then +0.6% in Q2 2020.

5 - Activity in France set to remain at the same quarterly growth rate as in 2019

quarterly variations in GDP as a % and main contributions of demand in percentage points



Source: INSEE

General outlook

After the municipal elections, general government investment should slow

As the municipal electoral cycle modulates general government investment, this is likely to slow down significantly at the start of 2020 (growth overhang of +1.3% by mid-year) after growing briskly in 2019 (+4.0%). Finally, household investment is likely to pursue its growth in 2020 (growth overhang of +1.6%) maintaining its momentum from 2019 (+2.0%).

Political risks ease slightly but economic risks remain

The world economic slowdown could be more pronounced than expected

The extent of the slowdown in China remains difficult to assess, but it could be more considerable than expected and thus weigh down on world trade. In the United States, the fading out of the effects of the fiscal stimuli could contribute more than expected to the slowdown in activity.

The extreme scenarios are becoming less likely on Brexit *and protectionist tensions*

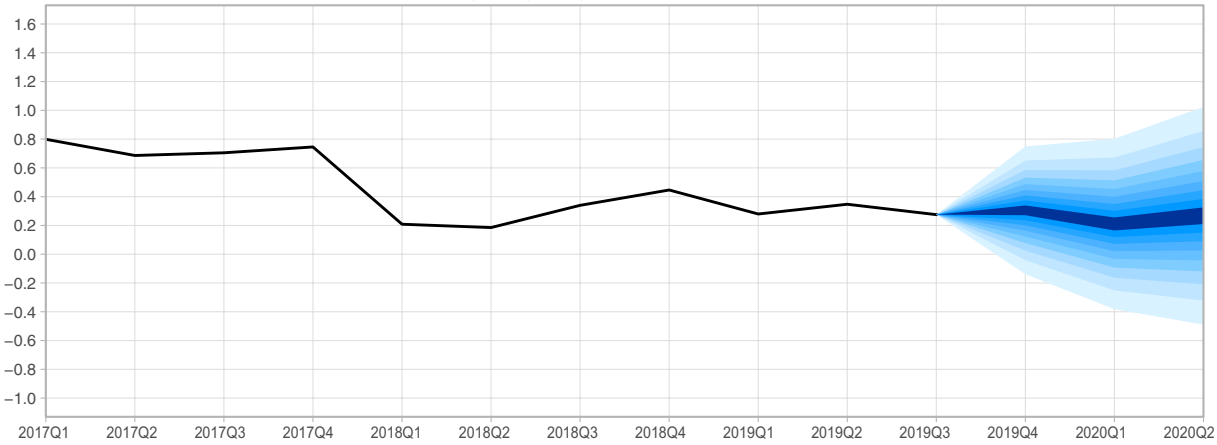
In Europe, despite lingering uncertainties surrounding *Brexit*, which has now been postponed once again, the likelihood of a brutal, no-deal separation from the European Union seems to be decreasing. In the rest of the world, despite recent rises in US customs barriers, the risks of new tariff hikes may not be excluded, but do seem to be easing all the same.

Questions as to European growth

Although a slight recovery in the German economy is expected by mid-2020, buoyed by consumption, the industrial outlook there does still seem bleak and may weigh down once again on the activity of the first economy in Europe and of its partners. In France, industrial production is also showing signs of fragility that might weaken the more robust dynamic observed in services. Conversely, European household consumption could prove to be stronger than forecast, driven by gains in purchasing power. ■

6 - Fan chart for *Conjoncture in France*

quarterly change in French GDP in %



How to read it: the fan chart plots 90% of the likely scenarios around the baseline forecast (black 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 Q2 2019 has a 50% chance of being between –0.2% and +0.7% ; for Q1 2020, up to a 90% probability the estimate will be between –0.3% and +0.8%.
Source: INSEE

Key figures: France and its international environment

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
International environment													
Advanced economy GDP	0.4	0.6	0.4	0.3	0.5	0.4	0.4	0.2	0.3	0.3	2.2	1.7	1.0
Eurozone GDP	0.3	0.3	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.3	1.7	1.1	0.7
Barrel of Brent oil (in dollars)	67	75	75	69	63	69	62	60	60	60	71	63	60
Euro–dollar exchange rate	1.23	1.19	1.16	1.14	1.14	1.12	1.11	1.11	1.11	1.11	1.18	1.12	1.11
World demand for French products	0.3	1.0	0.6	0.5	0.9	–0.7	0.5	0.3	0.4	0.7	3.9	1.5	1.2
France - supply and uses													
GDP	**0.2**	**0.2**	**0.3**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.3**	**1.7**	**1.3**	**0.9**
Imports	–0.7	0.7	–0.1	1.3	1.1	–0.3	0.7	0.9	0.7	0.8	1.2	2.5	2.3
Household consumption	0.2	–0.2	0.4	0.4	0.3	0.2	0.4	0.3	0.3	0.3	0.9	1.2	1.0
GG and NPISHs consumption	–0.1	0.2	0.2	0.5	0.0	0.5	0.5	0.3	0.0	0.3	0.7	1.1	0.8
Total GFCF	–0.1	0.8	1.0	0.8	0.5	1.3	1.2	0.5	0.5	0.4	2.8	3.5	2.2
of which: NFEs	*–0.1*	*1.1*	*1.4*	*1.1*	*0.5*	*1.1*	*1.4*	*0.6*	*0.7*	*0.6*	*3.9*	*4.1*	*2.6*
Households	*0.1*	*0.7*	*0.3*	*–0.2*	*0.2*	*1.7*	*0.7*	*0.3*	*0.3*	*0.4*	*2.0*	*2.0*	*1.6*
Exports	–0.4	0.6	0.8	1.8	0.1	–0.2	–0.1	1.0	0.2	0.6	3.5	2.1	1.3
Contributions (in point)													
Domestic demand excluding changes in inventories [1]	0.1	0.1	0.5	0.5	0.3	0.5	0.6	0.4	0.3	0.3	1.3	1.8	1.2
Changes in inventories[1]	0.0	0.1	–0.4	–0.2	0.3	–0.2	–0.1	–0.1	0.1	0.0	–0.3	–0.3	–0.1
Net foreign trade	0.1	0.0	0.3	0.2	–0.3	0.0	–0.2	0.0	–0.2	–0.1	0.7	–0.2	–0.3
France situation of households													
Total employment (variation en fin de trimestre)	69	34	47	80	107	62	40	53	43	45	230	263	88
Non-farm market sector employment	45	34	33	52	98	43	33	41	35	33	164	215	68
ILO unemployment rate France[2] (excluding Mayotte)	9.2	9.1	9.1	8.8	8.7	8.5	8.6	8.4	8.3	8.2	8.8	8.4	8.2
Consumer price index[3]	1.6	2.0	2.2	1.6	1.1	1.2	0.9	1.2	1.1	1.1	1.8	1.1	1.2
Core inflation[3]	0.9	0.8	0.7	0.7	0.5	0.9	0.9	0.9	1.1	1.0	0.8	0.8	1.1
Household purchasing power	–0.6	0.8	0.2	1.1	0.6	–0.2	0.6	0.8	0.0	0.0	1.2	2.1	0.8

Forecast

1. Changes in inventories include acquisitions net of sales of valuable
2. For annual data, unemployment rate is that of the last quarter of the year
3. Year-o-year on the last month of the quarter and annual averages

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 %.

GDP: gross domestic product
GFCF: gross fixed capital formation
GC: general government
NFEs: non-financial enterprisest
NPISHs: non-profit institutions serving households
ILO unemployment: unempoyment as defined by the International Labour Organisation

Source: INSEE

Special Analysis

Continuous forecasting of French economic growth:

Testing different models of machine learning

Paul-Armand Veillon

INSEE, Département de la conjoncture*

INSEE publishes its quarterly GDP growth forecast for the current quarter and the next quarter or two in the Conjoncture in France report each quarter. This forecast is based on those for each of the components of GDP such as household consumption or industrial production. The forecasts for these components are themselves based on short-term outlook indicators such as the business climate or the industrial production index. While only one forecast is published each quarter, new indicators are released almost daily and each new piece of information is likely to change the estimate of economic growth that appears most likely at a given date. New day-to-day or "nowcasting" forecasting models make it possible to take these frequent publications of new indicators into account for the quarterly growth forecast.

These models are developed through the use of statistical learning methods (known as "machine learning") on the one hand, and through open access in real time to hundreds of cyclical indicators ("open data") on the other hand. For example, since 2016, the Federal Reserve Bank (Fed) in Atlanta has published an updated growth forecast every week, based on a forecasting model of this type.

This brief presents a first proposal for continuous forecasting models for quarterly variations in French growth. The data used include the short-term outlook indicators published by the Banque de France, INSEE, OECD, Markit and various ministerial statistical offices. Several models are tested, including supervised statistical learning models such as random forest model and factor models.

The first results show that the forecast can vary significantly in the course of a quarter (between +0.2% and +0.4% for Q3 2019, for example), these variations following the publication of an indicator with a sharp rise or fall. The models used tend to converge at the end of the quarter and have an error, measured by the Root Mean Squared Forecast Error (RMSFE), of around 0.20 points. The forecast error ranges from 0.28 points at the beginning of the quarter to 0.20 points at the end of the quarter. The 80 % - confidence interval for Q3 2019 growth forecast thus rose from [–0.1; 0.6] in July to [0.0; 0.5] at the end of September. ■

* at the time of writing this study. The author would like to thank Clément Rousset for his help.

INSEE growth forecasts are very heavily based on tendency surveys and indices such as the IPI

The first available estimate of current GDP, published in the national accounts, only becomes available one month after the end of each quarter. And yet, accurately forecasting short-term variations in GDP is a major priority for economic decision-makers. Their decisions are therefore informed by the short-term forecasts regularly published by various institutes and businesses. For example, in its Conjoncture in France published in December and June of each year, the INSEE makes forecasts for the next two quarters. These initial figures are then revised in the March and October forecasts. The forecasts published by the INSEE are based primarily on tendency surveys and short-term outlook indicators such as the industrial production index (IPI) or the turnover indices (CA). These forecasts are then integrated into an accounting framework which replicates the structure of the national quarterly accounts, ensuring consistency in terms of the accounting balances.

The rise of new statistical methods and the proliferation of data sources make real-time forecasting a possibility

Although only one forecast is published each quarter, it may be fine-tuned during the quarter in question following the publication of new indicators. The proliferation of data sources and the emergence of new forecasting methods now make it possible to continuously predict economic activity using a large number of short-term variables. These innovative methods, united under the umbrella term "nowcasting," provide a coherent statistical framework for the calculation of daily forecasts of GDP variation. By way of an example, the Federal Reserve in Atlanta is a pioneer in this field, publishing new forecasts which incorporate the most recent economic indicators on an almost daily basis. These sources range from the number of building permits issued to the level of production capacities, PMI indicators and surveys focusing on purchasing managers.

These methods are used here to create a new forecasting tool designed to continuously track the quarterly variations of French GDP. The database created for this purpose contains over a hundred temporal variables published by four different institutes. A daily forecast is produced using methods capable of summarising a very large number of variables in a single prediction.

Two results highlight the pertinence of such a tool. Firstly, forecasting error decreases continuously over the course of the forecasting quarter, falling by more than a third between the beginning and end of the quarter. As such the quality of each new prediction, measured by the degree of error in the empirical forecast, increases considerably. The best forecast is always that which is based on the most recent information. Furthermore, forecasting, as well as varying within the quarter, is highly sensitive to the publication of new indicators. Forecasts are therefore not to be considered as fixed values for a given quarter: they constantly evolve in response to the information available.

The diversity and frequency of the data available make continuous forecasting possible

Forecasters rely primarily on qualitative data for economic activity and quantitative data for production and consumption

The tendency surveys are the first data sources used by the forecasters. They are subsequently complemented by the publication of the first quantitative indicators such as the industrial production index or registration data, among others. Although these indicators provide more quantitative information than the qualitative questions contained in the business tendency surveys, their publication delay of over a month limits their usefulness for forecasting purposes. For example, the INSEE tendency survey for the manufacturing industry is published 25 days after the start of the month in question, whereas the industrial production index is published 40 days after the end of the month. As such, at the

end of any given quarter, the forecasters are equipped with survey data for the whole period but quantitative data for the first month only. The advent of Big Data also raises the prospect of utilising new forms of data such as media articles, search engine traffic and even data obtained via social media. Nevertheless, the value of these new sources appears to be limited when it comes to analysing the French outlook (Bortoli & Combes 2015a, Bortoli et al. 2017).

The tendency surveys are the first indicators of economic activity available for forecasting purposes

The INSEE currently conducts around a dozen surveys covering households as well as businesses in the services, industrial and construction sectors. Their early publication makes them a useful variable for forecasters attempting to predict economic activity. By construction, these surveys are prospective: the 20,000 businesses included in the samples used for the tendency surveys are quizzed about their activity, their headcount and their expected output for the coming three months. They are also asked about the variation in these variables over the preceding three months. Their answers are summarised as "increasing," "decreasing" and "stable." The balances of opinion, which summarise these qualitative responses, are calculated as the difference between the percentages of "increasing" and "decreasing" responses. The forecasters use calibration techniques to determine the average relationship between these balances and economic activity, in order to construct forecasts. Other organisations such as the Banque de France and market analysis firm Markit also conduct tendency surveys. They provide information which is different but complementary to the INSEE surveys: they interview a different sample of businesses over a different period, with questions which are phrased differently from those used by the INSEE. The three composite indicators published by each of the organisations, although strongly correlated with one another, also demonstrate their own individual fluctuations. Furthermore, it may be pertinent to incorporate data from surveys focusing on the short-term outlook in the Eurozone or OECD countries, such as those published by the INSEE.

Quantitative indicators, published later on, by their construction provide a better quality of information on economic activity

Although the tendency surveys provide a useful signal as to trends in activity, this signal is sensitive to noise. Three-option qualitative responses cannot provide as much information as hard quantitative data. Furthermore, the questions may be open to interpretation (Bortoli et al. 2015b). Quantitative indicators, meanwhile, are based on real data such as household consumption or output figures. With the exception of vehicle registrations data, they are published more than a month after the fact, but provide quantitative information which is very close to the first estimates contained in the quarterly accounts. Three indicators published by INSEE are particularly important when constructing the first estimate of GDP: the industrial production index, published within 40 days, is an advanced indicator of industrial output compiled using data from the monthly branch surveys. The monthly series for household consumption of goods, published within 30 days, provide an initial estimate of the final consumption of households. The business turnover index, published almost 60 days after the end of the month in question and calculated using VAT declarations, gives an idea of spending on services. For these variables, the growth overhang is incorporated into the forecast. Financial variables such as loan demand from households and businesses, interest rates and market data can also be used to predict variations in GDP. The majority of these variables are published monthly by the Banque de France, and integrated into the forecasting database.

On average, a new indicator is published approximately once every three working days

The diagram below shows the date of publication of the principal indicators used for forecasting purposes within each quarter. The diagram begins on the first day of the quarter in question and ends 30 days after the end of the quarter, when the first estimate from the quarterly national accounts is published. In any given month the first available data are the tendency surveys published by Markit and the INSEE, around 18 and 24 days after the start of the month respectively, while the industrial turnover index is published 89 days after the start of the month. In total, over the four months shown here, new data are published on 34 of the 96 working days, an average of one new publication every three working days. It is thus theoretically possible to issue a new forecast every three days, incorporating a new set of information. Finally, of the 64 datasets published, 30 are tendency surveys conducted by the INSEE, the Banque de France or Markit, 13 are sets of financial data published by the Banque de France and the OECD, while 21 are quantitative indicators published by the Banque de France, INSEE and the Ministerial Statistical Services. This diverse array of indicators and data sources allows for forecasts based on a greater wealth of information than that generally used by forecasters, although the use of the resulting forecasts requires a certain degree of caution.

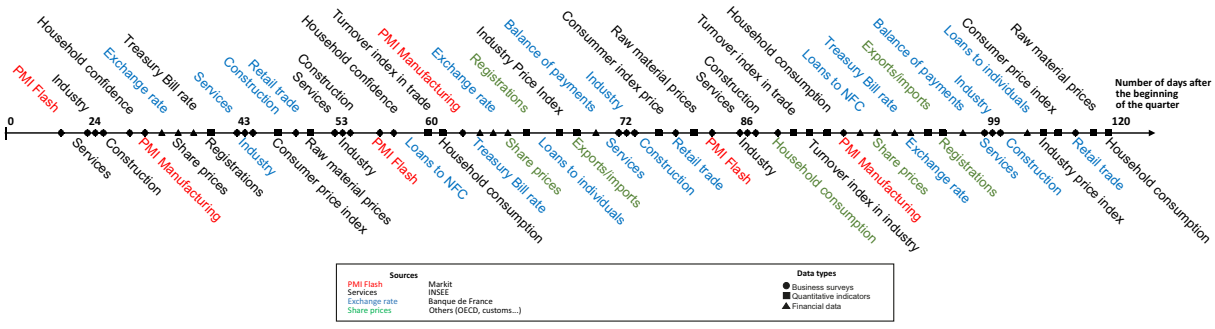
Thank to machine learning methods, it is possible to construct a forecast based on a number of indicators greater than the number of available observations

Two methodological problems arise when attempting to predict in real time the evolution of an economic aggregate: how do we aggregate data with different frequencies (monthly or quarterly) and publication dates? How do we construct forecasts with a number of variables (N) which is often greater than the number of observations (T), a problem which can be expressed as "N>T"? While the aggregation of heterogeneous and missing data is a problem specific to real-time forecasting, N>T is a classic dilemma of forecasting known as the "curse of dimensionality." Our method here is to apply the solutions proposed in the existing literature to the task of producing a first estimate of GDP growth for the quarterly national accounts.

There are various solutions to the problem of missing data

More than a decade ago, Dubois and Michaux (2006) were already examining the "problem of missing data" in relation to the quarterly forecasting of industrial output using the monthly tendency surveys. Their proposed solution was to create three quarterly series corresponding to the first, second and third months of each quarter. Depending on the availability of data, they would then integrate one, two or all three of these quarterly series. However, the drawback of this method is that it multiplies by three the number of variables, thus accentuating the problem of dimensionality. A common variant of these methods, known

1 - Calendar of publication of outlook indicators



as the bridge equation, is to predict the values for the missing months using an auto-regressive model. However, one consequence of extending the data in this manner is to add inertia to the forecast. As such, we have opted instead to calculate a quarterly average for the data available as of the forecasting date for tendency surveys, and to use the growth overhang for the other variables. The advantage of this approach is to prioritise the diversity of data sources over the addition of delays to a small number of variables, and also to make our forecasts more sensitive to the publication of new data.

Adding a large number of variables certainly improves the degree to which the model fits the data. Nevertheless, this adjustment may be detrimental to forecasting. In such situations, known as "overfitting," the estimated model is too close to the past data used and not sufficiently relevant to future developments. We thus felt it necessary to use a parsimonious model, incorporating a limited number of variables (*see the Box on Overfitting*).

One solution is thus to select a limited number of variables. Dubois & Michaux (2006), in the forecasts produced by the outlook department, were the first to employ a GETS (General to specific modelling) statistical method based on the selection of variables. This approach consists of successively eliminating non-significant variables, starting with the most general model and conducting a certain number of specification tests at each step. Where selection was previously done by hand or using less effective algorithms such as ascending and descending selection[1], using GETS instead enabled us, subject to certain conditions, to obtain the best linear forecasting model.

Factor models are capable of condensing a large number of variables into a few factors

Dynamic factor models offer a simultaneous response to the problems of missing data and high dimensionality. Pioneered by the work of Stock & Watson (2002) and Doz et al. (2011), these models have rapidly gained in popularity and are now used by many organisations, including the Fed and the ECB. Generally speaking, factor models allow us to obtain a parsimonious representation of a set of variables, summed up in a relatively small number of factors. The most well-known of these methods is principal component analysis. Meanwhile, dynamically representing these factors in the form of a space-state model allows us to take missing values into account. This method, which is conceptually very appealing, has been applied to forecasts for French GDP growth by Bessec & Doz (2012), and is also used in this article. A principal component analysis (PCA) model which does not take factor dynamics into account, an approach more frequently used in the existing literature, was also tested.

Statistical learning models offer new solutions to the "curse of dimensionality"

Different potential methods of machine learning (ML) represent a new approach to forecasting which no longer relies on the pre-specification of the relationship between an endogenous variable and the exogenous variables, but depends instead on an algorithm which finds the right model to minimise an objective function. Thanks to their predictive capacity, algorithms such as LASSO (Least Absolute Shrinkage and Selection Operator) and the random forest approach have spawned a growing body of literature focusing on the forecasting of macroeconomic aggregates with the help of Machine Learning. Biau, Biau & Rouvière (2006) notably applied the random forest method to the responses to the INSEE tendency surveys for the industrial sector, in order to forecast manufacturing output. Nevertheless, the deployment of these methods needs to abide by a certain number of elementary principles in order to avoid the pitfall of overfitting. Other automatic learning algorithms might also be used, such as neural networks. But these models often rely

1. Stepwise ascending and descending selection algorithms allow us to test only a small number of models, which generally do not turn out to be the most effective.

upon a large number of parameters, requiring a quantity of observations so great that optimisation is not possible. The methods used in this case are LASSO[2] and random forests. The former allows us to create a linear model based on a sub-set of variables selected automatically, while the latter is based on the construction of decision-making trees (*see Box*).

The performance of these methods was then compared with that of a simple model using only the dynamics of the variable we were seeking to forecast (an autoregressive moving average model, or ARMA) and a simple calibration process based solely on the business climate in France.

The forecasting model yields results which vary considerably within the forecasting quarter, while error falls by around 40%

The quality of a forecast is measured in terms of its RMSFE (Root Mean Squared Forecast Error). As illustrated in *Figure 2*, for a given date t, the model is trained with data stretching up to date t and a forecast is then generated for the date *t+1*. The error on date *t+1* is calculated as the difference between the forecast and the value actually recorded on *t+1*. RMSFE is then calculated as the square root of mean forecasting error. The training data begin in Q4 2001 and forecasting errors are calculated for the period stretching from Q1 2011 to Q1 2019. In the rest of this section the forecasting data from Q3 2019 are given for

2. The regulating hyperparameter λ was selected by a process of cross-validation with the training data.

2 - RMSFE calculation

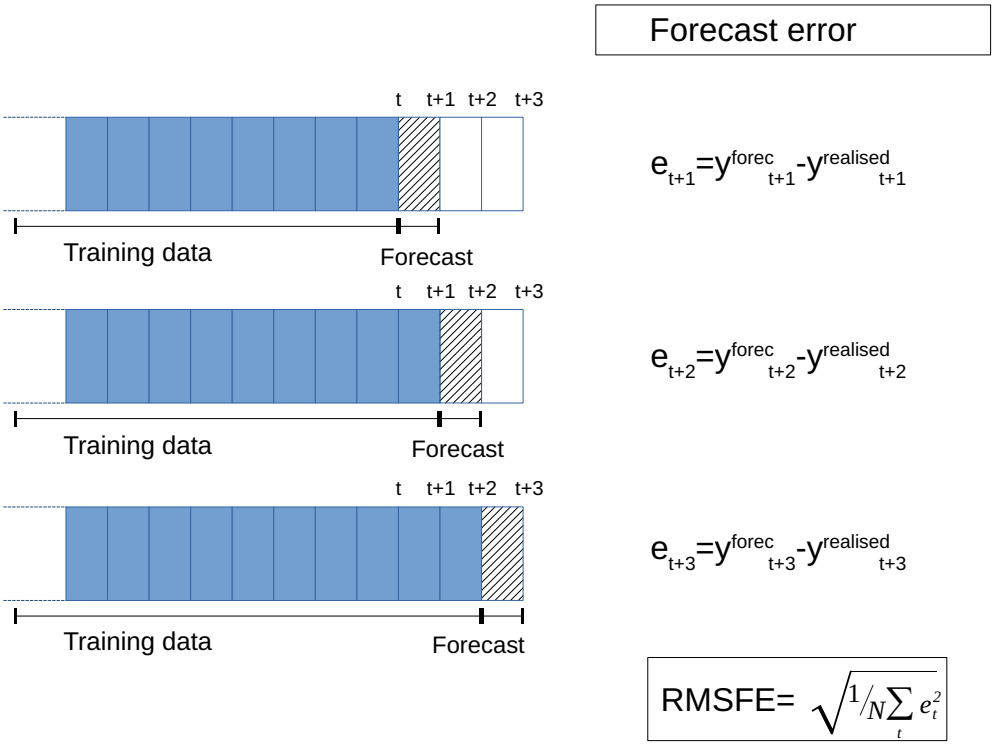


illustration purposes, with the quarterly forecast for GDP growth in Q3 2019 as the objective.

Table 1 shows the RMSFE and the absolute value of maximum error with the data available 100 days after the start of the quarter, i.e. 20 days before publication of the first estimate in the quarterly accounts. All of the models perform better than those used as standard in this forecasting period. LASSO and random forest were the models with the lowest RMSFE.

While their forecasts follow a relatively similar progression, the models differ in terms of their volatility

As new information becomes available, the forecast evolves significantly and differently from model to model. Figure 3 shows the evolution of the forecasts for quarterly growth of French GDP in Q3 2019 generated by the LASSO, random forest and PCA models. The forecasts of all three models follow a broadly similar trajectory, with the main difference being their volatility or sensitivity to new publications. The PCA model is the most volatile, yielding a forecast which varies between +0.07% and +0.47%, followed by the LASSO model whose results vary between +0.17% and +0.43%. Finally, the random forest model yields forecasts varying between +0.18% and +0.38%. Higher volatility also indicates that the model's maximum absolute error is also higher. Calculated for all quarters preceding the most recent estimate, this maximum error ranges from 0.53% to 0.77% in absolute terms depending on the model. Nonetheless, the LASSO and random forest models, i.e. those with the lowest RMSFE, are almost perfectly identical throughout the quarter. In

Table 1 - Forecasting quality of the models used

Mean quadratic error and maximum error of the principal forecasting models used between 2011 and 2019

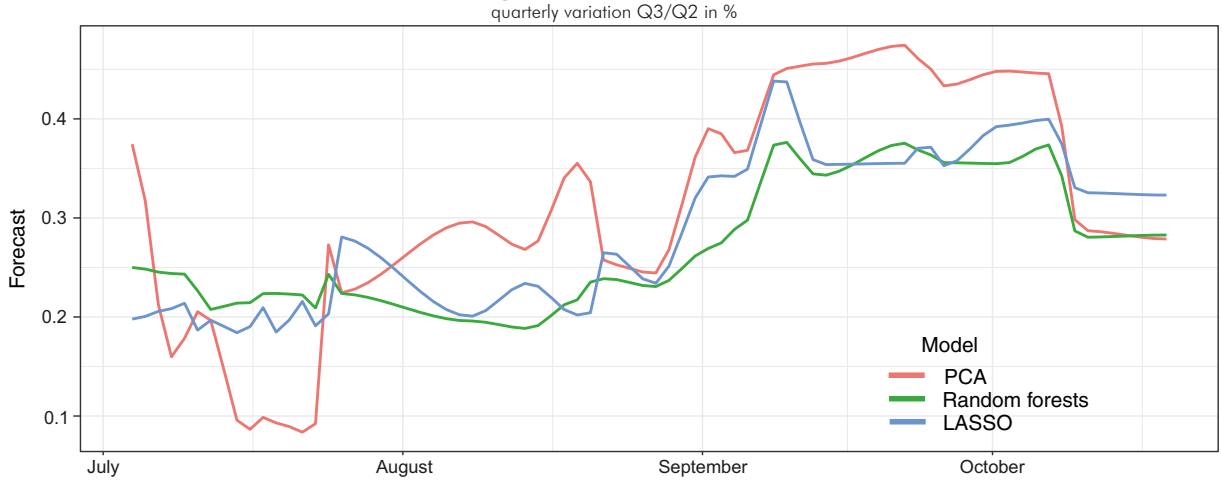
Model	Arima	Climate in France	Gets	LASSO	Forêts Al.	ACP	Dynamic-factor
RMSFE	0.33	0.28	0.23	0.20	0.19	0.23	0.22
Maximum error	0.77	0.55	0.65	0.53	0.55	0.62	0.66

Key: The maximum error of the LASSO model at T+100 days is 0.53 points (absolute value of the difference between the predicted quarterly growth rate of GDP and the rate actually recorded in current estimates) for the period 2011-2019. The corresponding RMSFE of 0.20 is calculated based on the forecasting error observed at forecasting date T+100 days, for all quarters in the same period

Source: INSEE, Banque de France, OECD, Markit, authors' calculations.

3 - Evolution of the GDP growth estimate over the course of Q3 2019

quarterly variation Q3/Q2 in %



Key: on 18 October 2019, the forecast yielded by the random forest model is 0.28.

Source: INSEE, Banque de France, OECD, Markit, authors' calculations.

the rest of this section we will look more closely at the random forest model, which offers the dual advantage of relatively low RMSFE and maximum error.

During the quarter in question forecasting error shrank by 40%

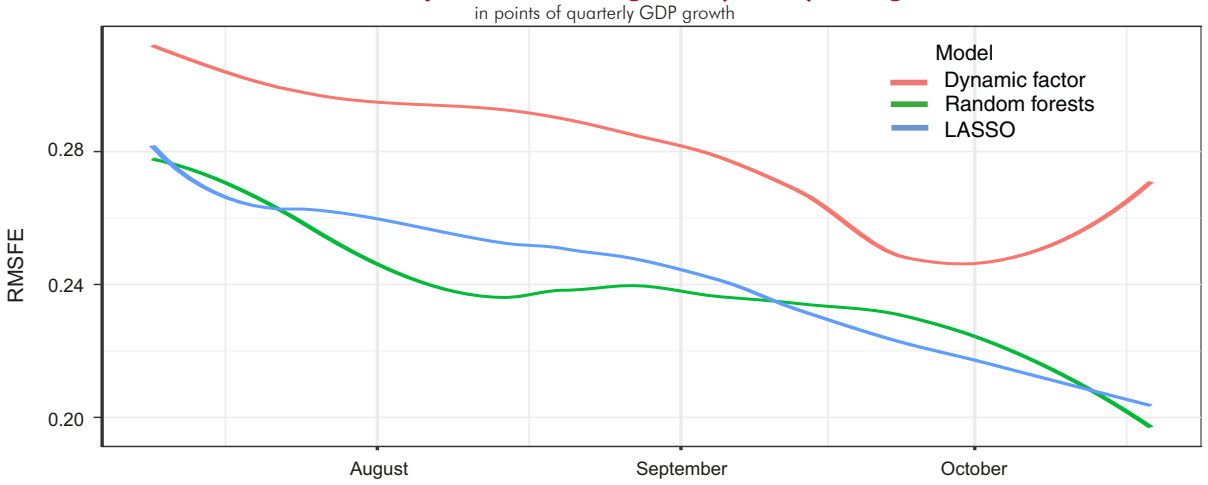
As the forecast evolves, the forecasting error shrinks as the quarter progresses, as more information becomes available regarding the current economic situation. *Figure 4* shows the evolution of the forecast generated by the random forest model and the reduction in its forecasting error over the course of Q3 2019. Forecasting error shrank by around 40% between the beginning of the quarter and the eve of the publication of the national accounts. To put it slightly differently, the 80% confidence interval of this forecast is +/– 0.38 percentage points at the start of the quarter and +/– 0.25 points by the end of the forecasting period.

Forecasting variations can be attributed to the publication of specific indicators

The growth forecast for Q3 2019 hit its lowest point in mid-August, at +0.18%. This coincides with the publication of two outlook indicators which are of particular importance for forecasting (cf. hereunder): the industrial output index for June, published on 9 August, dropped 2.2%; meanwhile the balance of output forecasts in the manufacturing

4 - Evolution of empirical forecasting error (RMSFE) during Q3 2019

in points of quarterly GDP growth

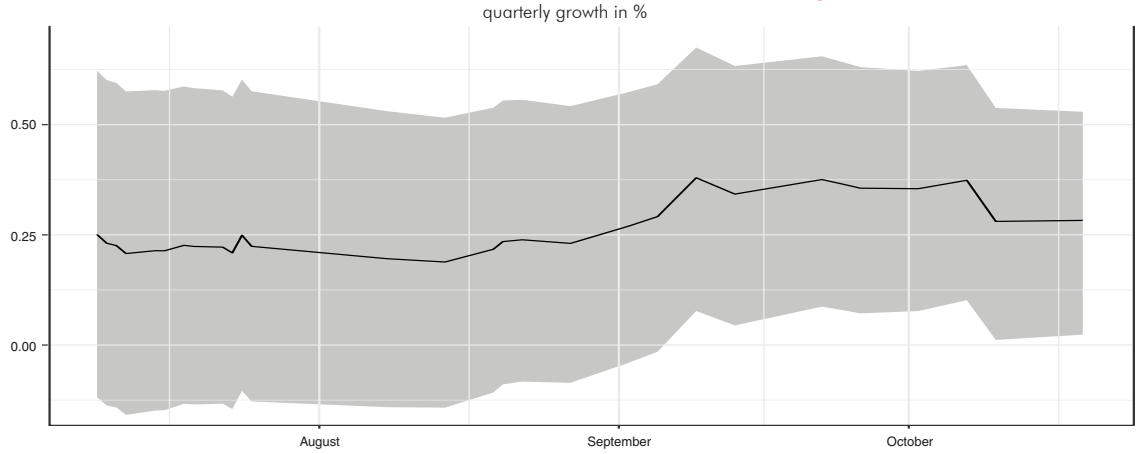


Key: on 1st September 2019, the forecasting error (RMSFE) of the random forest model is 0.24 points of GDP growth

Source: INSEE, Banque de France, OECD, Markit, authors' calculations.

5 - Growth forecast Q3 2019 with a confidence interval of 80%, using the random forest model

quarterly growth in %



Key: on 18 October 2019, the growth forecast for Q3 yielded by random forest model is +0.28%. The value with the confidence interval at 80% is between 0.03 and 0.52

Source: INSEE, Banque de France, OECD, Markit, authors' calculations.

industry, derived from the monthly outlook survey published by the Banque de France, dropped two points on the same date. One month later the forecast was back up to +0.39%, buoyed by the increase in the business climate indicator for industry, published by the Banque de France (+3.4 points), and the slight upturn in the industrial production index for the month of July, published on 10 September (+0.3%). The sharp decrease in the forecast in early October can be partly explained by the fall in the PMI indices, and also by the slight decrease seen in the IPI for August.

The random forest algorithm allows us to identify the most important variables for the forecasting of quarterly GDP growth

With the random forest method, it is possible to measure the importance of each forecasting variable (see the Box on Forecasting using the random forest method). This importance is calculated in terms of the predictive gain associated with each variable. For example, the balance of opinion for future output from the manufacturing industry is capable of reducing RMSFE by 13.5% for a forecast produced in mid-July. Tables 2 and 3 show the ten most influential variables for forecasts produced in the months of October and July respectively, i.e. one month after the end of Q3 2019 and in the first month of the quarter. The majority of the most influential indicators are connected with the manufacturing industry. Industrial output makes a very significant contribution to quarterly variations in GDP, a contribution which is disproportionate to its share of the total value added by all sectors. Moreover, the most influential variables are taken from a large number of different sources: OECD, Insee, Banque de France, Markit. This multiplicity of sources makes it possible to significantly improve the quality of the forecast. Finally, those indicators which can be considered weak signals, such as share prices, are among the most influential variables in July but have been superseded by October by quantitative indicators such as the industrial production index.

Table 2 - Importance of forecasting variables in the random forest model, as of mid-October (*T+100*)

Variables	Importance
Other industrial products (C5), variation in orders received – Banque de France, September	12.7
Manufacturing industry, past variation in output – Banque de France, September	12.4
Manufacturing industry, output forecast – Banque de France, September	10.8
Industrial production index, manufacturing industry – INSEE, August	10.0
Industrial production index, intermediate goods – INSEE, August	9.9
Industrial production index, capital goods – INSEE, August	9.1
Manufacturing PMI – Markit, September	8.5
Other industrial products (C5), output forecasts – Banque de France, September	7.0
Business climate in the construction industry – INSEE, September	6.9
Capital goods (C3), output forecasts – Banque de France, September	6.7
Manufacturing PMI, new orders – Markit, September	6.6
Monthly consumption of households, manufactured goods – INSEE, August	5.6

These new tools enable us to track in real time the evolution of economic forecasts as new indicators are published. They also allow forecasters, when used in conjunction with existing tools, to address new questions such as: "How did the forecast evolve over the course of the quarter?" "Which indicators had the biggest influence on forecasts?" and "How precise is our forecast at any given moment?". Nonetheless, this initial prototype has certain limitations and will require further research. First and foremost, machine learning is a field of research which has undergone a profound transformation over the past decade, and which continues to develop apace. The models of automatic learning used in this study may themselves need to evolve as further progress is made in the field. Moreover, real-time forecasting of quarterly growth is based on statistical analysis and is no substitute for economic analysis. It does not allow us to clearly establish a causal relationship between the fluctuations of a given indicator and the growth of GDP; it simply reflects the correlation between certain indicators and developments in GDP, based on historic data. Finally, the performance of our model over a single quarter is not sufficient proof of its robustness. It is therefore not possible to predict how it will react in times of crisis, periods in which, by definition, indicators depart significantly from their past trends. ■

Table 3 - Importance of variables in forecasting with the random forest model in mid-July (*T+15*)

Variables	Importance
Manufacturing industry, output forecast – Banque de France, June	13,5
Composite Index, business survey, OECD – OECD, June	9,5
Share prices, France – OECD, June	8,5
Other industrial products (C5), output forecast – Banque de France, August	8,0
Share prices, USA – OECD, June	7,8
Outlook turnaround indicator for services – INSEE, June	6,9
Transport equipment (C4), variation in orders received – Banque de France, June	6,7
Business climate, manufacturing industry – INSEE, June	6,6
Transport equipment (C4), variation in international orders received – Banque de France, June	6,6
Manufacturing PMI, new orders – Markit, June	6,1
Other industrial products (C5), variation in orders received – Banque de France, June	5,9

Key: in mid-July, the OECD's Composite business survey index improves RMSFE by 13.5%
Source: INSEE, Banque de France, OECD, Markit, authors' calculations.

Box 1: Overfitting

The purpose of a predictive model is to produce the most accurate forecast possible for an unobserved variable based on auxiliary observations. In this respect, the priority is not to maximise its adjustment with the data used in the estimation process: the objective is to build a model which is sufficiently general that it will yield a good forecast when used with new observations. The quality of a forecasting model is therefore assessed using a different data set from that used in its construction. To do this, all of the initial data is split into a learning sample, designed to estimate the properties of the model, and a validation sample, designed to assess the model's performance when used with an unknown sample.

The capacity of a model to be generally applicable is inversely proportional to its complexity, as per Occam's razor. The simpler a model is, the more its empirical performance will depend on the particularities of the data used in its estimation. To illustrate this principle, consider the example of a data set generated by a function (*f*) to which we then added noise (*epsilon*), so that: $y(x)=f(x)+epsilon$. We observe only $y(x)$ and x. The forecaster's objective is to identify the function g which will best approximate *f*. We can approximate this function using a polynomial of degree p, wherein the higher the value of p, the more complex the model. *Figure 6* shows, by way of an example, the function *f* we wish to estimate (in black), an estimate calculated using a degree 2 polynomial (in red) and a degree 11 polynomial (in blue). Although the degree 11 polynomial is most closely adjusted to the data, the degree 2 polynomial offers a better estimate of *f*. The degree 11 polynomial mistakenly incorporates some of the uncertainty introduced in the data generation process. This is an example of overfitting.

6 - Simulation of overfitting

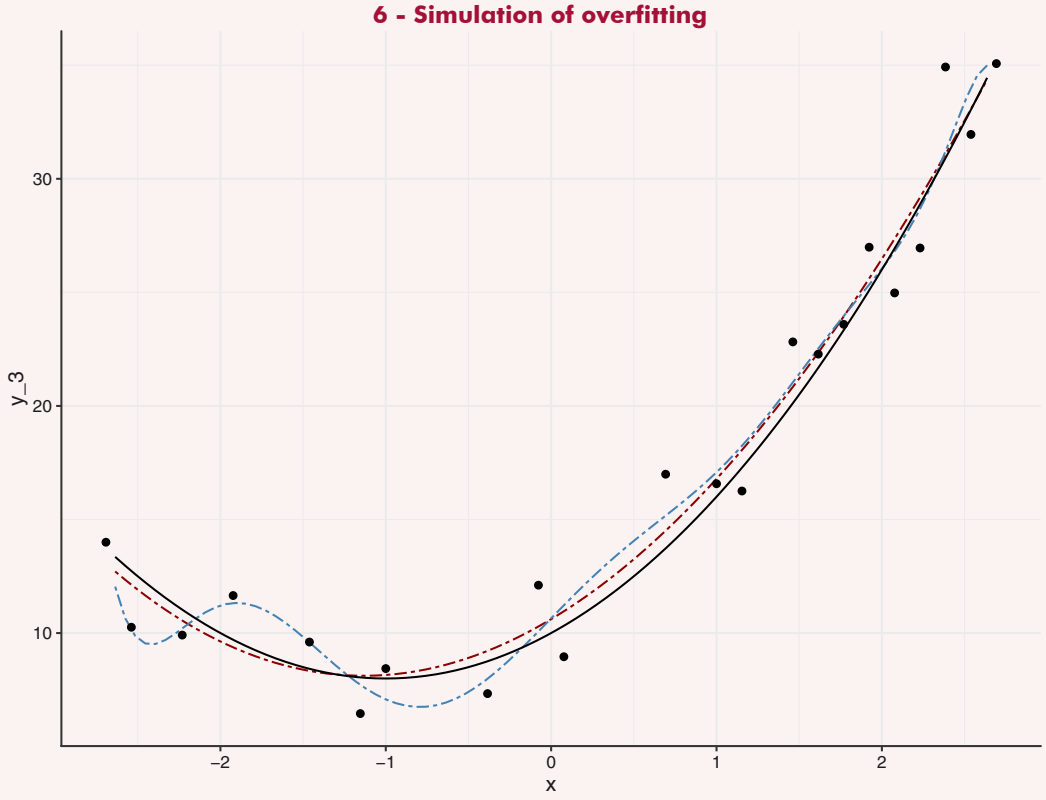
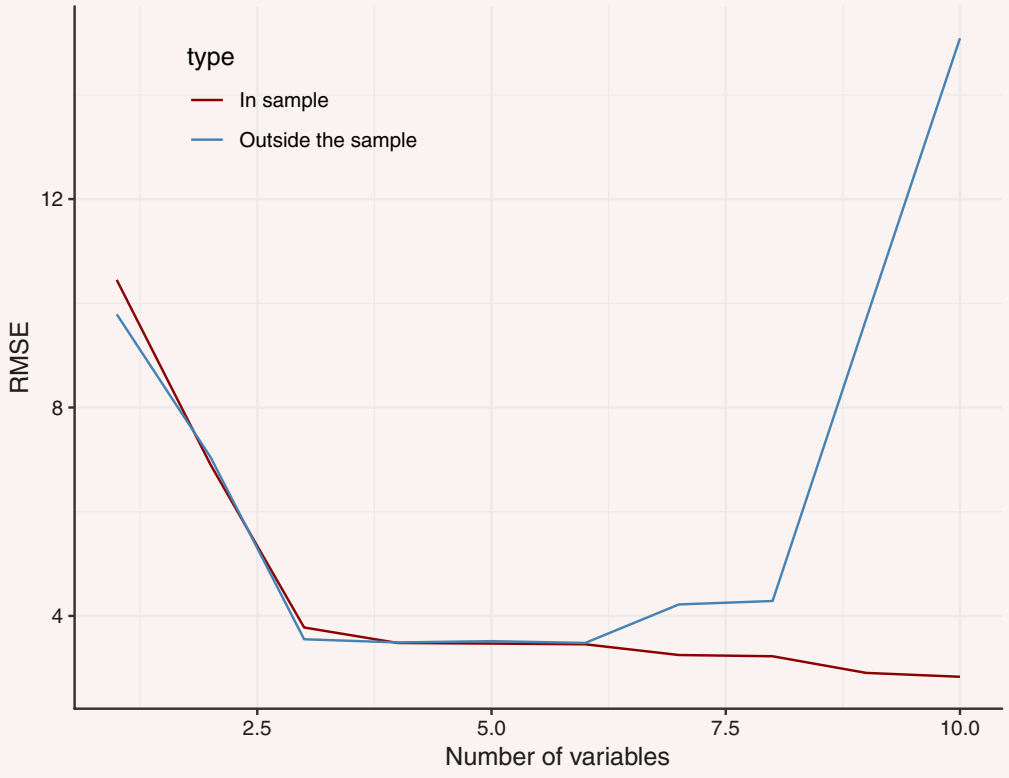


Figure 7 shows the error, in the form of RMSE (the Root Mean Square Error between the actual and predicted values), within the sample and outside the sample when we increase the number of variables. The error within the sample decreases along with the number of variables used. The more variables there are in the model, the better the model will fit the training data. However, when the number of variables exceeds 4, the error outside the sample increases. Once again, this is a case of overfitting. The model is not sufficiently general, and is too sensitive to uncertainty. ■

7 - Growth forecast for the third quarter of 2019 including confidence intervals, created using the random forest model



Box 2: Forecasting using random forests

The 'random forest' method is a machine learning method first developed by Leo Breiman in 2001. This algorithm is based on the construction of multiple decision-making trees, built using slightly different data samples.

Decision-making trees allow us to divide a set of observations into homogenous groups using a set of discriminant variables (predictive variables) and an output variable (predicted variable). They also have the advantage of being easy to construct and yielding a graphical representation which is simple to interpret. The trees are constructed using the CART[1] algorithm (Breiman, 1984). The general principle is to recursively divide the data set into groups. With each new division, the two sub-sets constructed are as homogenous as possible for the predicted variable[2]. The final step, known as pruning, involves constructing an optimal sub-tree using the final tree constructed in the previous step. The underlying idea is that the final tree contains a very large number of branches. This tree has very high variance and low bias; an example of overfitting. One solution is therefore to construct a family of sub-trees derived from the trimmed-down final tree, choosing from this family the tree which best minimises forecasting error.

Figure 8 shows a decision tree for forecasting the quarterly variations of GDP. This tree was created using all of the indicators available 20 days before publication of quarterly national accounts. It can be read as follows: if, in a given quarter, the growth overhang of the IPI in month 2 is greater than –1.5%, the standardised business climate in the construction sector is over 1.9 and the growth overhang of exports is greater than –1.7%, then the growth forecast is +0.97%. The percentage below the forecast indicates the share of observations from the sample which are included in this category. It is also worth noting that the algorithm has selected quantitative indicators as well as variables taken from the tendency surveys.

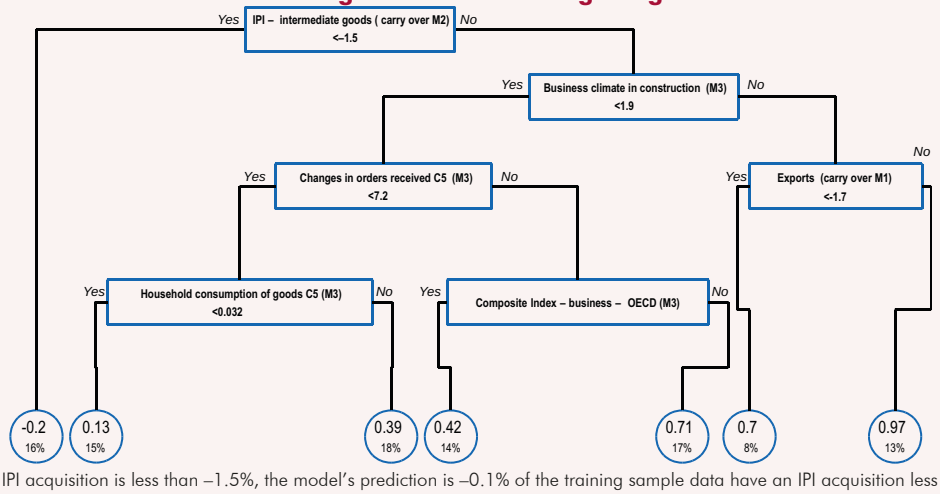
However, this algorithm has one major defect: instability. A slight modification to the sample may yield a very different decision tree, and thus very different predictions. The solution proposed by Breiman is to aggregate the predictions from multiple trees, generated with a degree of uncertainty. The algorithm is as follows:

- Sampling with replacement of a set number *N* of observations in order to establish a training sample
- Random selection of *p/3* variables from the set of p predictive variables available
- Construction of a decision tree using these variables and the sample, using the CART algorithm
- Repeat this operation 1000 times to create 1000 different decision trees. The final prediction is the mean value of the predictions generated by all of the trees.

As such, each tree is generated by a different leaning process and their forecasts are weakly correlated. One of the key criteria for forecasters is the interpretability of the resulting model. With the random forest method this is made possible by quantifying the importance of the variables, calculated based on the predictive associated with each variable. *Tables 2 and 3* show the respective importance of these variables when forecasting quarterly variations at two different dates. ■

1. Classification and Regression Trees
2. To be more precise, with each division the two sub-sets minimise the variance within the sub-groups.

8 - Decision-making tree for forecasting the growth of GDP



Reading: if the IPI acquisition is less than –1.5%, the model's prediction is –0.1% of the training sample data have an IPI acquisition less than –1.5%

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The cycle of municipal elections:
how does it affect public investment, employment and output?

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Municipal elections in France cover a six-year cycle. Local government bodies (APULs) – which currently account for the majority of public investment – tend to adjust their investment behaviour in part according to the dates of these elections. Using an econometric model, the effect of the electoral cycle can be isolated from other elements that may influence their behaviour (income, activity, long-term factors). It emerges that in the year preceding an election, the pace of annual growth in nominal investment by APULs, all other things being equal, is on average 4 points higher than in previous years, after which there is a backlash effect as it slows in the year of the election and the year after.

APULs invest mainly in construction (buildings, civil engineering and specialised construction). In order to support the additional demand in the run-up to the elections, output and employment in the construction branch have to adjust. Using business tendency surveys in the building construction and civil engineering industries, the effect of the electoral cycle can be quantified for these two aggregates. The models selected here suggest that in the year preceding municipal elections, construction output increases by 2 percentage points more than the usual pace, while payroll employment increases on average with 17,000 more jobs than usual.

In 2020, in the run-up to the March elections and beyond, investment by APULs, output and payroll employment in the construction sector look set to gradually slow. The overall effect of the electoral cycle on changes in these three aggregates is likely to be zero in Q2 2020. ■

The majority of public investment is driven by local government

After almost continuous growth in the 1950s and 1960s, the GDP share of government gross fixed capital formation (GFCF; i.e. investment[1]) experienced a trend decrease and stood at 3.4% of GDP in 2018 (against more than 5% at its peak in 1967; *Figure 1*). Over the same period, the contribution by all of local government (APULs; territorial authorities and various local administration bodies) to the general government (APU) GFCF rose from 30% in 1950 to 57% in 2018. In addition, central government's share was halved (from 64% in 1950 to less than 35% in 2018), illustrating the gradual process of decentralisation towards the APULs. All in all, investment by APULs accounted not only for 8.6% of investment by all institutional sectors and 2% of GDP in 2018 but also for 75% of the variability of the general government GFCF (i.e. about 3% of GDP variability) since the beginning of the 2000s. Understanding and anticipating short-term changes in this aggregate is useful in order to refine the outlook diagnosis.

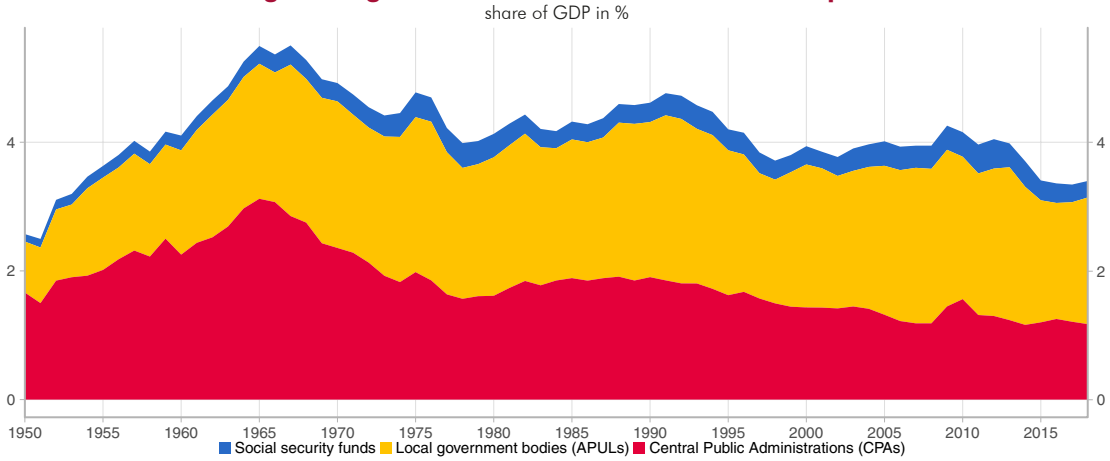
Breaking down the accounts provides no economic explanation for particularly notable short-term changes in the APUL GFCF

While general government's share of GFCF in the GDP declined, the share of the APULs alone has maintained a stable level from the end of the 1960s until the present, at around 2%. Despite this average stability over a long period there have nevertheless been some large variations in the short term. The annual change in value of the GFCF of APULs can be sizeable, both upwards and downwards. For example, since 2000, annual investment by APULs experienced growth on seven occasions of between 5% and 10%; but there were also decreases, on three occasions, ranging from –5% to –10%.

Breaking down these fluctuations in the accounts does not make them easier to understand. First of all, these variations are not due to irregular price changes: the volume-price distribution of the growth rate of the aggregate does not indicate any particular price distortion and accounts for a change in volume that fluctuates as much as the value of this

1. GFCF consists of acquisitions less disposals of tangible or intangible assets by resident producers. These assets are derived from production processes and used repeatedly or continuously in other production processes for at least one year.

1 - GDP share of general government GFCF and GFCF of its components since 1950



Source: National accounts, INSEE

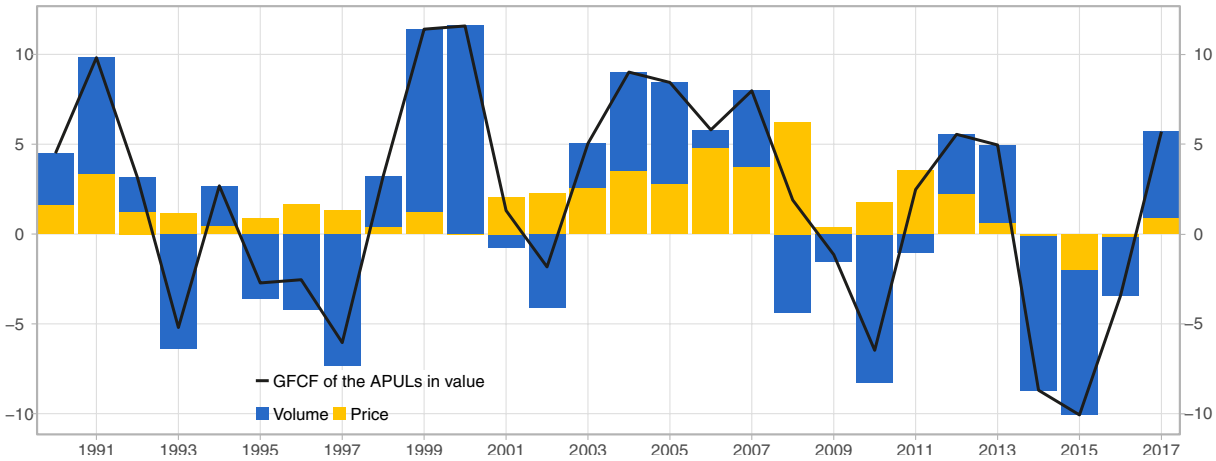
investment (*Figure 2*). Nor does the gross disposable income of the APULs fluctuate as sharply as the GFCF.

In addition, in 2017 more than 80% of the GFCF of APULs was made up of investment in construction: 40% for specialised construction (construction of parts of buildings and civil engineering work or preparatory work for this type of project: pile driving, building foundations, structural work, concreting, bricklaying, paving, scaffolding, etc.), 33% for the construction of civil engineering projects (motorways, roads, bridges, tunnels, railways, aerodromes, ports and other river and maritime projects, irrigation systems, sanitation systems, industrial installations, electrical conduits and power lines, outdoor sports installations, etc.) and 7% for building construction (dwellings, offices, shops and other public, utility and agricultural buildings, etc.). In the short term, and in general, none of these products, when considered individually, seems to account for the major movements in the aggregate (*Figure 3*).

The reasons for these considerable annual variations must therefore be sought in macro-economic and political determinants. On the one hand, cyclical fluctuations in activity can affect investment by APULs directly (increase or decrease in demand) or indirectly (fiscal policy may be more or less expansionist, increase or decrease in tax revenue). In the latter case, the ratio of the GFCF of APULs to GDP may deviate in a sustainable fashion from its long-term average, as was the case after the sovereign debt crisis in the early 2010s, a period when government

2 - Volume-price distribution of changes in GFCF of APULs

annual variation in %, contributions in points

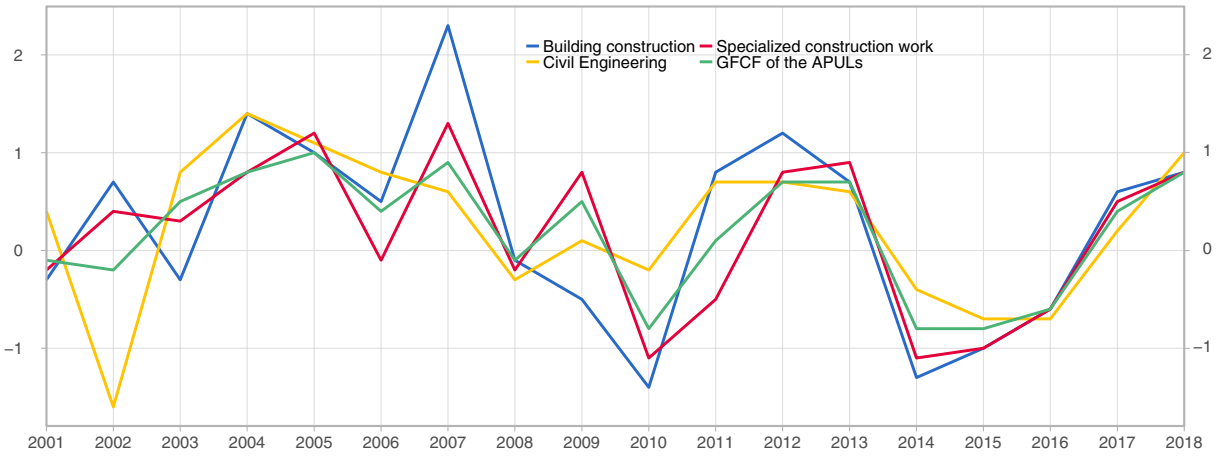


Note: volumes are approximated by deflating the GFCF of APULs using the deflator for the general government GFCF

Source: National accounts, INSEE

3 - Changes in components of the GFCF of APULs as a constant volume

annual variation in %



Source: National accounts, INSEE

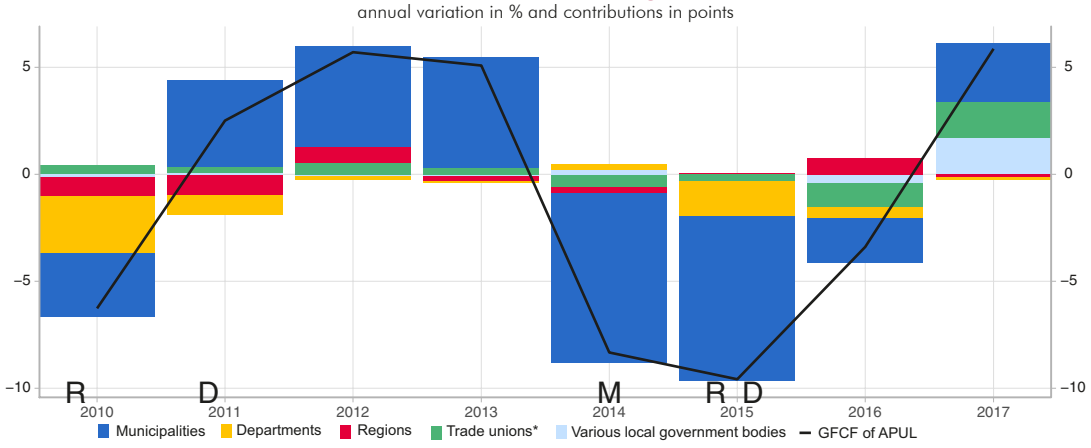
revenue was low. On the other hand, independently of fluctuations in activity, the electoral calendar can also influence fiscal policy with regard to public investment.

Of all the local ballots, the municipal elections are likely to have the greatest effect on investment by APULs

Within local government, investment by municipalities, departments and regions is likely to be affected by the corresponding local elections (municipal, departmental and regional, respectively). Nevertheless, there are two elements that prompt a closer look at the municipal electoral cycle for an understanding of the short-term movements in investment by APULs. First, investment by municipalities predominates in the APULs: the majority of APUL investment is by municipalities (62% in 2017), whereas the contribution of the departments and the regions is smaller (14% and 8% respectively in 2017). The remaining APUL investment is split between miscellaneous local administrative bodies (ODAL, 7%) and intermunicipal syndicates with their own tax system (9%). Second, it appears that, in the years for which data are available, investment by municipalities was more sensitive to the presence of local elections (*Figure 4*). It is therefore likely that municipal elections have a major effect on local government investment, unlike other elections. Therefore only these polls will be studied, and the potential effects of the other local elections disregarded.

4 - Contributions of sub-sectors to local government investment

annual variation in % and contributions in points



Note: the letters M, D and R indicate the dates of municipal (M), departmental (D) and regional (R) elections. In 2011, departmental elections were still cantonal elections.
* Trade unions represent intermunicipal trade unions with their own taxation.
Source: National accounts, INSEE

The cycle of municipal elections

On average, local government investment spending increases with the approach of municipal elections and decreases afterwards

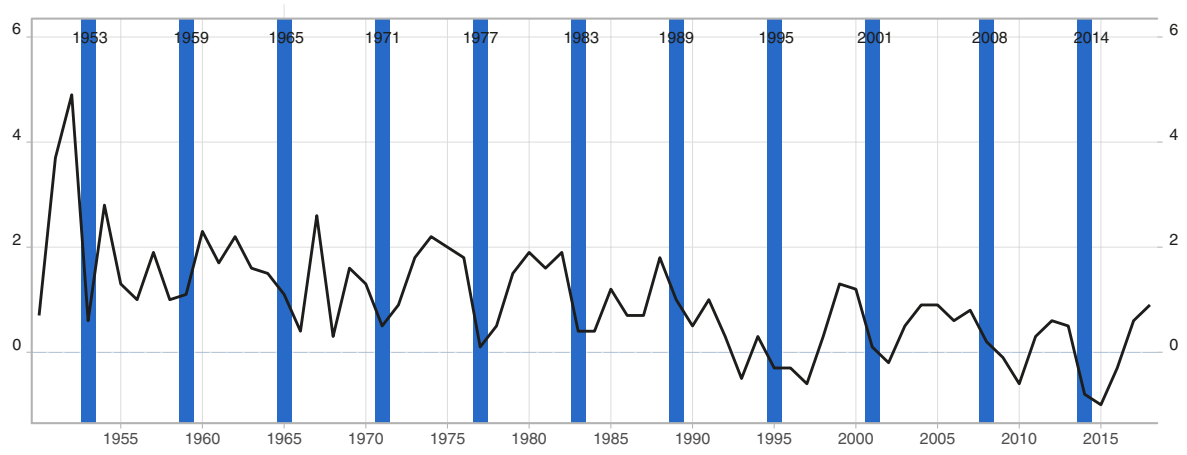
The dates of municipal elections cover a six-year cycle (exceptionally seven years after the 2007 elections were shifted to 2008) which may affect local government investment decisions (*Figure 5*). To identify this effect, an econometric model was used to isolate short-term deviations in the GFCF of APULs from its trend change[2] which did not result in the cyclical fluctuations in activity described previously (*Annexe 1*).

It would seem that the presence of an election has a considerable effect on investment by APULs (*Figure 6*). In the years preceding an election, the GFCF of APULs shows a vigour that is not explained by cyclical

2. Variations that are neither explained by the electoral cycle nor by economic effects and therefore not measured by the model could result, among other things, from exceptional events (large-scale investment, reconstruction after a natural disaster, etc.), from phenomena of catching up on periods of under-investment or over-investment, from investment decisions not decided at a local level or from the effects of other local elections (departmental and regional).

5 - Changes in value of the GFCF of APULs and dates of municipal elections

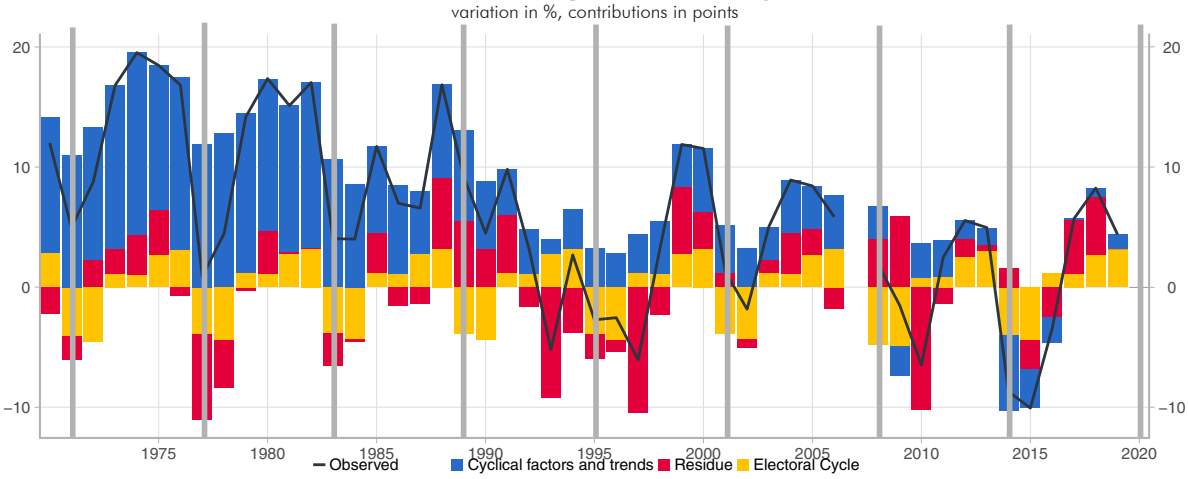
annual variations in %



Source: National accounts, INSEE

6 - Estimated contributions of the electoral cycle to the change in value of the GFCF of APULs

variation in %, contributions in points



Notes :

(1) The shifting of the 2007 municipal elections to 2008 resulted in a break in the electoral cycle series. So as not to disrupt the model, 2007 was not taken into account.

(2) The analysis was carried out with the series of GFCF of APULs by value as no deflator corresponded to the aggregate. In order to ensure that prices did not influence the interpretation of the results, a similar econometric analysis was carried out by deflating the GFCF of the APULs by that of the GFCF of general government. The results and the scale of effect of the electoral cycle on changes in the GFCF of the APULs were of the same order of magnitude as those presented here.

Source: National accounts, INSEE

factors alone and this effect is heightened as the year of the election approaches: an average of 9% growth in the year preceding elections for the last five elections. On average and according to the model, 4.1 points of growth in investment by APULs in the year preceding municipal elections are attributable to the electoral cycle.

Conversely, the years following these elections suffer a backlash and are years of sluggish or negative growth in the GFCF of APULs: –2% on average over the last five elections; 4 points on average appear to be deducted from the growth of the aggregate because of the electoral cycle, according to the model. Election years also experience low or negative growth in investment. This can be explained by the dates of the polls being too early in the year (usually in March but exceptionally in June for the 1995 elections) to compensate for the decline in local government investment after polling. On average, the presence of municipal elections appears to reduce growth in the GFCF of APULs by 3 points in those years.

In recent years, it is likely that the approach of the 2020 municipal elections has contributed in the same way to the buoyancy of the GFCF of APULs. In 2018, the nominal GFCF of the APULs grew by 8.6%, of which almost 6 percentage points can be attributed in equal measure to the electoral cycle and the buoyancy in activity, according to the model. In 2019, the GFCF of the APULs looks set to grow by 6.0% in value, of which 4.1 points could be linked with the elections in the next year, or two thirds of the aggregate's pace of growth.

The estimated effect of the electoral cycle is an average effect since 1960. It may nevertheless show variations over time. On the one hand, skills transfer could increase the volume of investment by APULs and hence the scope of the electoral cycle. On the other hand, changes in local taxation and allocations by the State may increase or reduce the municipalities' financial autonomy and ultimately affect their investment decisions (OFCE, 2019). Lastly, the drop in interest rates may also change the investment behaviour of the APULs. Such a change does not seem to be identifiable, according to the model selected here (*Annexe 1*)

Business tendency surveys in the building construction industry and in civil engineering are used to measure the effects of the electoral cycle on payroll employment and output

This cycle of APUL investment may influence other macroeconomic variables, as output adjusts to satisfy this internal demand, and employment changes according to variations in activity. To determine the influence of the municipal electoral cycle on these respective variables, business leaders' responses to business tendency surveys in the civil engineering and building construction industries were used. These two surveys cover virtually the entire construction branch (composed of public works – civil engineering and specialised construction – and building construction) and this activity itself accounts for almost all investment by APULs (see above). Balances of opinions were used to estimate econometrically the effect of the electoral cycle on employment and output in the construction sector by doing away with the statistical constraints that such an operation would require if it were done on these series directly (see *Annexe 2*). To do this, we first estimate the effect of the electoral cycle on the balances of opinion of business leaders. Then we identify a calibration relationship linking these balances to the target variables (employment and output in construction). By transitivity, the effect of the electoral cycle on these

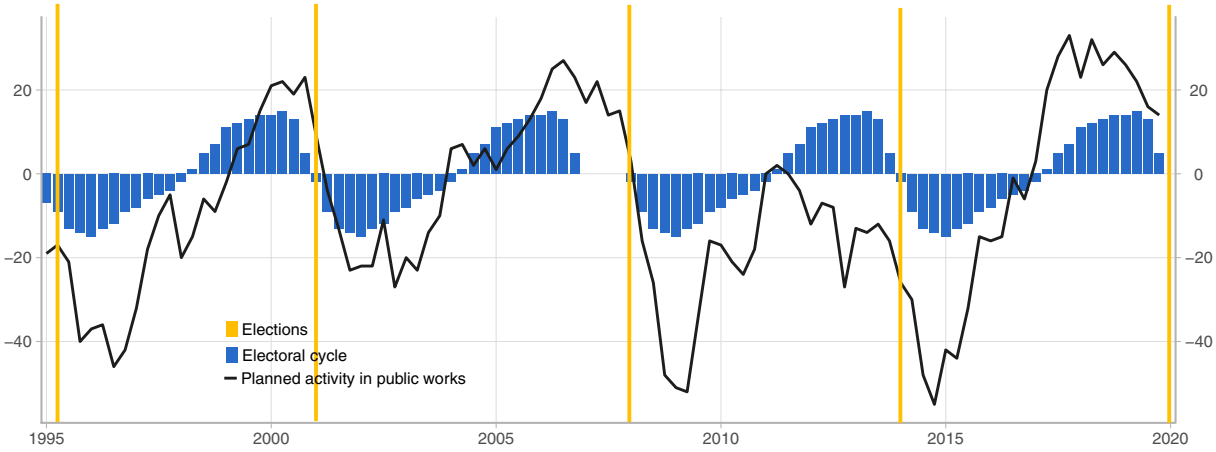
variables can therefore be measured indirectly from the business leaders' responses to business tendency surveys.

Among the questions asked in the business tendency surveys, the one on expected activity reflects the opinion of industrialists on their prospects for activity in the next three months. The balance of opinion (difference between the number of respondents answering "up" and those answering "down" to this question) has a significantly quarterly profile, especially as the dates of the municipal elections draw near, both in civil engineering (*Figure 7*) and the building construction industry (*Figure 8*).

Thus according to the model used, the balance of opinion on expected activity in civil engineering in the three quarters before an election date was, on average, 15 points higher than for the other quarters. In other words, 15% more than usual of the businesses questioned replied that their expected activity would go up rather than the reverse. As the election date approached, this share decreased gradually but remained positive nevertheless. For example, this balance was, on average, 12 points higher than usual two quarters before the elections, then 7 points higher in the quarter before. In the quarter of the election, the balance was 3 points lower than usual. In a symmetrical fashion, it remained negative for a few quarters after the elections before increasing once again. In

7 - Estimated contributions of the electoral cycle to the balance of opinion on expected activity in civil engineering

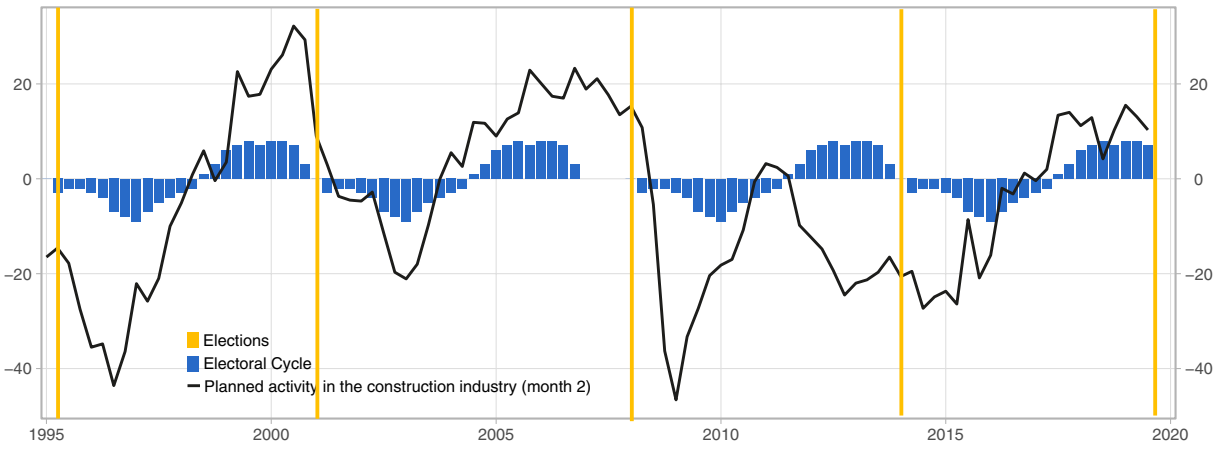
balances of opinion in %, SA



Source: Fédération nationale des travaux publics (FNTP), INSEE: monthly business survey in the public works industry

8 - Estimated contributions of the electoral cycle to the balance of opinion on expected activity in the building industry

balances of opinion in %, SA



Source: Fédération nationale des travaux publics (FNTP), INSEE: monthly business survey in the public works industry

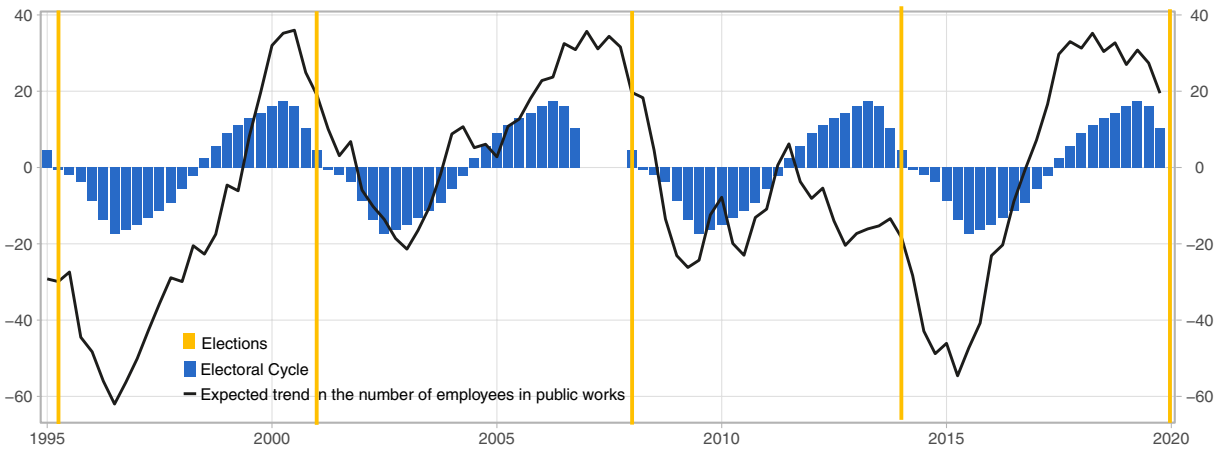
the quarter after the elections, the balance of opinion was, on average, 9 points lower than usual, reaching a minimum four quarters later (15 points fewer than usual).

Before the municipal election dates, the balance of opinion on expected activity in the building construction industry was also higher than usual, on average, and after these dates it was lower than usual (*Figure 8*). However, it remained at a high level for longer, 7 points more than usual on average, in the two years before an election. This gap decreased during the quarter that preceded the election (4 points more) and disappeared in the quarter when polling took place. It fell back after the elections, but more gradually. This relatively high inertia compared with the level in civil engineering, both before and after the elections, could be due to the specific features of construction activity in the building sector.

Similarly, the responses of business leaders to the question on expected changes in workforce size also appeared to be affected by the electoral cycle. The maximum effect was different for the two branches: in civil engineering, it was as much as 17 points higher three quarters before the election, against 10 points higher five quarters before the elections in the building industry (*Figures 9 and 10*). In the quarter of the elections, this balance of opinion was also higher than usual, though to a lesser

9 - Estimated contributions of the electoral cycle to the balance of opinion on the expected trend in workforce size in civil engineering

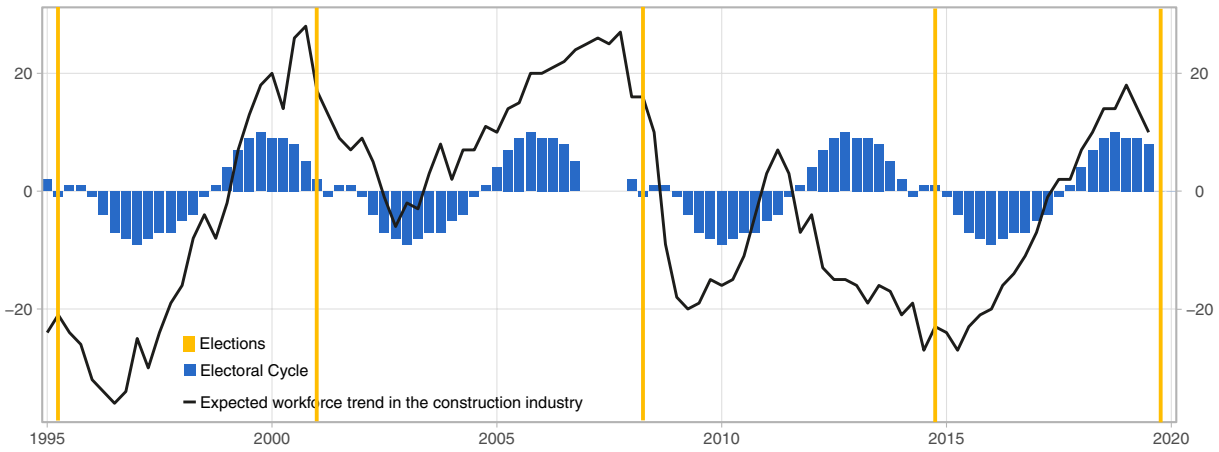
balances of opinion in %, SA



Source: Fédération nationale des travaux publics (FNTP), INSEE: monthly business survey in the public works industry

10 - Estimated contributions of the electoral cycle to the balance of opinion on the expected trend in the building industry

balances of opinion in %, SA



Source: Fédération nationale des travaux publics (FNTP), INSEE: monthly business survey in the public works industry

extent, in civil engineering (+4 points), but not in the building industry (zero contribution).

The electoral cycle seems to affect both public and private customers of the businesses surveyed

The questionnaire in the two surveys also differentiates the type of project: public (State and territorial authorities) or private (all businesses including those whose capital is controlled by the State). In responses on expected activity, the influence of the electoral cycle appeared to be significant for public-sector customers in civil engineering and also in the building construction industry (*Table*). However, it was also positive for private-sector customers, contrary to what one would intuitively expect. This could be explained1 by the fact that businesses use subcontractors for public-sector projects or sometimes carry out additional work on public projects originally carried out by private companies.

Estimated contribution of the electoral cycle to balances of opinion before, during and after the municipal elections

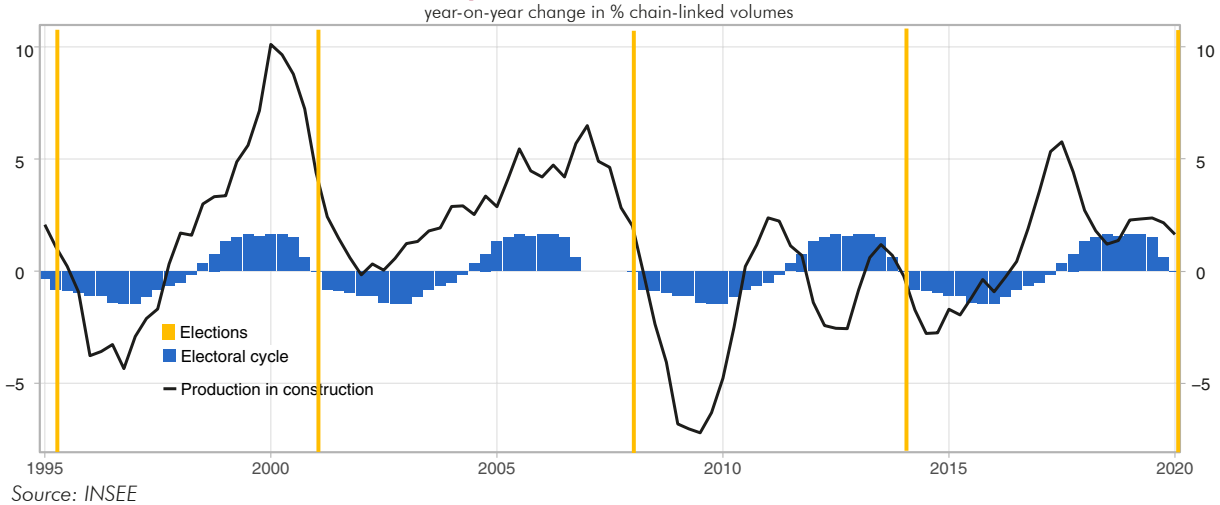
	Q–2	Q–1	Voting quarter Q	Q+1	Q+2
Civil engineering					
Expected workforce trend	16	10	5	–1	–2
Expected activity	13	5	–2	–9	–13
of which public customers	14	7	–3	–12	–16
of which private customers	10	4	0	–4	–7
Opinions on order books	29	22	13	1	–4
of which public customers	30	21	9	–4	–9
of which private customers	24	17	11	6	3
Building industry					
Expected workforce trend in the construction industry	8	5	2	–1	1
Expected activity in the building construction industry (month 2)	7	3	0	–3	–2
Expected activity in the building construction industry (month 1)	8	3	1	–3	–2
of which public customers (month 1)	6	3	1	–2	–1
of which private customers (month 1)	7	2	–1	–6	–3
Opinions on order books	13	9	5	2	5

How to read it: In the quarter of the election, the balance of opinion on expected activity in the building industry is 3 points (or 1 point) higher than usual for the survey in the second (or first) month of the quarter under consideration. In the previous quarter, it was 7 points (or 3 points) higher.

Source: INSEE, business surveys

11 - Estimated contributions of the electoral cycle or year-on-year shift of production in construction

year-on-year change in % chain-linked volumes



Source: INSEE

In the year preceding municipal elections, growth in output in the construction sector appears to receive a boost

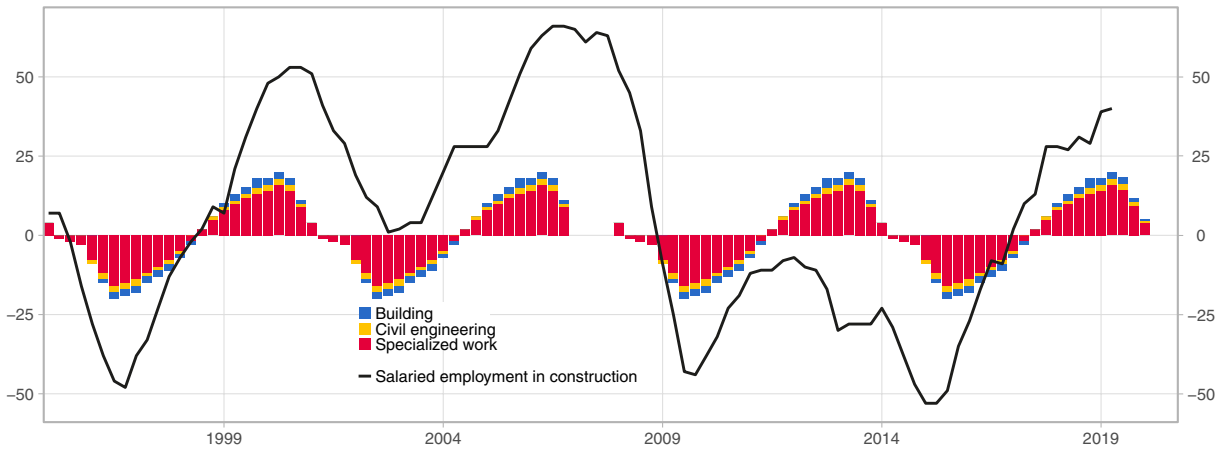
As a result of this sensitivity of business leaders' responses to the electoral calendar, the effect of the municipal electoral cycle on construction output can be estimated. On average, between one year and one and a half years before the election, the electoral cycle contributes up to 2 percentage points to year-on-year output in the construction sector (*Figure 11*). As the elections draw nearer, this contribution gradually decreases, and becomes negative one quarter after the election date. A year and a half afterwards, the electoral cycle reduces the year-on-year output in the construction sector by about 1.5 points on average. At first glance, these estimates represent a lowering of the effect on total output, since the electoral cycle can also affect other branches of the economy.

On average, as many as 20,000 jobs would appear to be created in construction in the year leading up to municipal elections

From these estimates it is also possible to estimate the contribution of the electoral cycle to year-on-year payroll employment in the three sub-branches of the construction sector: building construction, civil engineering and specialised construction. On average, the effect of the electoral cycle is at its maximum three quarters before the election date: payroll employment in construction appears to gain around 20,000 additional jobs over a year (*Figure 12*). The effect of the electoral cycle on employment in the specialised construction branch, which in 2018 represented almost 80% of total payroll employment in construction, appears to make the largest contribution to this movement (+16,000 jobs). Following this, with equal shares, are employment in civil engineering and in building construction (+2,000 jobs in each branch). In the quarter of the election, the effect of the electoral cycle on year-on-

12 - Estimated contributions of the electoral cycle to the year-on-year change of salaried employment in the construction branches

year-on-year change in % chain-linked volumes



Source: INSEE

year payroll employment in construction appears to be neutral. After this, the electoral cycle is likely to hamper employment during the quarters that come after the election.

The estimate proposed here is probably only a lower bound of the potential effects of the electoral cycle on employment. First of all, as in the case of output, it is likely that it contributed to job creation in other branches. In addition, self-employment, which is not measured here, may also be affected by the municipal cycle.

The effects of the March elections are likely to fade gradually over 2020

The 2020 municipal elections will take place on 15 and 22 March. According to the models used here, investment by APULs would appear to have grown twice as quickly in 2019 compared to a period without elections. On average in 2019, sustained by this demand, the annual pace of output in the construction sector appears to have increased by 2.3% of which 1.4 points could probably be attributed to the electoral cycle, or 0.1 points of the average annual pace of growth in total production of the French economy. However, over the forecasting period, i.e. to mid-2020, the contribution of the electoral cycle is likely to become gradually neutral. At the start of 2020, output in the construction sector looks set to slow and will probably be +1.2% year-on-year in Q2, with the municipal cycle no longer contributing to growth in this aggregate. Finally, on average, payroll employment in construction should increase by 31,000 jobs at the annual pace of 2019 of which 17,000 will probably be attributable to the upcoming elections. In Q1 2020, there are likely to be an extra 5,000 net job creations in construction compared with the same quarter in the previous year, as a result of the electoral cycle. However, this effect is unlikely to last into Q2 2020. ■

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Annexe 1: modelling local government investment

An error correction model was used to describe changes in APUL investment in value. In the long term, the GDP share of the GFCF of APULs was considered as stable, hence the presence of a unit coefficient of GDP in the long-term equation. This stability was challenged in the 2010s, with the result that a dummy is now included. This break could be explained by, among other things, a decrease in operating allowances (National Audit Office, 2015 and 2017). In the short term, changes explained by cyclical factors are measured through variations in GDP, while the effects of the electoral cycle are identified by the Buys-Ballot method: six dummies are included, one for each year separating two election dates. The sum of the dummies equals 1 at each date.

The delaying of the 2007 municipal elections until 2008 resulted in a break in the periodicity of the electoral cycle. To avoid disrupting the estimate, the model was estimated in two stages.

First, the following long-term equation was estimated over the period 1960-2017:

$$\ln\left(APUL_t\,GFCF\right) = -3{,}8_{(-6{,}0)} + \ln\left(GDP_t\right) - 0{,}1_{(-3{,}1)}\,dummy\left(t \geq 2014\right) + \hat{\lambda}_t$$

where $\hat{\lambda}_t$ is the estimated residual.

Second, in the short term, observations for 2007 were withdrawn from the series used. The estimated equation is as follows:

$$\begin{aligned}\Delta\ln\left(APUL_t\,GFCF\right) = {} & -0{,}3_{(-3{,}8)}\,\hat{\lambda}_{t-1} + 1{,}0_{(7{,}4)}\,\Delta\ln\left(GDP_t\right) \\ & - 0{,}03_{(-1{,}5)}\,election_t - 0{,}04_{(-2{,}2)}\,elections_{t-1} + 0{,}01_{(0{,}4)}\,elections_{t-2} \\ & + 0{,}01_{(0{,}5)}\,elections_{t-3} + 0{,}03_{(1{,}8)}\,elections_{t-4} + 0{,}04_{(2{,}1)}\,elections_{t-5} + \epsilon_t\end{aligned}$$

$R^2 = 0.73$. Student statistics are given in brackets.

In the absence of a constant, a Buys-Ballot type of model can be estimated where the sum of the coefficients associated with the dummies is zero, reflecting the idea of a periodical cycle (Gourieroux and Monfort, 1995). The estimate from the model reflects a significant restoring force equal to –0.3. In other words, any deviation in the APULs' GFCF from its trend change is largely absorbed after three years. In the year before a municipal election, the annual change in value of the GFCF of the APULs is 4 percentage points higher than in other years, all other things being equal (coefficient associated with the term $elections_{t-5}$).

Lastly, the investment behaviour of APULs as a result of the electoral cycle may change over time. In particular, the scale of the effect of the elections may vary. In order to take this into account, the coefficients $t \to \beta_i + \gamma_i t$ associated with the election dummies i are transformed into linear functions of time: thus making it possible to measure the deformation of the effects of the electoral cycle over time. According to this model, the electoral cycle does not seem to affect APUL investment any more today than in the past. ■

Annexe 2: using business tendency surveys to estimate the effects of the electoral cycle

Presentation of data

Two surveys were used to estimate the effect of the electoral cycle on output and payroll employment in the construction sector: the quarterly business tendency survey of civil engineering (French national federation of public works - FNTP and INSEE) and the monthly business tendency survey of the building industry (INSEE). Around 1,800 businesses representing the civil engineering branch in the first survey and 2,500 in the second, were surveyed every month or quarter on their expected activity in the future, the expected trend of their workforce size, etc. For the monthly survey of the building industry, only the second month of each quarter was retained.

Estimate of the effect of the electoral cycle on employment and output in construction

To quantify the effect of the municipal elections on employment and output, a two-step approach was used.

Step one: the effect of the electoral cycle on the balance of opinion relating to expected activity and the trend forecast for workforce size in the building industry and in civil engineering was estimated using the Buys-Ballot method (see *Annexe 1* for a description of the method). To isolate the effect of the electoral cycle, the business climate of the French economy was incorporated into the linear regression in order not to disrupt the estimate of the cycle by variations in activity. Thus, for a balance of opinion, the following equation was estimated:

$$s_t = \beta t + \Gamma' E_t + \lambda\, climate_t + \epsilon_t$$

where t is a linear trend, $climate_t$ is the second month of the business climate and E_t is a vector with 24 dummies, one for each quarter of an electoral cycle. These models were estimated between 1995 and 2018. The estimated coefficients were all significant and the R^2 varied between 60 and 85%.

Step two: a calibration relationship was estimated between output or employment and the chosen balances of opinion. The selected estimates were as follows:

$$production\ construction_t = 2{,}2_{(11,5)} + 0{,}05_{(2,8)} ActivityTP_t + 0{,}12_{(6,2)} ActivityBuilding_t$$

R^2=80%, *période d'estimation : 1995–2018*

where production construction$_t$ is year-on-year output in construction at a chained volume, $ActivityTP_t$ is the balance of opinion on expected activity in civil engineering and $ActivityBuilding_t$ the balance of opinion on expected activity in the building industry.

$$Build\ jobs_t = 3{,}4_{(7,8)} + 0{,}3_{(10,5)} PayrollBuild_t$$

R^2=55%, *estimation period: 1995–2018*

$$Civil\ engineering\ jobs_t = 1{,}3_{(7,7)} + 0{,}1_{(16,9)} StaffTP_t$$

R^2=76%, *estimation period: 1995–2018*

$$specialized\ works\ jobs_t = 8{,}2_{(6,2)} + 0{,}9_{(17,9)} StaffTP_t$$

R^2=78%, *estimation period: 1995–2018.*

where emploi x_t is the annual increase in payroll employment in branch x in quarter t in thousands of jobs, and staff x_t is the expected trend in workforce size in civil engineering ("TP") or building ("Bat"). The contribution of the electoral cycle to employment and output can now be measured by the indirect effect of the electoral cycle on the balance of opinion. Lastly, contributions are smoothed with a moving centered average of order 3, weighting the central quarter more heavily (50% weighting) than the previous and following quarters (both 25% weighting). For example, 8 percentage points of the balance of opinion on the expected trend in workforce size in the building industry can be explained by the electoral cycle, on average, the year before a municipal election (step one). The effect on employment in the building industry is obtained by multiplying this 8-point average by the coefficient associated with the corresponding balance of opinion in step two (0.3), with the result that about two thousand additional jobs appear to result from the electoral cycle in the year before the election.

When using balances of opinion from the surveys, a two-step approach may be preferable to an approach where the electoral cycle is estimated on employment and output directly.

When predicting employment in the construction sector, a model of labour productivity in construction is required, which is beyond the scope of this analysis. Concerning output, modelling it with a macroeconomic model is difficult. In addition, when using a macroeconomic model, the effect of the electoral cycle on the model's explanatory variables needs to be isolated beforehand: for example, to model employment, the effect of the electoral cycle must first have been eliminated from activity in the construction sector. ■

French Developments

Review of the previous forecast

In Q3 2019, activity grew by +0.3%, as forecast in the October 2019 issue of Point de Conjoncture in France. Activity was driven by domestic demand excluding inventories (contribution of +0.6 points against +0.4 forecast) but was held back by the deterioration in foreign trade (–0.2 points against 0.0 forecast).

Imports were more dynamic than forecast

Manufacturing output fell back once again in Q3 2019 (–0.6%) due mainly to the closing of a refinery. Agricultural output declined although a slowdown had been expected; this was probably because the good wheat harvests were not enough to offset the poor grape harvest.

The introduction of the new motor vehicle testing requirements, WLTP, affected domestic demand for manufactured goods, especially via the effects of anticipation. The resulting increase in registrations of private and light vehicles led, on the one hand, to a rebound in household consumption of goods, an increase that was forecast in October's Point de Conjoncture, and on the other hand to an acceleration in investment in manufactured products by non-financial enterprises (+1.5% after +1.0%).

Exports of goods and services decreased slightly (–0.1%) but surprisingly, imports rose (+0.7% whereas stability was predicted) due to the reception of aeronautical and automobile products.

The approach of the municipal elections bolstered investment in construction

Investment in construction slowed in Q3 2019 (+0.6% after +0.9%) but nevertheless remained buoyant. For households it increased by 0.2% in Q3, the same as in Q2. It also slowed for general government, as expected, while still maintaining a fairly rapid pace (+1.5% after +2.0%) due to the approach of the municipal elections in March 2020. Local election dates form part of an electoral cycle where public investment increases in the preceding quarters (see *Special Analysis*).

Household consumption of market services increased at the same pace as in the previous quarter, as forecast, after an exceptional month of June in the hotel industry, probably linked with the FIFA Women's World Cup being held in France. Household investment in services excluding construction maintained a steady pace, with the volume of property transactions continuing to

1 - Gross domestic product and its main components in the expenditure approach

Percentage changes from previous period in %

	Planned in *the Point* of October 2019	Estimated	Difference
Gross domestic product	**0.3**	**0.3**	**0.0**
Imports	0.1	0.7	0.6
Household consumption expenditure	0.3	0.4	0.1
General government consumption expenditure*	0.3	0.5	0.2
Gross fixed capital formation	0.6	1.2	0.6
of which: Non financial enterprises	*0.5*	*1.4*	*0.9*
Households	*0.4*	*0.7*	*0.3*
General government	*0.9*	*1.0*	*0.1*
Exports	0.1	–0.1	–0.1
Contributions (in percentage points)			
Domestic demand excluding changes in invetories**	0.4	0.6	0.2
Changes in inventories**	–0.1	–0.1	0.0
Net foreign trade	0.0	–0.2	–0.2
Unemployment rate as defined by the ILO (including the French overseas departments)	**8.4**	**8.6**	**0.2**
Consumer Price Index	**0.9**	**0.9**	**0.0**

* General government and non-profit institutions serving households
** Changes in inventories include acquisitions net of sales of valuable
Source: INSEE

increase at a healthy pace, probably driven by advantageous financing conditions.

Domestic demand brought growth; the unemployment rate did not decline in Q3

All in all, household consumption expenditure picked up somewhat (+0.4% in Q3 2019, a little more than expected). This domestic demand excluding inventories supported growth in activity, but was held back by the deterioration in trade in goods. In fact, foreign trade held growth in activity back by 0.2 points, whereas a zero contribution had been forecast. All in all, GDP increased by +0.3%, as forecast (*Table*).

These strong imports of manufactured goods offset the decline in manufacturing output. Partly as a result of a refinery closure, companies also increased their destocking of energy, water, and waste. All in all, changes in inventories contributed to a slowing of GDP growth by 0.1 points, as anticipated.

Non-farm market payroll employment increased almost as expected (+33,000 net job creations against +37,000 anticipated). Nevertheless, the ILO unemployment rate increased slightly in Q3 (+0.1 points to 8.6%) despite a 0.1 points decrease being forecast.

Meanwhile, year-on-year inflation increased to 0.9% in September 2019, as expected. ■

Output

Total output of goods and services slowed slightly in Q3 2019 (+0.3% after +0.4% during the two previous quarters), mainly due to a deceleration in market services excluding trade. Since the spring, the business climate in France has remained quite significantly above its long-term average.
Over the forecasting period, total output is expected to keep growing at between 0.2 and 0.3% per quarter. In Q4 2019, manufacturing activity is expected to remain stable after falling for two quarters. In H1 2020, total output should be driven by market services excluding trade. In construction, the end of the municipal electoral cycle is likely to lead to a slight slowdown in production. On average in 2019, the output of goods and services is expected to grow by 1.7%, after +2.0% in 2018. By mid-2020, its annual growth overhang should be +0.9%.

Output of goods and services is set to grow moderately through to mid-2020

In Q3 2019, the output of goods and services slowed down somewhat (+0.3%, after +0.4% in Q1 and Q2; *Table*).

Since April, the business climate has remained at around 105 – well above its long-term average (*Graph 1*) – as has the business climate in services. The business climate in industry, after improving slightly in August, has deteriorated and only just reached its long-term average in November. However, the climate in the construction sector remains at at very high level – above 110.

In this context, the total output of goods and services is expected to keep growing in Q4 2019 (+0.3%). After two quarters of decline, the

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

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

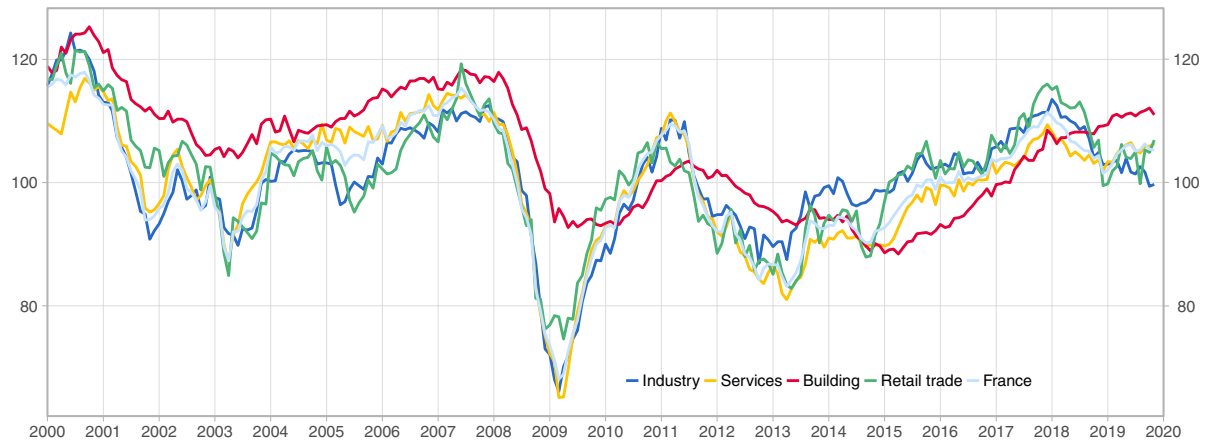
	Quarterly changes										Annual changes		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agriculture (2%)	–0.1	–0.2	–0.3	–0.4	–0.4	–0.1	–0.3	0.1	0.0	0.0	1.1	–1.1	–0.1
Manufacturing industry (19%)	–1.5	0.0	0.7	0.2	0.4	–0.5	–0.6	0.0	–0.2	0.0	0.6	0.2	–0.6
Energy, water, waste (4%)	2.2	–3.7	0.9	0.4	0.0	1.3	–0.4	–0.4	0.3	0.2	0.4	0.4	0.2
Construction (7%)	–0.2	0.5	0.5	0.6	0.7	0.5	0.5	0.3	0.2	0.1	1.8	2.2	0.9
Trade (11%)	0.2	0.6	0.1	0.5	0.3	0.2	0.5	0.4	0.0	0.3	2.4	1.5	0.8
Market services excuding trade (43%)	0.7	0.5	0.8	0.8	0.5	0.8	0.7	0.5	0.4	0.5	3.2	2.7	1.7
Non-market services (14%)	0.0	0.2	0.1	0.5	0.3	0.4	0.4	0.3	0.2	0.2	0.8	1.3	0.9
Total (100 %)	**0.1**	**0.2**	**0.6**	**0.6**	**0.4**	**0.4**	**0.3**	**0.3**	**0.2**	**0.3**	**2.0**	**1.7**	**0.9**

Forecast

Source: INSEE

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

normalized to 100 with standard error of 10



Source: INSEE

stability of manufacturing output should indeed offset the slowdown in services and construction. In H1 2020, output is likely to maintain moderate growth (+0.2% in Q1, then +0.3% in Q2). The mid-year growth overhang for output in 2020 should be +0.9%.

Manufacturing output is expected to stabilise through to mid-2020

In Q3 2019, manufacturing output fell again (–0.6% after –0.5% in Q2), due to the contraction of activity in capital goods (–2.4% after +0.4%) and a further decline in the manufacture of coke and refined petroleum products (–3.6% after –6.3%), with refineries being shut down for maintenance. The drop in transport equipment output continued at a more moderate pace (–0.4% after –1.3%), despite a more pronounced drop in automotive activity (–5.5% after –2.3%).

Since August, the business climate in industry has deteriorated significantly (*Graph 1*), mainly due to the sharp decline in the climate for the agri-food sector (*Graph 2*). In November, the business climate improved marginally in capital goods and in the "other industries" sub-sector, and remained virtually stable in transport equipment. Manufacturing output is therefore expected to come to a standstill in Q4 (+0.0%).

Activity in capital goods should bounce back (+0.5% after –2.4%) and make a positive contribution to manufacturing output in Q4 2019. Output in transport equipment looks set to keep falling slightly (–0.3% after –0.4%). Activity is expected to deteriorate again in the manufacture of coke and refined petroleum products (–5.0%) due to the closure of the main French refinery in October.

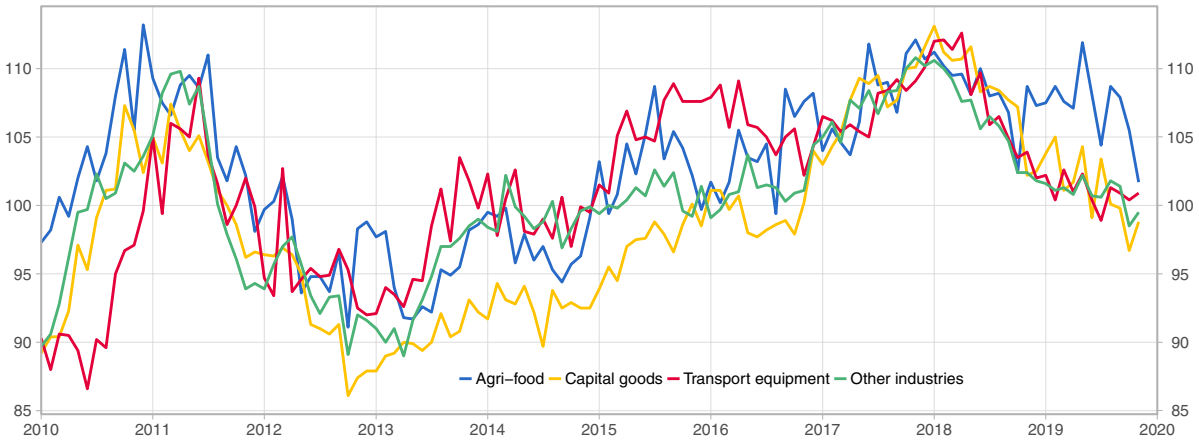
On an annual average basis, manufacturing output should slow to +0.2% in 2019, after +0.6% in 2018. In Q1 2020, activity is expected to decline again (–0.2%), before stabilising in Q2, driven by a slight upturn in exports. The growth overhang for 2020 is likely to be negative (–0.6%) at the end of H1.

Agricultural output looks set to remain virtually stable through to mid-2020

In Q3 2019, agricultural output fell (–0.3%). Cereal harvests were fairly favourable, but did not fully compensate for the poor grape crops. Assuming that weather conditions are normal, agricultural output is expected to stabilise through to mid-2020. Its annual growth overhang should then be –0.1%, after –1.1% for 2019 as a whole.

2 - Sub-sector business climates in industry

normalized to 100 with standard error of 10



Source: INSEE

Energy output should bounce back slightly through to mid-2020

In Q3 2019, energy output edged down (–0.4%) in reaction to the increase in the spring (+1.3%). Assuming that temperatures are seasonal in December, it is expected to decline at the same rate in Q4 2019 (–0.4%) and to rebound slightly in H1 (between +0.2 and +0.3% per quarter), in line with household energy consumption. On average throughout 2019, energy output is likely to increase marginally (+0.4%). By mid-2020, its annual growth overhang is expected to be +0.2%.

Activity is likely to slow down in construction

In Q3 2019, output in the construction sector continued to rise (+0.5%), after a dynamic H1 (+0.7% in Q1 and +0.5% in Q2). It was driven mainly by vigorous public works activity, especially in civil engineering. In the construction industry, the number of building permits for individual dwellings continued to rise in Q3 2019 (+5.5%), whereas those for collective housing fell sharply (–6.2%).

The business climate in the construction industry has remained at a very high level – above 110 – since February 2019. However, in November, the increase in activity expected by business leaders fell back sharply (*Graph 3*). In public works, the quarterly balances of opinion of these business leaders, based on their expected activity and views on their order books, have deteriorated since last July.

In this context, output in the construction sector should slow down in Q4 2019, to +0.3% and then to +0.2% in Q1 2020, before slowing again in Q2 (+0.1%): in particular, activity in public works is expected to slow down, in line with the end of the municipal election cycle (see *Special Analysis entitled «The municipal election cycle: what are the impacts on public investment, employment and output?"*).

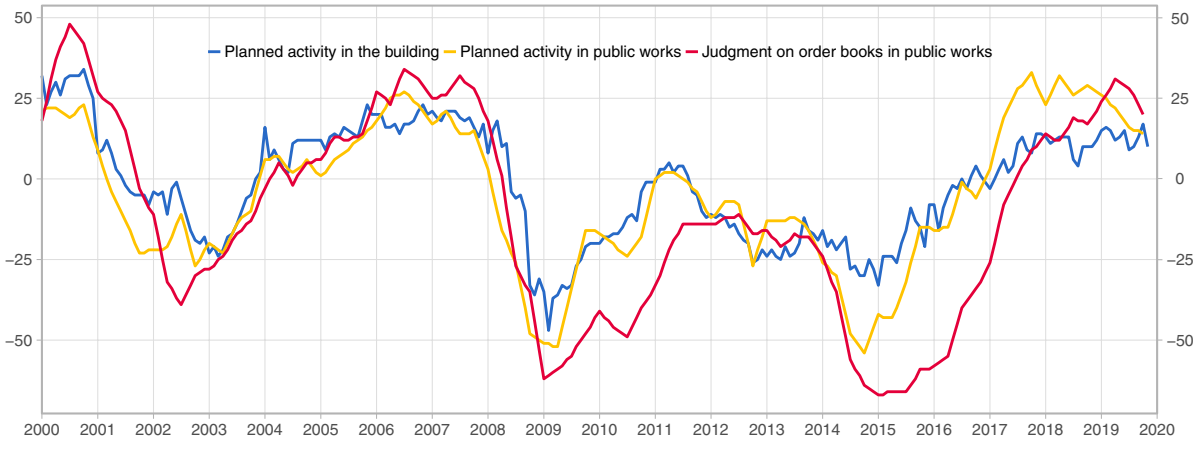
On average over 2019, activity in construction is expected to have risen by +2.2% after +1.8% in 2018. In 2020, the mid-year growth overhang for the year should be 0.9%.

Trade activity should grow moderately through to mid-2020.

In Q3 2019, trade activity ramped up (+0.5%) after moderate growth in Q2 (+0.2%). It is likely to slow in Q4 2019 (+0.4%) and again in Q1 2020 (0.0%), in line with the slowdown in household consumption, before picking up a little momentum in Q2 (+0.3%).

3 - Expected activity in construction, judgment on order books in civil engineering

balances in %



Source: INSEE

Market services excluding trade: slight slowdown in H1 2020

In Q3 2019, the activity of market services excluding trade slowed slightly compared with the second quarter, but remained robust (+0.7% after +0.8%). In greater detail, activity stalled in the transport sector (0.0% after +1.3%) but remained robust in services to businesses (+0.6% after +0.6%). It also decelerated marginally in real estate activities (+0.4% after +0.5%), after real estate sales set a record over 12 months in the spring. Activity remained virtually stable in accommodation and food services (+0.1% after +0.7%): the summer season, in particular, was less favourable for hotel occupancy, which had been very dynamic in spring 2019. Activity was very vigorous in information-communication (+2.0% after +1.0%) and in financial activities (+1.1% after +1.2%). Activity grew at the same pace in other service activities (+0.4%).

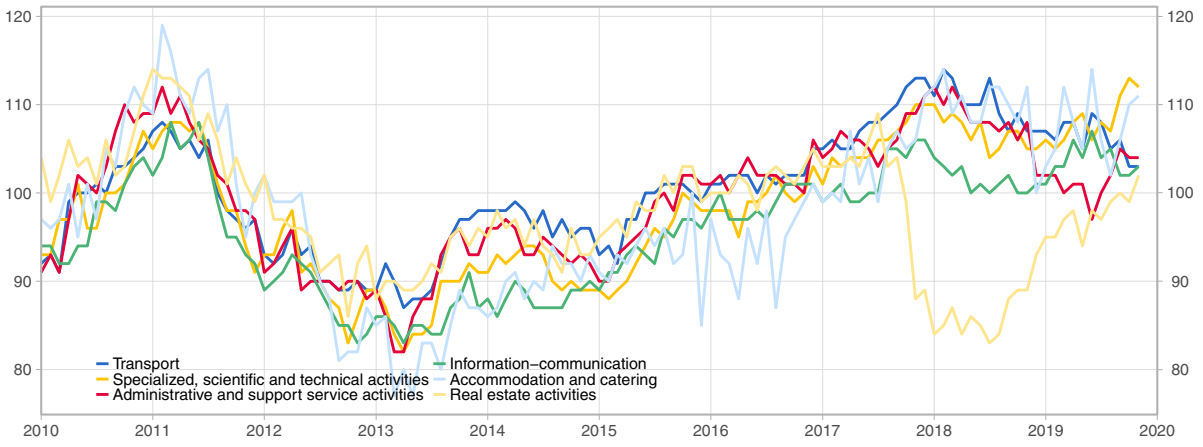
The business climate is above its long-term average in each service sub-sector (*Graph 4*). In November, it rose sharply in real estate activities, where it reached its highest level. It has increased slightly in accommodation and food services and also in information-communication. The business climate is weakening slightly but remains highly favourable in specialised scientific and technical activities. It is stable in goods transported by road and in administrative and support services.

In Q4 2019, growth in market services excluding trade is likely to remain brisk (+0.5%). The same should apply in H1 2020 (+0.4% to +0.5% per quarter).

Over 2019 as a whole, the output of market services excluding trade is expected to have been dynamic, although somewhat down on 2018: +2.7% after +3.2%. The mid-year growth overhang for 2020 should stand at +1.7%. ■

4 - Sub-sector business climates in services

normalized to 100 with stadard error of 10



Source: INSEE

Foreign trade

In Q1 2019, world trade bounced back (+0.3% after –0.2%) in the wake of vigorous imports by the advanced countries, whose dynamism can probably be explained in part by the relative easing of prevailing uncertainty (prospect of a Brexit agreement, pause in the US-China trade war). World trade should maintain a fairly strong pace through to mid-2020, in line with a gradual upturn in the climate of confidence.
At the same time, world demand for French goods bounced back, after a depressed Q2 (+0.5% after –0.7%). Despite benefitting from an international context that was promising once again, French exports continued their downturn in Q3 (–0.1% after –0.2%), especially in manufactured products. In Q4, exports should increase more strongly (+1.0%) as a result of sales in the aeronautical and naval sector. In H1 2020, they are likely to slow, despite the delivery of a major new naval contract, before recovering, driven mainly by world demand.
Imports bounced back in Q3 (+0.7% after –0.3%), mainly due to a strong acceleration in manufacturing output. They should pick up slightly in Q4 2019 (+0.9%) then increase again more quickly than domestic demand in H1 2020 (around +0.7% per quarter).
The contribution of foreign trade to GDP growth is expected to be neutral in Q4 (after –0.2 points), but will probably be negative again in H1 2020 (–0.1 points on average per quarter).

World trade should gather pace until mid-2020

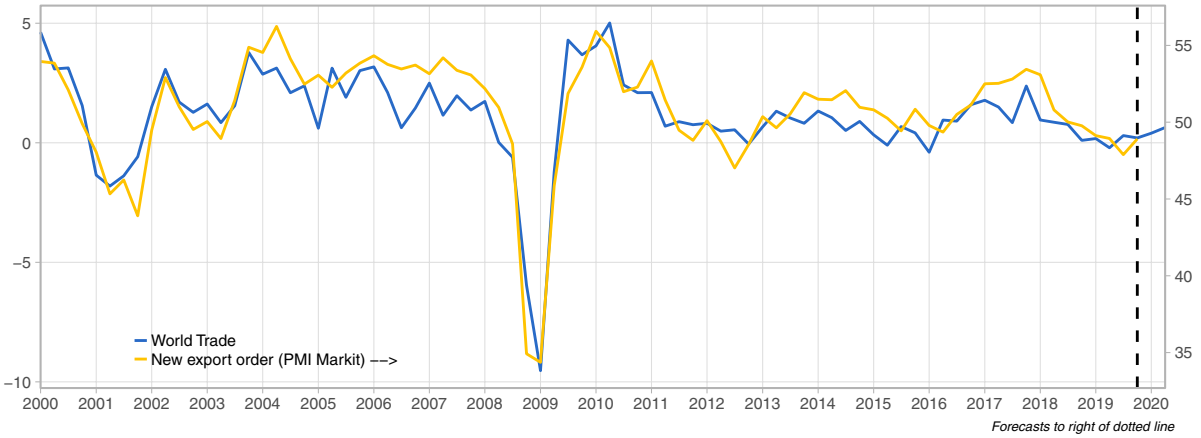
World trade bounced back in Q3 (+0.3% after –0.2%, *Graph 1*), after an H1 affected by jolts linked mainly with the anticipation of Brexit and US-China trade tensions. British imports increased slightly (+0.8% after –13.0%), contributing to the upturn in imports by the advanced countries (+0.5% after –0.7%). For the emerging economies, Chinese and Indian imports suffered from the slowdown in domestic demand, while for the other countries imports were more buoyant. In Q4 2019, world trade is likely to decelerate a little (+0.2%), before picking up slightly in spring 2020 (+0.4% then +0.6%).

On average in 2019, growth in world trade is likely to be much lower than in 2018 (+0.9% after +4.6%). However, by mid-2020, world trade should have regained some of its vigour, with an annual carry-over effect of +1.1% by mid-year.

World demand for French goods rose again in Q3 (+0.5% after –0.7%), sustained by imports by its main trading partners, especially Germany, Italy and Spain which together represent a little over one third of French exports. By mid-2020, demand for French goods should increase at virtually the same pace as world trade (+0.3% in Q4 2019 and +0.5% on average in H1

1 - World trade and new export orders

quarterly variations in %, levels in points



Source: DG Trésor, INSEE calculations, PMI Markit, INSEE forecast

2020, *Table 2*), propelled mainly by the strong performance of European demand.

At the end of 2019, aeronautical and naval deliveries should drive growth in exports

In Q3 2019, French exports dropped back once again (–0.1% after –0.2%), when manufacturing exports shrank (–0.5% after +0.1%). Despite a rebound in sales excluding the aeronautical and naval sector (+0.2% after –0.4%), mainly due to sales of refined petroleum products (+4.8% after –8.2%) and other industrial products (+1.3% after +0.4%), aeronautical and naval deliveries (–4.6% after +2.6%) hampered manufacturing exports. However, sales of non-manufactured products rebounded, driven mainly by sales of energy products (+5.0% after +4.4%) and agricultural products (+3.2% after –1.3%). Exports of services (+0.2% after –1.7%) also contributed to the rebound of French exports excluding manufacturing, although to a lesser extent.

In Q4 2019, despite the announcement by the United States of new tariffs on imports of certain European products (see Focus, *"The increase in customs duties on French exports to the United States is likely to have a limited effect in the short term"*), manufacturing exports are expected to increase strongly (+1.2%). Aeronautical and naval exports should pick up at the end of the year (+11.0%), as a result of the combined effects of the increased pace of civil aeronautical deliveries, ongoing deliveries of military hardware and the sale of an ocean liner (see *Focus, "The saga of French exports to the United States depends strongly on the aeronautical and naval sector"*). In addition, exports of agricultural products are expected to remain strong (+1.0% after +3.2%), as are exports of services (+1.0% after +0.2%). Only sales of energy products are likely to fall back (–3.0%), linked with the closing of refineries for maintenance. All in all, exports of goods and services should accelerate strongly (+1.0%).

In H1 2020, driven by buoyant demand for French goods and the slight depreciation forecast in the real effective exchange rate of the euro, exports should remain dynamic. They are expected to be at a standstill in Q1 but then benefit from the delivery of a large naval contract (+0.2%). They should then recover their vigour in Q2, in line with the increased pace of aeronautical deliveries and the good performance of other sales of manufactured products (+0.6%, *Graph 3*).

As an annual average, exports are likely to slow in 2019 (+2.1% after +3.5% in 2018), with their annual carry-over effect standing at +1.3% by mid-2020.

Imports are expected to be driven by domestic demand until mid-2020

In Q3 2019, French imports increased significantly (+0.7% after –0.3%). This is because purchases of manufactured products accelerated sharply (+1.1% after +0.2%), especially transport equipment (+3.4% after +2.8%) and capital goods (+1.0% after –0.5%). In addition, imports of agricultural products rebounded (+1.3% after –1.3%), as did imports of services (+0.6% after –1.1%).

1 - Foreign trade growth forecast

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

	Quarterly changes						Annual changes		
	2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2			
Exports									
All goods and services	0.1	–0.2	–0.1	1.0	0.2	0.6	3.5	2.1	1.3
Manufactured products (67%*)	0.3	0.1	–0.5	1.2	–0.2	0.6	3.6	3.0	0.8
Imports									
All goods and services	1.1	–0.3	0.7	0.9	0.7	0.8	1.2	2.5	2.3
Manufactured products (69%)	1.0	0.2	1.1	1.0	0.5	0.6	2.5	3.3	2.3
Contribution of foreign trade to GDP	**–0.3**	**0.0**	**–0.2**	**0.0**	**–0.2**	**–0.1**	**0.7**	**–0.2**	**–0.3**

Forecast

* Part of exports (resp. imports) of non-energy industrial goods in exports (resp. imports) in a whole in 2018.

Source: INSEE

2 - World trade and world demand for French products

	2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2			
World trade	**0.2**	**–0.2**	**0.3**	**0.2**	**0.4**	**0.6**	**4.6**	**0.9**	**1.1**
Imports of advanced economies	0.7	–0.7	0.5	0.3	0.4	0.6	3.7	1.7	1.2
Imports of emerging economies	–0.9	0.8	–0.2	0.0	0.3	0.7	6.7	–0.6	1.0
World demand for French products	**0.9**	**–0.7**	**0.5**	**0.3**	**0.4**	**0.7**	**3.9**	**1.5**	**1.2**

Forecast

Source: INSEE, DG Trésor

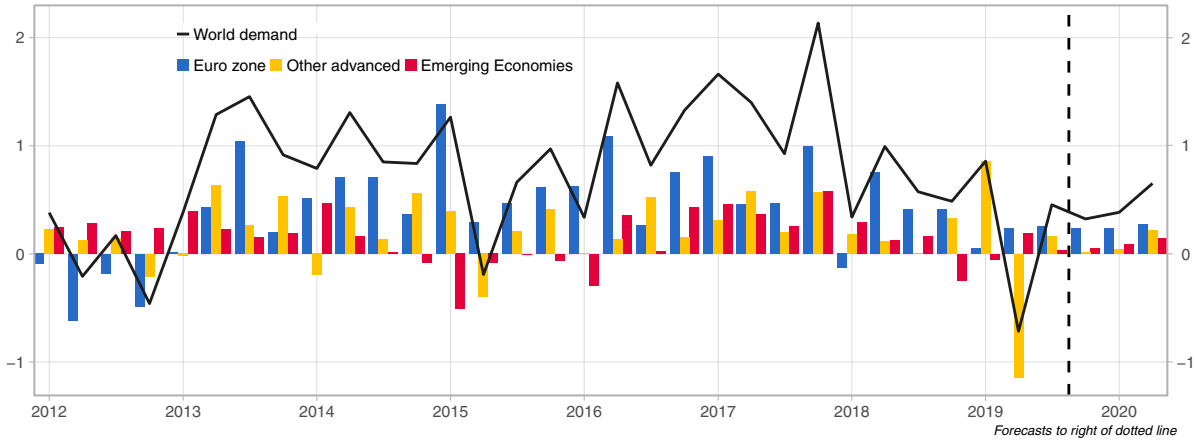
Energy sourcing continued its downturn in Q3 (–4.3% after –5.9%), linked with the closure of refineries for maintenance in September.

In Q4 2019, imports are expected to maintain a steady pace (+0.9%); they should increase at the beginning of 2020 at a pace consistent with the relative buoyancy of domestic demand (around +0.7% per quarter).

As an annual average, imports are likely to gather pace in 2019 (+2.5% after +1.2% in 2018). As a result, the contribution of foreign trade to GDP growth is once again expected to be negative in 2019 (–0.2 points after +0.7 points). By mid-2020, the contribution of foreign trade to the carry-over effect of activity is likely to be negative (–0.3 points), because of manufactured products and energy. ■

2 - Foreign demand for French goods and contributions of the main trading partners

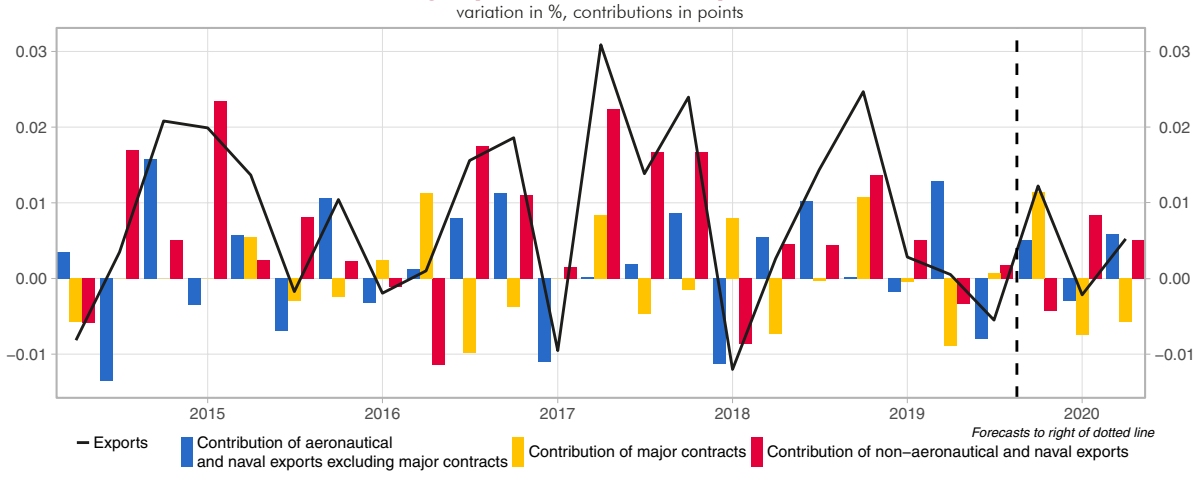
quarterly variations in %, contributions in points



Source: INSEE forecast, DG Trésor

3 - Manufacturing exports and main components contributions

variation in %, contributions in points



Source: INSEE

The quaterly chronic of French exports are heavily dependent on the aeronautical and naval sector

Deliveries in the aeronautical and naval sector are subject to pronounced calendar effects. To be more precise, since 2016 Airbus deliveries have been particularly dynamic towards the end of the year. Nevertheless, the phenomenon is still too recent to be neutralised by correcting for seasonal variations in the quarterly accounts statistics. This partly explains the peaks observed in French exports in Q4 over the past three years. Deliveries of cruise ships and military equipment have also followed a different rhythm over the past three years.

Since 2016 the aeronautical and naval sector has accounted for a tenth of total French exports of goods and services

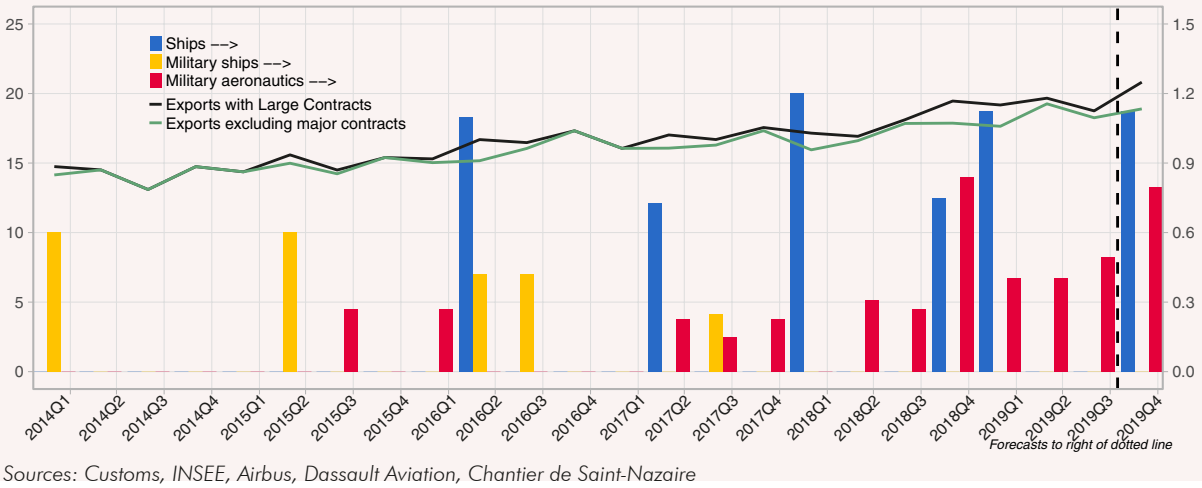
In 2018, the aeronautical and naval sector represented 15% of French manufacturing exports, and 10% of all exports of goods and services. Within these aeronautical and naval exports, a distinction is made between "major contracts," defined here as deliveries of military equipment (Rafale fighter jets) and cruise ships, and other deliveries, grouped together as "deliveries not including major contracts," composed primarily of deliveries to the civil aviation sector. While these exports cannot be predicted using the available data for world demand or real effective exchange rates, largely on account of the discretionary nature of the deliveries, they can at least be estimated with the help of sector-specific expertise: mainstream and trade media, official statements from Airbus, Dassault Aviation etc.

Exports of "major contracts" in the aeronautical and naval sector account for more than a quarter of the variability of aeronautical and naval exports in general

Deliveries of major contracts, tracked in large part via the official statements of Dassault Aviation and available information regarding the shipyards of Saint-Nazaire, have grown steadily in recent years (*Graph 1*). In fact, between 2017 and 2019, they included five cruise ships against only one of the three previous years, for respective amounts of approximatiely 4 billions and 1 billion euros. Moreover, deliveries of major contracts in the military aviation sector have also increased since 2017, with 17 Rafale jets delivered between 2017 and 2018 for a total value of around 1.4 billion Euros, and 26 more expected to be delivered in 2019.

1 - Aeronautical and naval exports

in billions of euros



Sources: Customs, INSEE, Airbus, Dassault Aviation, Chantier de Saint-Nazaire

Although the average weight of "major contracts" as a proportion of total aeronautical and naval exports is relatively low (an average of 3% since 2014), their contribution to the quarterly variability[1] of exports in this sector in the period 2014-2019 is 28%. Within the broader category of manufacturing exports, these exceptional deliveries account for just 0.5% of value but contribute 6% of total variability.

Outside of major contracts, other aeronautical and naval exports account for almost half of the variability of manufacturing exports

Excluding "major contracts," aeronautical and naval exports contributed 46% of the quarterly variability of French manufacturing exports over the period 2014-2019, despite representing on average just 14% of exports in value terms. These exports are also strongly correlated with the number of aircraft delivered by Airbus from its French factories: the correlation coefficient, calculated for the period 2014-2019, is +0.7. Analysing these deliveries is thus essential in order to understand the development of French exports.

Since 2016 Airbus has continuously increased its delivery target, hitting new records at the end of each year

The contribution of the aeronautical sector to French exports is all the more significant since delivery rates can vary significantly from one quarter to the next: they have increased considerably towards the end of each year[2] since 2016 (*Graph 2*). In all, these year-end peaks contributed +0.6 points to the average increase in French manufacturing exports observed in Q4 between 2016 and 2018.

In 2019, problems with the Boeing 737 Max could boost Airbus deliveries

Although 2019 started at full steam for both of the world's leading aeronautical manufacturers, with annual delivery targets revised upwards (an objective of 880 deliveries for Airbus, revised to 860 in October, up from 800 in 2018; Boeing expected to deliver 900 aircraft, up from 806 in 2018), two accidents in October 2018 and March 2019 saw the whole 737 Max fleet grounded until further notice.

1. Breaking down aeronautical and naval exports (CL2) into deliveries covered by major contracts (GC) and other deliveries (hGC), the contribution of both components to the variability of CL2 exports is calculated using the following:

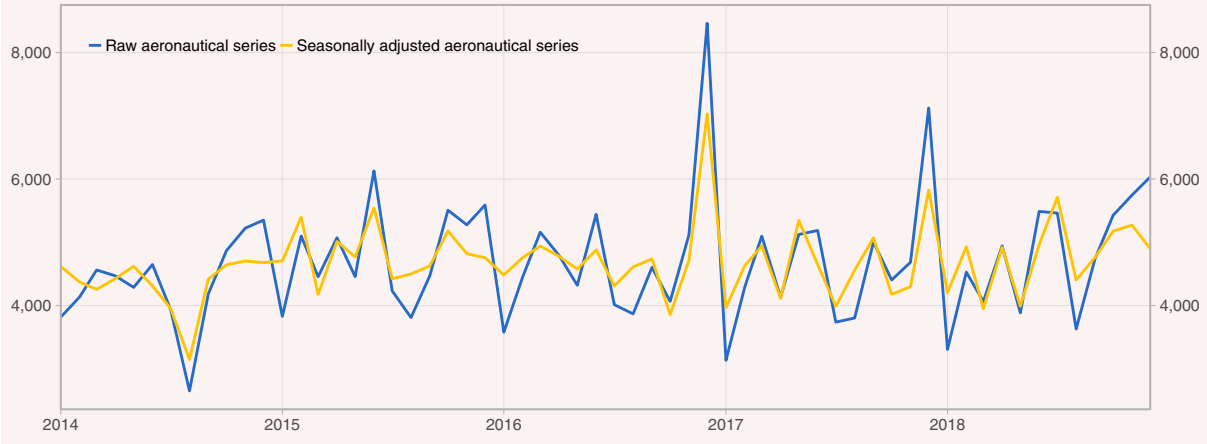
$$\left(\Delta X_{(CL2)_t}-\Delta X_{(CL2)_{t-1}}\right)^2=\left(\Delta X_{(CL2)_t}-\Delta X_{(CL2)_{t-1}}\right)*\left(\Delta X_{(GC)_t}-\Delta X_{(GC)_{t-1}}\right)+\left(\Delta X_{(CL2)_t}-\Delta X_{(CL2)_{t-1}}\right)*\left(\Delta X_{(hGC)_t}-\Delta X_{(hGC)_{t-1}}\right)$$

A similar analysis can be performed for manufacturing exports, distinguishing between sales from the aeronautical sector (which are also split between major contracts and other sales) and those from other sectors (chemicals, capital goods, food and agricultural products etc.).

2. Since 2016, the increases in deliveries recorded in Q4 have been partially corrected by seasonal adjustment. Despite three successive years of year-end delivery acceleration, the seasonal adjustment coefficients remained almost the same as before. Airbus wants to smooth further its deliveries during the year, including by increasing its production capacity, so the rise specific to the last quarter may fade in the future.

2 - Aeronautical exports: gross customs values and seasonally-adjusted data as per the national accounts

monthly data in billions of euros

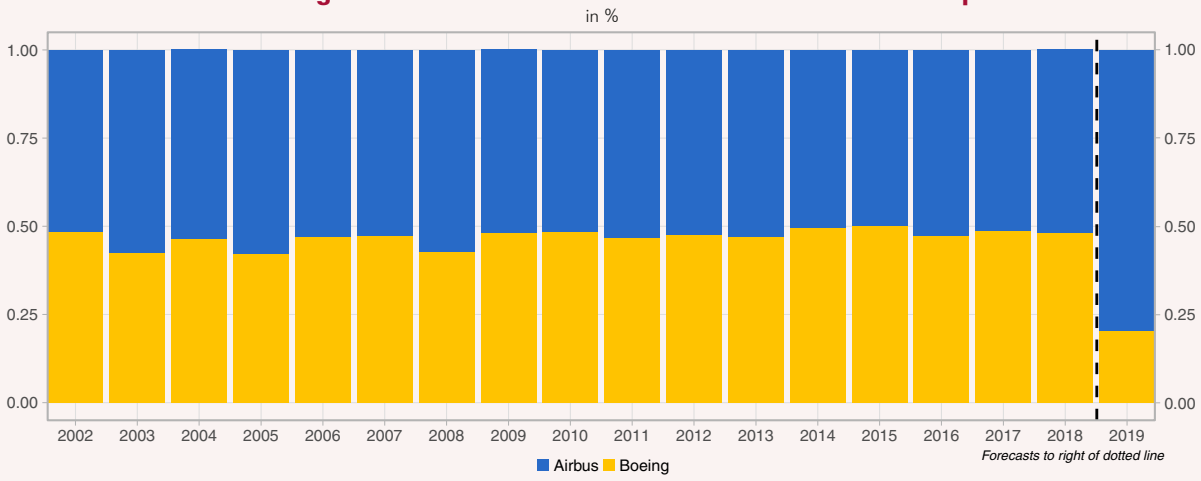


Source: Customs, INSEE

Orders and purchase agreements for single-aisle aircraft, the category to which the Boeing 737 Max and the Airbus A320 belong, were virtually identical for both manufacturers at the Le Bourget trade fair in June 2019, with each firm recording 200 orders or agreements. Nevertheless, Airbus seems better placed to hit its annual target than Boeing: the most recent data available (November 2019) indicate that the European group has delivered almost ¾ of its annual target whereas Boeing has delivered just over a third more than in October. On the assumption that the American firm continues deliveries as a constant rate, on account of its recent difficulties, while Airbus continues to stick to its annual target, then the European group should account for almost 80% of the market in single-aisle aircraft in 2019 (*Graph 3*). The 737 Max crisis and the temporary halt in deliveries of that aircraft could thus bolster orders and deliveries from Airbus, contributing to the future growth of French aeronautical exports.

In Q4 2019, manufacturing exports should pick up (+1.2% after –0.5%). Taking into account those deliveries already completed and the target set by Airbus, the increase in aeronautical exports excluding major contracts should contribute approximately +0.5 points to this increase, while the delivery of the cruise liner Grandiosa should contribute +1.1 points. All in all, the growth of exports of manufactured goods, which represent around 69% of total French exports, should contribute +0.8 points to the predicted increase (+1.0%) in total exports in Q4 2019, almost all of which can be attributed to deliveries of aircraft and major defence and naval contracts. ■

3 - Market share of single-aisle aircraft and forecast for 2019 based on completed deliveries



Hypotheses: Airbus hits its target for deliveries of single-aisle aircraft and Boeing's deliveries remain constant, leading to a total number of deliveries in 2019 far below the annual target announced by Boeing in January 2019.
How to read it: In 2018, of all deliveries of single-aisle aircraft completed by Airbus and Boeing, 52% came from the former and 48% from the latter. In 2019, 80% of deliveries of single-aisle aircraft are expected to come from Airbus, leaving just 20% for Boeing.
Source: Boeing, Airbus

The increase in customs duties on certain French exports to the United States should have a limited impact in the short term

Fewer than 1% of total French goods exports are expected to be affected by the new customs duties announced recently

In early October 2019, the World Trade Organisation (WTO) authorised the United States to increase their customs duties on European goods by 7.5 billion Dollars per annum, just under 7 billion Euros. As a result, the United States have decided to apply additional customs duties of 10% to imports of certain wide-body aircraft from France, the United Kingdom, Spain and Germany, and 25% to other European products including wine, olive oil and various types of cheese.

According to French customs data for individual products and countries, the portion of French exports affected by these new customs duties should correspond to a maximum[1] of 3.3 billion Euros for the period September 2018 – September 2019. This would be equivalent to 8% of goods exports to the United States, and 0.7% of all goods exports from France.

These measures should have a limited impact on the year-on-year growth of French exports and GDP

On the assumption that export volumes (at prices which include taxes) display unitary elasticity[2], over the next 12 months these additional customs duties should have the effect of reducing the rate of growth of total French exports by around 0.1 points, in volume terms.

Furthermore, the effect on the growth rate of French GDP could ultimately be attenuated by the decrease in French imports used as intermediate consumption in the production of goods delivered internationally. According to the AVIONIC model[3], it appears that the average import content of the goods in question – wide-body aircraft (around 60% of affected exports), wine (35%) and cheese (5%) – was approximately 38% in 2015. For products in the aeronautics and space industry alone, the import content of exports is 64%. Working on the hypothesis that the decrease in intermediate consumption of these goods will be equivalent to the decrease in exports, the effect of the additional customs duties should be such that the year-on-year growth rate of total French imports, in volume terms, should slow by just under 0.05 points.

All in all, considering the direct effects on exports and the indirect effects on imports, the introduction of these additional customs duties on French products should have a marginal effect on the annual GDP growth rate (around -0.01 percentage points).

The effects are even more marginal in the short term at the macroeconomic level

The effects should be even weaker because, in the short term, exports of the goods in question are relatively inelastic to price variations (in particular, some of Airbus' orders are already confirmed for the coming months). Finally, the price sensitivity of exports of French speciality products is relatively weak, particularly for products in the food and agriculture sector (some of which are affected by these tax measures). As for aircraft, while the price sensitivity is relatively high for exports to other developed nations (due to competition with Boeing), it is weaker for sales to the United States (Beatriz & Fontvieille, 2019). All in all, the effects estimated above could serve to amplify the impact of these additional customs duties in the short term.

The effects estimated here do not take into account recent threats of further tax increases, mooted by the Americans in early December. ■

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Beatriz M., Fontvieille M., (2019), "For a better understanding of the sensitivity of French exports to exchange rate fluctuations using detailed customs data", *Conjoncture in France*, March 2019.

Bourgeois A., Briand A. (2019), "AVIONIC (Variantial Input/Output Analysis, National Imported and Content): The Input/Output Model of National Accounts", *Document de travail de l'Insee*, n° G2019/02. ■

1. The maximum range was applied for those products for which more detailed information is not available under the customs classification model.
2. There are numerous methods for estimating the elasticity of export prices. Nevertheless, these estimates are affected by numerous sources of bias, including aggregation and heterogeneity bias. They may also be sensitive to the context of the estimation.
3. Model developed by INSEE (Bourgeois & Briand, 2019) based on symmetrical French input-output tables. It allows us to estimate the amount of imports or value added generated by components of final demand (modelling the content of final demand) and can be applied at a detailed level of the general classification (level G, 138 products).

Employment

In France, non-farm market payroll employment continued to grow in Q3 2019 (+33,000, after +43,000 in Q2) and should achieve a fairly similar pace in Q4 (+41,000). Across the whole of 2019, it is expected that 215,000 non-farm market payroll jobs will be created, after +164,000 in 2018. In H1 2020, market employment should slow (+68,000 after +74,000 in H2 2019), probably due mainly to the earlier drop in activity. In addition, the effect on employment of the transformation of the CICE into a reduction in social contributions, introduced at the beginning of 2019, is likely to lessen in 2020 (+10,000 after +30,000 in 2019).
In the non-market sector, employment should pick up slightly in 2019 (+14,000, after –4,000 jobs in 2018), with the drop in the number of beneficiaries of subsidised employment contracts being much less pronounced than in 2017 and 2018.
All in all, 263,000 jobs should be created in 2019, a slight increase over 2018 (+230,000). In H1 2020, total employment is likely to slow very slightly: +88,000 jobs after +94,000 in H2 2019.

Market payroll employment is expected to slow slightly at the end of 2019 and into H1 2020

In 2019, the increase in payroll employment in the non-farm market sectors in France (excluding Mayotte), is set to be stronger than in 2018 (+215,000 at the end of the year, year on year, after +164,000, *Table 1*). In Q1 2019, employment was particularly buoyant (+98,000). In Q3, payroll employment continued to grow steadily (+33,000 after +43,000), increasing in construction (+9,000), industry (+1,000) and the tertiary sector excluding temporary work (+26,000). However, temporary work continued to slip back (–3,000, the same as in Q2).

Based on business leaders' responses to questions in the business tendency surveys about their workforce size, the employment climate improved once again in November 2019 to a level of 108, higher than its long-term average (*Graph 1*). It is therefore likely that the rise in payroll employment in the market sector will continue into Q4 2019. However, after a dynamic H1, employment is expected to slow in H2 2019 (+74,000 after +141,000) and in H1 2020 (+68,000). This slowdown will probably be due mainly to the earlier deceleration in activity, but also to the lesser effect of policies designed to reduce the cost of labour. In particular, the transformation of the CICE tax credit into reductions in employers' contributions at the beginning of 2019 would seem to have contributed to improving growth by about 15,000 jobs per half-year in 2019 and should contribute around 5,000 jobs in H1 2020 (*Focus* in the December 2018 issue of *Conjoncture in France*, p. 64).

Tertiary employment is expected to increase further but temporary employment is likely to drop back a little

After a slight rebound in H1 2019 (+9,000), temporary employment is expected to drop back again moderately in H2 2019 (–6,000) then in H1 2020 (–10,000; *Graph 2*).

Table 1 -Change in employment
in thousands, SA at the end of the period

	2019				2020		2019		2020	2018	2019	Level end 2019
	Q1	Q2	Q3	Q4	Q1	Q2	H1	H2	H1			
Mainly non-agricultural market sectors:	**98**	**43**	**33**	**41**	**35**	**33**	**141**	**74**	**68**	**164**	**215**	**17 119**
Industry	8	1	1	2	2	3	9	3	5	12	12	3 162
Construction	18	8	9	7	3	2	25	16	5	28	41	1 429
Temporary employment	12	–3	–3	–3	–5	–5	9	–6	–10	–28	3	788
Market services excl. tempory employment	61	37	26	35	35	33	98	61	68	152	159	11 740
Agricultural workers	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**–1**	**4**	**304**
Mainly non-market service sectors	**1**	**11**	**–2**	**4**	**2**	**6**	**12**	**2**	**8**	**–4**	**14**	**8 058**
Self-employed	**8**	**8**	**8**	**8**	**5**	**5**	**15**	**15**	**10**	**71**	**30**	**2 972**
TOTAL EMPLOYMENT	**107**	**62**	**40**	**53**	**43**	**45**	**170**	**94**	**88**	**230**	**263**	**28 454**

Forecast
* Sectors DE to MN and RU
Scope: France excluding Mayotte
Source: INSEE

However, employment in the tertiary market sector excluding temporary work should increase in the same way as in 2019 (+159,000, after +152,000 in 2018). Business leaders in the sector remain optimistic about changes in their workforce, judging by the business tendency surveys. In H1 2020, employment should therefore maintain a similar pace to that of H2 2019 (+68,000, after +61,000; *Graph 3*).

All in all, employment in the tertiary market sector, including temporary employment, should increase by 162,000 in 2019 (of which +55,000 in H2 2019). The slowdown in the course of 2019 looks set to continue into H1 2020 (+58,000 jobs).

Since 2018, industry has once again been creating jobs

After a virtually uninterrupted decline in industrial employment between the end of 2001 and the end of 2016, levels have been increasing since 2018. The first three quarters of 2019 confirmed this trend. Industry would appear to have created 12,000 jobs in 2019 and also in 2018, mainly in the food industry. Expectations of business leaders concerning their workforce size suggest that jobs in industry should continue to increase over the next few quarters (+5,000 in H1 2020).

In 2019, employment in the construction sector is expected to be buoyant

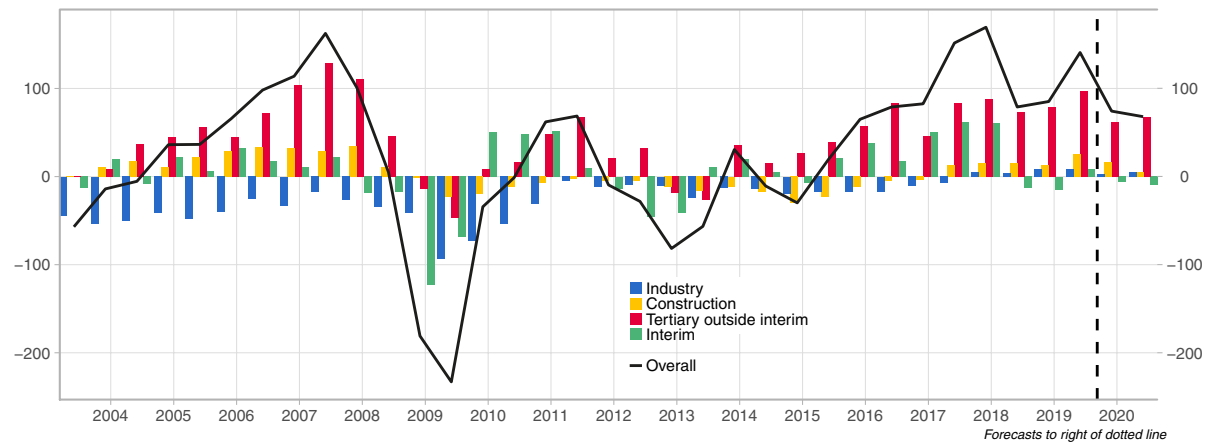
Since 2017, employment in construction has been on the rise once again, after falling continuously between 2009 and 2016. In 2019, it should be particularly dynamic (+41,000 after +28,000 in 2018 and in 2017) mainly because of the approach of the municipal elections in March 2020 (see *Special Analysis, "The cycle of municipal elections"*). Employment in the construction sector increased by 35,000 over the first three quarters of 2019; since the electoral cycle effect is at its maximum three quarters before the elections, this employment is now expected to slow slightly from Q4 2019 (+7,000) and again during Q1 and Q2 2020 (+3,000 then +2,000).

1 - Managers' balance of opinion on the expected number of employees

Source: INSEE

2 - Year-on-year change in payroll employment in the non-farm market sectors

half-yearly developments in thousands



Scope: France excluding Mayotte
Source: INSEE

Non-market employment should bounce back moderately in 2019, after being held back by the drop in subsidised contracts

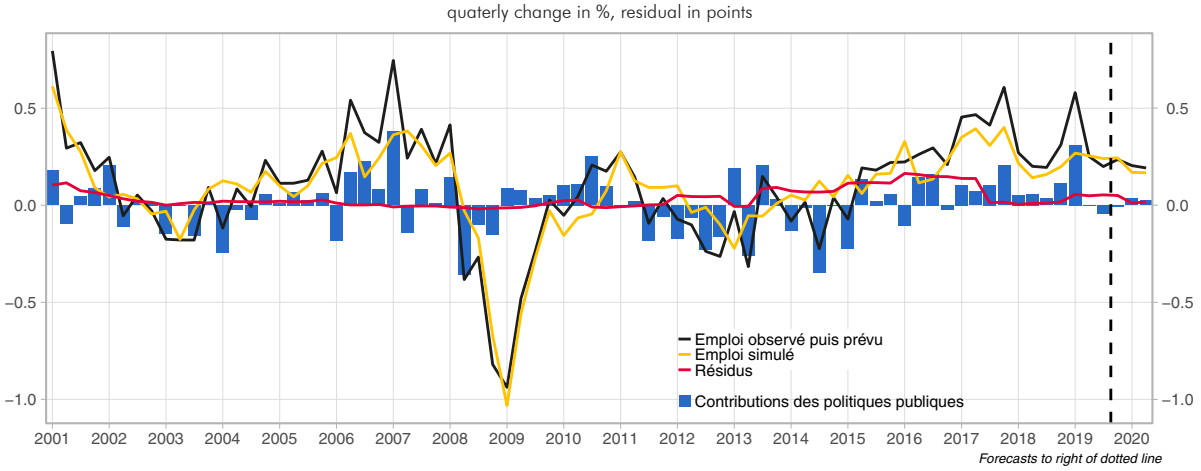
After a downturn in 2018 (–4,000), non-market employment is expected to pick up again in 2019 (+14,000). The decline in 2018 was due mainly to the reduction, starting in mid-2017, in the number of beneficiaries of "Contrats uniques d'insertion" (single integration contracts, CUI) – despite their being replaced by the "Parcours emploi compétences" system (employment skills pathway, PEC) – and "Emplois d'avenir" (future jobs contracts) (*Table 2*). However, the drop in the number of these contracts was offset to a degree by an increase in the number of employees on unsubsidised contracts (see *Focus*). The decline in the number of beneficiaries of subsidised contracts should lessen in 2019 and 2020: non-market employment is then expected to increase by 2,000 in H2 2019 (after +12,000 in H1) then by 8,000 in H1 2020.

Total employment should rise by 88,000 in H1 2020

Taking self-employed and agricultural workers into account, net job creations, in all sectors combined, should reach 263,000 in 2019, i.e. more than in 2018 (+230,000) but less than in 2017 (+343,000). However, in the course of the year, total employment is likely to shift: it should increase less quickly in H2 2019 than in H1 (+94,000 after +170,000) as a result of a particularly dynamic Q1 2019 (+107,000). In H1 2020, total employment should continue to slow (+88,000) due to the earlier slight deceleration in activity and a lesser effect on employment by the CICE reform than in 2019. ■

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

quaterly change in %, residual in points



Scope: France excluding Mayotte
Source: INSEE

2 - Change in subsidised employment and civic service in the non-marked sector

in thousands

	2019				2020		2018		2019		2020	2018	2019
	Q1	Q2	Q3	Q4	Q1	Q2	H1	H2	H1	H2	H1		
Supported non-market contracts, excluding ACI	–7	–7	–17	–10	–17	–4	–73	–26	–15	–27	–21	–99	–42
job of the future	–6	–3	–3	–3	–5	0	–16	–12	–8	–5	–5	–28	–13
Single integration contract (CUI-CAE)	–5	–1	–1	0	0	0	–106	–68	–6	–1	0	–174	–7
Competence employment parth (PEC)*	3	–4	–14	–7	–12	–4	50	54	–1	–21	–16	104	–22
Workshops and insertion sites (ACI)	0	1	–1	–1	3	0	–3	0	1	–1	3	–3	0
Civic services	0	–3	2	1	0	–3	2	5	–3	3	–3	7	0
Total	**–8**	**–8**	**–16**	**–10**	**–14**	**–7**	**–73**	**–21**	**–16**	**–26**	**–20**	**–95**	**–42**

Forecast
Note: including renewal amendments
* From January 2018, new entries into assisted non-market contracts are mainly in «Skills Employment Path» (PEC) instead of the old CUI-CAEs and jobs of the future.
** Since July 2014, hiring in workshops and integration projects (ACI) is no longer carried out in the form of CUI-CAE but as CDDI (fixed-term integration contract).
Scope: Metropolitan France
Source: INSEE

Reduction in the number of beneficiaries of subsidised contracts: what impact will it have on employment in the non-market sector?

Between mid-2017 and mid-2019, the number of beneficiaries of subsidised contracts fell sharply. This had consequences for payroll employment, particularly in the non-market sector. Nevertheless, for some employers these subsidised contract schemes are believed to have had a certain "windfall" effect: if these contracts were not available, they would have needed to recruit anyway. When the measures come to an end, these employers should thus be capable of replacing subsidised jobs with non-subsidised jobs, which should attenuate the overall impact on employment levels. This capacity varies from one sector of activity to the next, and generally speaking it appears to be stronger in the private sector than in the public sector.

The number of beneficiaries of subsidised contracts in the non-market sector fell substantially between mid-2017 and mid-2019

Subsidised contracts, based on direct or indirect subsidies, reduce the cost to employers of hiring or training certain workers. Generally speaking these jobs are aimed primarily at those groups who are furthest removed from the labour market, helping them to enter the market or to return to employment. The volume of these subsidised contracts is determined by the government. They are often used to counteract the effects of the economic cycle: an increase in the volume of subsidised contracts is generally intended to mitigate the impact of a slowdown in activity on total employment.

Subsidised contracts, not including "sandwich training contracts," are primarily concentrated in the non-market sector, with both public and private employers (*Table 1*). As for private employers, subsidised contracts are primarily concentrated in the field of social work. In the public sector, these contracts have primarily been used in the sectors of local government and education. In total, there were 132,000 beneficiaries in the non-market sector at the end of 2018, with 18,000 in the market sector. The non-market sector has access to three main types of subsidised employment contracts. Integration contracts and employment support contracts (CUI-CAE), which accounted for the majority of such subsidised contracts until 2017, have since been gradually replaced by «employment skill programmes» (PEC)[1]. Meanwhile, "future contracts" in the non-market sector (EAV-NM) were introduced in 2012, taking the form of longer-term contracts aimed at young people with few qualifications. Since 2018, it has no longer been possible to issue new contracts on these terms: contracts currently in place will be allowed to run their course, but will not be renewed.

The number of beneficiaries of subsidised contracts in the non-market sector fell sharply between mid-2017 and mid-2019 (–201,000 beneficiaries over this period, *Graph 1*). This contraction may have contributed to the downturn in total non-market employment. But the scale of this contribution depends on the choices made by employers: have they replaced, and to what extent, their former subsidised contracts with new, non-subsidised jobs?

The substitution effect mitigates the impact of subsidised contracts on total employment

The use of subsidised contracts allows employers with considerable budgetary constraints to obtain

1. See the *Focus article "Subsidised contracts in 2018"* in *Conjoncture in France* March 2019.

Table 1 - Employers using subsidised contracts in mid-2017

	Private		Public	
Sector of activity	**Number of contracts**	**Main employers**	**Number of contracts**	**Main employers**
Central government	2 500	Social security (60 %)	81 000	Municipalities (70 %)
Teaching	20 000	Associations (95 %)	73 500	Local schools (100 %)
Healthcare	3 500	Associations (50 %) Foundations (20 %)	12 500	Hospitals (100 %)
Social outreach work	47 500	Associations (80 %)	19 000	Local social and medical-social institutions (40 %) Local centres for social action (35 %)
Art and entertainment	19 000	Associations (95 %)	Fewer than 500	-
Other service activities	30 500	Associations (95 %)	Fewer than 100	-

Scope: France excluding Mayotte
Note: As of mid-2017, there were approximately 12,500 assisted contracts in progress in the health sector in the public domain and the employers of these contracts are hospital facilities.
Source: Dares, Service and Payment Agencies - INSEE calculations

extra manpower which they would not have been able to afford without this scheme. Nevertheless, if the scheme had never existed, some of the jobs in question would have been created anyway for two reasons:

• The subsidies provided for these contracts do not cover 100% of wage costs: for example, if an employer hires two employees on subsidised contracts with subsidies of 50%, if the subsidy is subsequently taken away the employer will still have the budgetary resources required to keep on one employee;

• The severity of the budgetary constraints involved differs from one employer to the next: by the time the scheme is stopped, some employers may have been able to find new resources to recruit more employees without subsidies.

In the former scenario, we use the term substitution "at constant budget." The latter phenomenon is referred to as substitution "independent of budgetary constraints." Subsidised contracts thus have a certain substitution effect. Some of the subsidised jobs would have existed without the subsidies, being funded by employers who have instead been able to take advantage of the subsidy programmes. When these programmes are being wound down, a symmetrical effect (creation or preservation of jobs without subsidies) attenuates the impact of the reduction in the number of subsidised contracts on total employment.

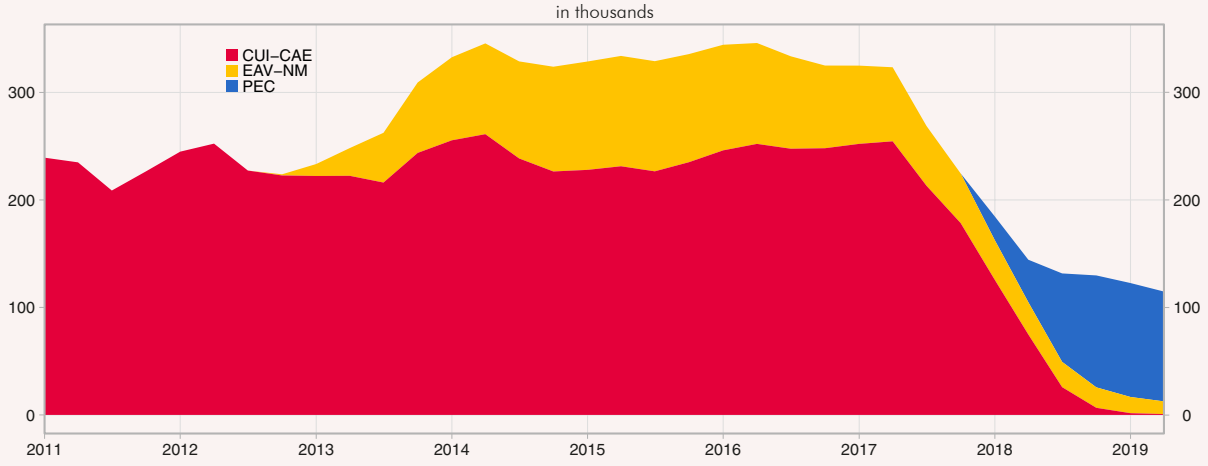
Under the 'constant budget' hypothesis, the effect of subsidised contracts on payroll employment can be estimated fairly precisely: the share of jobs which would not have existed in the absence of these subsidies thus corresponds to the rate at which these contracts are subsidised by the government[2]. This method measures the effect of subsidised contracts on employment. For example, for a CUI-CAE contract subsidised at 70%, the effect of each new subsidised contract on employment is 0.7 and the substitution effect is 0.3. However, the effect on employment and the substitution effect 'independent of budgetary constraints' are difficult to estimate. In this article, the effect of subsidised contracts on employment presented in *Graphs 2 to 10* only incorporates the first component, assuming that employers in the non-market sector are operating on "constant budgets" in the short term. In practice, the scale of the total substitution effect appears to vary depending on the components of the non-market sector, and particularly depending on whether the jobs in question are in the public or private sector.

In education and social work, private sector employment has continued to grow since 2017 in spite of the continual decline in the number of subsidised contracts

In education and social work, total private sector employment has proved to be relatively resilient to the decline in subsidised contracts since 2017. Payroll employment, excluding the effect of subsidised contracts 'at constant budget', has increased in both sectors at a rate slightly superior to the long-term trend (*Graphs 2 and 4*). In the public education sector, excluding the effect of subsidised contracts 'at constant budget', payroll employment was more dynamic in 2017 and 2018 than in 2016 (*Graph 3*). In particular, the creation of a significant number of non-subsidised jobs providing extra support for disabled pupils (AESH) has made up for the disappearance of former subsidised contracts fulfilling the same roles. In the public social work sector, however, the decline in total employment has been more closely linked with the end of subsidised contracts, with no apparent net compensation from non-subsidised employment (*Graph 5*).

2. The rate at which these contracts are subsidised is 70% for CUI-CAE signed before the end of 2016 (60% for CUI-CAE reaching their conclusion after 2016), falling to 50% for PECs. For future contracts in the non-market sector, the rate was 75% until the end of 2016, thereafter falling to 65%.

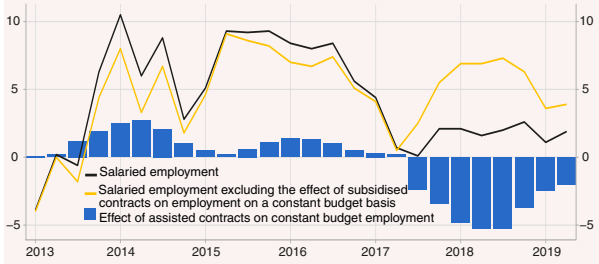
1 - Variation in the number of beneficiaries of subsidised contracts in the non-market sector



Scope: France excluding Mayotte
Source: Dares, Service and payment agencies, INSEE calculations

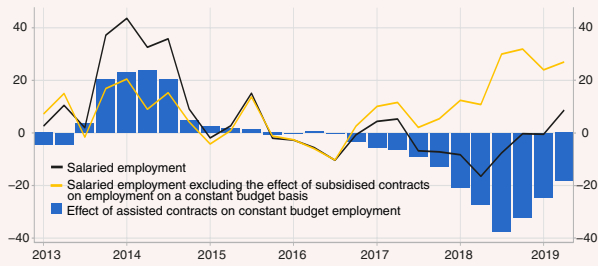
2 - Variation in private-sector employment of teachers

year-on-year change in thousands



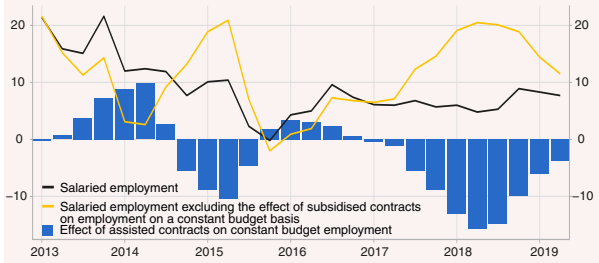
3 - Variation in public-sector employment of teachers

year-on-year change in thousands



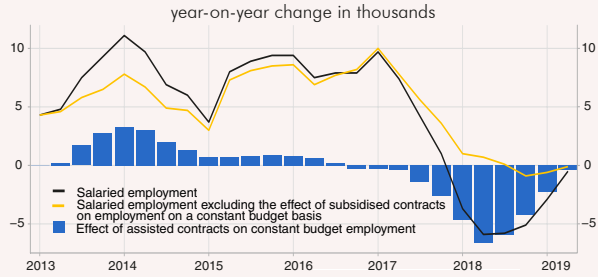
4 - Variation in employment levels in the private social work sectors

year-on-year change in thousands



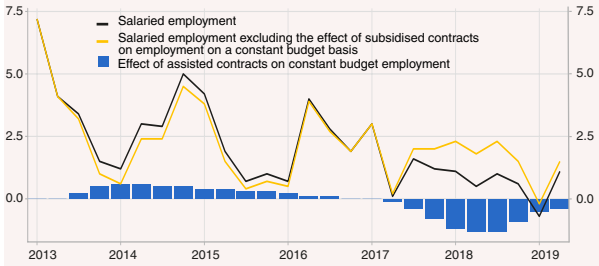
5 - Variation in employment levels in the public social work sectors

year-on-year change in thousands



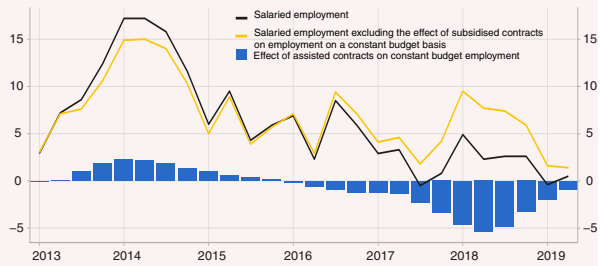
6 - Variation in private healthcare employment

year-on-year change in thousands



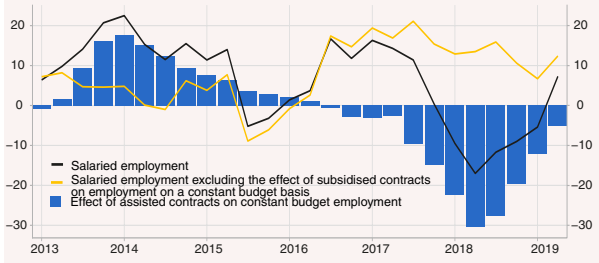
7 - Variation in public healthcare employment

year-on-year change in thousands



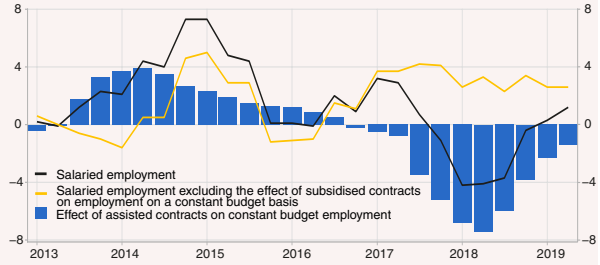
8 - Variation in public sector employment in "general government"

year-on-year change in thousands



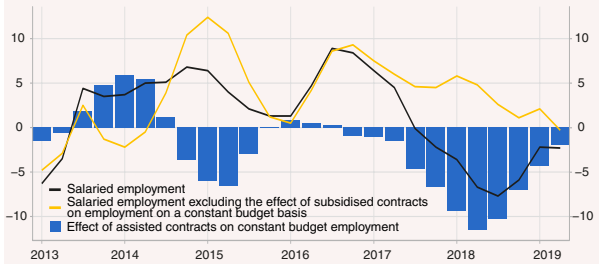
9 - Variation in private sector employment in "entertainment and the arts"

year-on-year change in thousands



10 - Variation in private sector employment in "other service activities"

year-on-year change in thousands



Scope: Metropolitan France
Reading: In the second quarter of 2019, public employment in the General Administration increased despite a decrease in the number of beneficiaries of assisted contracts, which would have a negative impact on employment, "on a constant budget". Excluding the effect of assisted contracts on "constant budget" employment, employment would increase.
Source: Dares, Agences de services et de paiement, Insee calculates

In education and social work, once the effect on employment "at constant budget" has been taken into account, the private sector appears to have compensated for the disappearance of subsidised contracts more than the public sector, via different types of contract. Budgetary constraints thus appear to be less of a problem in the private sector, meaning that the substitution effect is stronger. Moreover, each sector may also be subject to its own short-term dynamics, linked to factors not observed here.

In the healthcare sector, the effect of the disappearance of subsidised contracts has been, as a proportion of total employment, more limited than the effect observed in education and social work. Contrary to social work, in this sector there is no clear difference between the public and private sectors in terms of substitution behaviours (*Graphs 6 and 7*).

In the 'general government' sector[3], the dynamism of public sector employment appears to have been directly affected by the decline of subsidised contracts

Between H2 2017 and H1 2019, employment fell in the 'general government' sector, in year-on-year terms. This decrease appears to be directly linked to the disappearance of subsidised contracts (*Graph 8*). Put differently, without the effect of subsidised contracts the trajectory of employment has not substantially deviated from its long-term trend. As such, it appears that in this sector there is no substitution effect other than the "constant budget" effect.

Private sector employment in entertainment and the arts and "other service activities" appears to have been directly affected by the decline of subsidised contracts

In the private sector, a similar situation can be observed in entertainment and the arts, as well as the "other service activities" sector (primarily comprised of charitable associations)[4]. The dynamism of employment in these sectors appears to be more closely linked to the fate of subsidised contracts than it is in other private non-market sectors, with a smaller substitution effect (*Graphs 9 and 10*).

Overall, non-market employment appears to be more resilient in certain areas of the private sector

Between Q2 2017 and Q2 2019, the total number of beneficiaries of subsidised contracts in the non-market sector[5] fell by 201,000. Over the same period, the overall decline in salaried employment in the non-market sector was much smaller (–22,700). This difference can be largely attributed to the upwards trend of non-market employment over the period (independently of subsidised contracts), and to a lesser extent to the replacement of subsidised jobs by non-subsidised jobs. In the public sector, as well as the private entertainment and arts sector and "other service activities," budgetary constraints appear to be strong. As such, the trajectory followed by total employment in these sectors is more closely linked to the level of subsidised contracts. At the other end of the scale, in the private education and social work sectors, the presence of a substitution effect should mitigate the effect of the disappearance of subsidised contracts on total employment. ■

Bibliography

"Assisted contracts in 2018" (2019), *Dares Résultats* le 15/11/2019 ■

3. "Public administration and defence; compulsory social security" in the French classification of activities. Only contract covered by public law are counted here; they represented almost 94% of jobs in this sector in Q2 2019.
4. In the standard classification of activities, these sectors are considered as being "mainly market sectors," but they share many properties with the non-market sector, in particular a high rate of uptake for subsidised contracts.
5. Including the "entertainment and the arts" and "other service activities" sectors.

Unemployment

In Q3 2019, the ILO unemployment rate increased slightly (+0.1 points), to 8.6% of the French labour force, after dropping by 0.2 points during the previous quarter. Year on year, it fell by 0.5 points, following the downward trend that began in mid-2015.
Over the forecasting period to mid-2020, employment should continue to grow more quickly than the labour force, and unemployment is expected to keep falling steadily. Consequently, the unemployment rate is likely to stand at 8.4% at the end of the year, 0.4 points below its level one year before, thereby reaching its lowest level since early 2008.

The unemployment rate increased marginally in Q3 2019

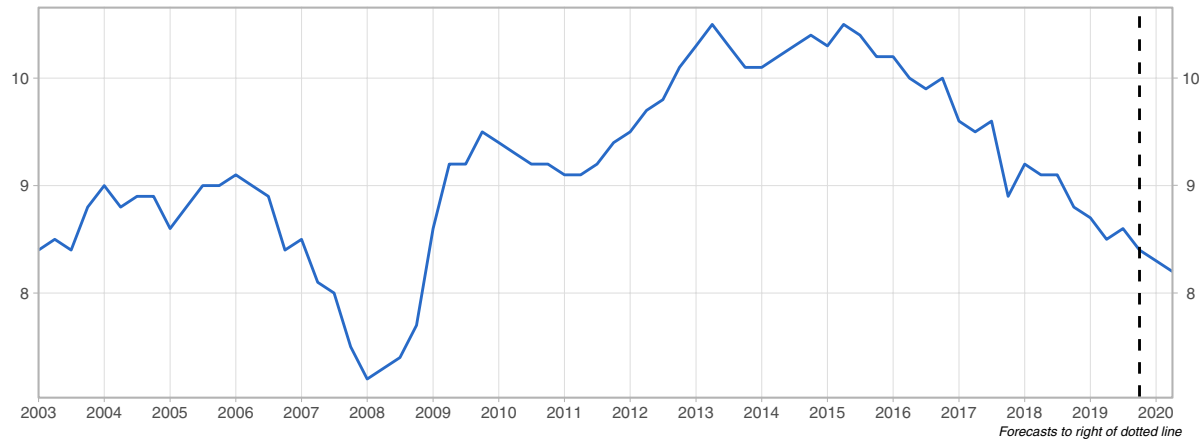
In Q3 2019, the number of unemployed barely increased (+10,000; *Table*), corresponding to an increase of 0.1 points (after rounding off), and taking the unemployment rate (*Graph*) to 8.6% in France (excluding Mayotte), after –0.2 points in the previous quarter. Year on year, the unemployment rate fell by 0.5 points (–185,000 unemployed), at a similar pace to its average decline since mid-2015 (at an annual rate of –0.4 points). It reached its lowest level since early 2009, but remains 1.6 points above its pre-crisis low point recorded in early 2008. At the same time, the halo of unemployment[1] increased slightly, both over the quarter (+27,000) and year on year (+30,000).

The unemployment rate should keep falling steadily through to mid-2020

In 2019, total employment measured as a quarterly average is expected to accelerate again (+277,000 after +238,000 in 2018, and +312,000 in 2017). In addition, the labour force trend is becoming less dynamic each year (+70,000 in 2019 after +83,000 in 2018, and +91,000 in 2017). The Skills Investment Plan (Plan d'investissement dans les compétences[2]), which is gradually being rolled out to more beneficiaries, is likely to have only a limited effect

1. The halo of unemployment is formed by people who are inactive according to the ILO definition, but who are in a situation relatively close to unemployment. It covers people who are seeking employment but are unavailable, and people who want to work but are not actively seeking work, regardless of their availability.
2. The Skills Investment Plan (PIC), launched in September 2017 and coordinated by the French Ministry of Labour, sets out to train one million low-skilled job-seekers and one million young people who are excluded from the labour market.

Unemployment rate (ILO definition)
quarterly averages as a % of the labour force, SA data



Scope: France (excluding Mayotte), population of households, people aged 15 or over
Source: INSEE, Employment Survey

on the labour force (see "Estimated effects of public policies" line). Consequently, the expected rise in employment in 2019 (+277,000) is once again likely to exceed the increase in the labour force (+153,000). As a result, the unemployment rate should drop by 0.4 points during 2019, after –0.1 points in both 2018 and 2017. In particular, the unemployment rate is set to decline by 0.2 points in Q4 2019, when it should stand at 8.4%.

In H1 2020, employment is expected to keep growing faster than the labour force (+92,000 compared to +33,000) and the unemployment rate is likely to fall again (–0.1 points per quarter). Over the forecasting period, the unemployment rate is expected to stand at 8.2% of the labour force by mid-2020, i.e. 0.3 points lower than one year earlier and at its lowest level since the end of 2008. ■

Change in the labour force, employment and unemployment

in thousands, SA and in %

	Quarterly changes										Annual changes			
	2018				2019				2020		2017	2018	2019	2020 S1
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2				
Population of the 15-64 age bracket	–10	–10	–10	–10	–7	–7	–7	–7	2	2	–13	–41	–29	4
Population of the 15-59 age bracket	–11	–11	–11	–11	–12	–12	–12	–12	–4	–4	–26	–44	–49	–9
Labour force (1)=(2)+(3)	**181**	**19**	**31**	**–32**	**65**	**15**	**61**	**12**	**19**	**14**	**12**	**199**	**153**	**33**
including:														
(a) Contribution of the population and the trend activity rate	21	21	21	21	18	18	18	18	15	15	91	83	70	29
(b) Estimated effects of economic downturns	*3*	*3*	*3*	*3*	*2*	*2*	*2*	*2*	*2*	*2*	*20*	*12*	*8*	*4*
(c) Estimated effects of public policies	*4*	*–1*	*–2*	*–7*	*6*	*–7*	*4*	*2*	*2*	*–2*	*25*	*–5*	*6*	*0*
(d) Other short-term fluctuations (residual)	*153*	*–4*	*9*	*–49*	*39*	*2*	*38*	*–10*	*0*	*0*	*–124*	*109*	*69*	*0*
Employment (2)	**82**	**51**	**41**	**64**	**94**	**85**	**51**	**47**	**48**	**44**	**312**	**238**	**277**	**92**
Reminder: End-of-period employment (see "Employment" sheet)	69	34	47	80	107	62	40	53	43	45	343	230	263	88
ILO unemployment (3)	**99**	**–32**	**–10**	**–96**	**–29**	**–70**	**10**	**–35**	**–29**	**–30**	**–300**	**–39**	**–124**	**–59**
	Quarterly average										Average in the last quarter of the period			
ILO unemployment rate (%)	**9.2**	**9.1**	**9.1**	**8.8**	**8.7**	**8.5**	**8.6**	**8.4**	**8.3**	**8.2**	**8.9**	**8.8**	**8.4**	**8.2**

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 tha 1% of the active population), it is neglected here for the unemployment forcasting exercise,
- in (a), the contribution of demographics and of trend activity behaviour includes all the effects of pensions reforms up to and includint that in 2014.

Scope: France (excluding Mayotte for employment, unemployment and estimated effects of public policies)

Source: INSEE

Consumer prices

2018 was significant for its relatively high level of inflation (+1.8% on average) in the wake of high oil prices, but prices overall should slow down considerably in 2019 (+1.1%). In November 2019, inflation bounced back to +1.0% year on year, linked with the rise in tobacco prices. It is expected to rise to +1.1% by June 2020, while inflation excluding tobacco should reach +0.9% in June after +0.8% in November. Core inflation[1] is likely to increase slightly through to mid-2020 reaching +1.0% after +0.9% in November.

Headline inflation is expected to rise slightly through to June 2020

In November 2019, headline inflation bounced back to +1.0% year on year, after +0.8% in October (*Graph 1*). The prices of food products gathered pace (+2.1%, after +1.8%), as did the prices of services (+1.3% after +1.2%). Tobacco prices rose by +15.3% year on year in November, after +8.8% in October, as a result of the increase in indirect taxation. Meanwhile, energy prices continue to decline (–0.7%, after –1.6%), as do prices of manufactured products (–0.6%, after –0.5% in October).

Inflation should remain at around +1.1% (Table) through to June 2020. There is likely to be a rebound in energy prices (+0.8%, against –0.7% in November) and the drop in the prices of manufactured products is expected to lessen in June (–0.2%, against –0.6%). In addition, prices of food products should slow (+1.4% year on year in June, against +2.1% in November), as should tobacco prices (+12.2% after +15.3%). Lastly, the rise in the prices of services is expected to be fairly similar to that in December, around +1.3% year on year.

Energy inflation should increase slightly through to June 2020

The price of Brent is currently hovering once again at around $60, with the rise at the end of the summer having faded with Saudi oil production sites getting back on track quickly. Based on the assumption of the price of Brent at $60, energy inflation is expected to reach +0.8% year on year in June 2020 after –0.7% in November. Also, regulated electricity tariffs should increase by 4.0% at the most in February 2020. In addition, because of a larger than expected order for electricity from alternative suppliers to EDF, electricity prices are set to rise by 3%. This increase will be spread over H1 2020.

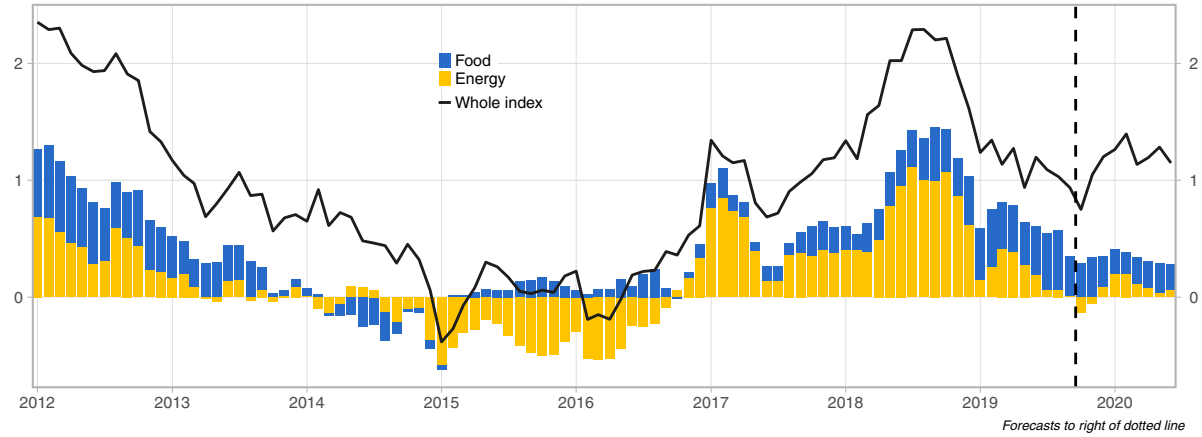
Tobacco prices should slow

In November 2019, the increase in tobacco prices reached 15.3% year on year, as a result of another rise in indirect taxation. The price of a packet of cigarettes will increase again by 50 cents in April 2020. When previous price rises were applied, manufacturers made only slight adjustments to their margins. Tobacco prices will thus remain very buoyant until June 2020, at +12.2% year on year.

1. The core inflation indicator was estimated by removing the prices of energy, fresh produce and public-sector tariffs from the headline index, and then adjusting it for tax measures and seasonal variations.

1 - Consumer prices in France

year-on-year variation in points



Source: INSEE

Prices of food products are likely to slow

Food inflation should fall by June 2020, to +1.4% against +2.1% in November 2019. Assuming normal production conditions during the winter, prices of fresh food products should slow in June to +1.5%, after +2.2% in November.

Excluding fresh products, food inflation stood at +2.0% year on year in November 2019 and should decrease by June to +1.3% as a result of the base effect, having increased slightly last year because of certain measures of the "Agriculture and Food" Law. In addition, the production deficit resulting from the Chinese pig crisis is likely to continue to drive up pork prices and hence consumer prices.

Prices of manufactured goods should continue to fall

The drop in the prices of manufactured goods should continue through to June 2020, to –0.2%, after a drop of –0.6% year on year in November.

The prices of clothing and footwear decreased slightly in November 2019 (–0.2% year on year, after +0.2% in October). This drop is expected to continue through to June 2020, at a similar pace (–0.1%). The winter sales period will be reduced from 6 to 4 weeks, as a result of the PACTE Law coming into force. Thus February will include just one week of sales, compared with three weeks previously, which is likely to result in a one-off increase in the prices of clothing and footwear of around 0.8 percentage points over the month and 0.3 points over the quarter.

The drop in the prices of health goods is expected to continue until June 2020 (–2.0% year on year, after –3.0% in November). In January 2020, the "zero left to pay" plan for spectacles and lenses will be introduced: on the one hand in future there will be full reimbursements, and on the other hand, prices will be capped. This latter aspect of the reform is likely to bring down the optical goods price index.

Prices of "other manufactured goods" (excluding clothing and health goods) should increase slightly in June 2020 (+0.2% year on year, after –0.2% in November). In January 2020, the threshold for the application of the "ecological malus" for automobiles will be reduced and the amount of the basic levy will increase. In addition, the scale will be more restrictive than before for the most polluting vehicles. Almost 54% of new vehicles are likely to be concerned by this new malus, against 37% previously. Thus in January 2020, the prices of new motor vehicles are expected to increase by 1.4% over the month.

Consumer prices

changes as %

CPI groups* (2018 weightings)	October 2019		November 2019		December 2019		June 2020		Annual averages	
	yoy	cyoy	yoy	cyoy	yoy	cyoy	yoy	cyoy	yoy	cyoy
Food (16.2 %)	**1.8**	**0.3**	**2.1**	**0.3**	**1.6**	**0.3**	**1.4**	**0.2**	**1.9**	**2.4**
including: fresh food (2.4%)	*–0.1*	*0.0*	*2.2*	*0.1*	*0.5*	*0.0*	*1.5*	*0.0*	*5.2*	*4.1*
excluding: fresh food (13.8%)	*2.1*	*0.3*	*2.0*	*0.3*	*1.8*	*0.3*	*1.3*	*0.2*	*1.3*	*2.1*
Tabacco (1.9%)	**8.8**	**0.2**	**15.3**	**0.3**	**15.3**	**0.3**	**12.2**	**0.2**	**14.2**	**10.6**
Manufactured products (25.6 %)	**–0.5**	**–0.1**	**–0.6**	**–0.2**	**–0.3**	**–0.1**	**–0.2**	**0.0**	**–0.2**	**–0.6**
including : clothing and footwear (4.0%)	*0.2*	*0.0*	*–0.2*	*0.0*	*–0.2*	*0.0*	*–0.1*	*0.0*	*0.1*	*–0.3*
medical products (4.2%)	*–3.0*	*–0.1*	*–3.0*	*–0.1*	*–2.2*	*–0.1*	*–2.0*	*–0.1*	*–2.3*	*–2.9*
other manufactured products (17.4%)	*–0.1*	*0.0*	*–0.2*	*0.0*	*0.1*	*0.0*	*0.2*	*0.0*	*0.2*	*–0.1*
Energy (8.0%)	**–1.6**	**–0.1**	**–0.7**	**–0.1**	**1.1**	**0.0**	**0.8**	**0.1**	**9.7**	**1.7**
including : oil products (4.3%)	*–4.5*	*–0.2*	*–2.0*	*–0.1*	*0.5*	*0.0*	*–2.1*	*–0.1*	*14.7*	*0.4*
Services (48.3%)	**1.2**	**0.6**	**1.3**	**0.6**	**1.3**	**0.6**	**1.4**	**0.7**	**1.2**	**1.0**
including : rent-water (7.5%)	*0.7*	*0.1*	*0.8*	*0.1*	*0.9*	*0.1*	*0.9*	*0.1*	*0.1*	*0.4*
health services (6.0%)	*–0.2*	*0.0*	*–0.2*	*0.0*	*0.1*	*0.0*	*0.2*	*0.0*	*0.9*	*–0.1*
transport (2.9%)	*1.6*	*0.0*	*2.1*	*0.1*	*2.0*	*0.1*	*0.9*	*0.0*	*0.8*	*0.7*
communications (2.2%)	*0.9*	*0.0*	*2.3*	*0.1*	*1.4*	*0.0*	*–1.0*	*0.0*	*–1.0*	*–1.2*
other services (29.8%)	*1.6*	*0.5*	*1.6*	*0.5*	*1.6*	*0.5*	*1.9*	*0.6*	*1.8*	*1.6*
All (100%)	**0.8**	**0.8**	**1.0**	**1.0**	**1.2**	**1.2**	**1.1**	**1.1**	**1.8**	**1.1**
All excluding energy (92.0%)	*1.0*	*0.9*	*1.2*	*1.1*	*1.2*	*1.1*	*1.2*	*1.1*	*1.2*	*1.0*
All excluding tabacco (98.1%)	*0.6*	*0.6*	*0.8*	*0.8*	*0.9*	*0.9*	*0.9*	*0.9*	*1.6*	*0.9*
Core inflation (60.5%)	**1.0**	**0.6**	**0.9**	**0.6**	**0.9**	**0.6**	**1.0**	**0.6**	**0.8**	**0.8**

provisional
forecast
yoy: year-on-year
cyoy: contribution to the year-on-year value of the overall index
* Consumer price index (CPI)
** Index exlcuding public tariffs and products with volatile prices, corrected for tax measures.
Source: INSEE

Inflation in services is set to increase slightly

In June 2020, the increase in the prices of services is expected to reach 1.4% year on year, after +1.3% in November.

The prices of transport services should slow to +0.9% in June 2020, after +2.1% in November. This slowdown is mainly related to the prices of air transport services, despite the upward effect in Q1 2020 of the eco-tax on the price of economy-class tickets on flights out of France. This tax will be €1.50 for internal flights and flights within the EU and €3 for international flights outside the EU. The effect on the prices of air transport services is likely to be 0.6 percentage points in January 2020.

The prices of communication services followed a downward trend over the first three quarters of 2019, as a result of strong competition in the sector. Prices increased in September and inflation in this sector looks set to remain positive until May. Prices should start to fall again in June 2020. Thus the prices of communication services should fall to –1.0% year on year, after +2.3% in November.

Inflation in health services looks set to rise to +0.2% in June, after –0.2% year on year in November.

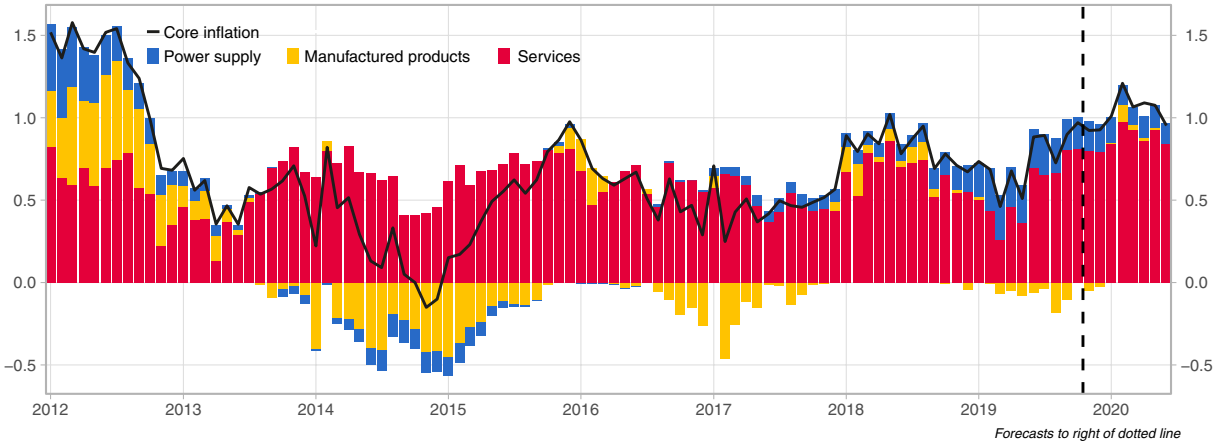
Lastly, rents are expected to rise by +0.9% year on year in June 2020, after +0.8% in November.

Core inflation should increase slightly

In June 2020, core inflation is likely to remain higher than its 2019 average (+1.0% against +0.8%). The prices of services are expected to contribute considerably to core inflation in 2020, but manufactured products should also make a positive contribution, for the first time since the beginning of 2019 (*Graph 2*). ■

2 -The core inflation forecast for France

year-on-year in % and contributions in points



Source: INSEE

Wages

In 2019, nominal wages an expected to pick up slightly in the market branches: +1.7% as an annual average after +1.5% in 2018 for the basic monthly wage and +2.1% after +1.7% for the average wage per capita. Prices look set to slow, with the result that real wages should pick up more substantially: +1.0% after +0.2% for the average wage per capita.

The one-off tax bonus to boost purchasing power (PEPA), in the context of the economic and social emergency measures adopted in December 2018, is to be continued into H1 2020, but limited to businesses that have put a profit-sharing scheme in place. This should give wages something of a boost once again: in 2020, the annual mid-year growth overhang of the average wage per capita should be +1.4%. Inflation is expected to rise in H1 2020 and the annual mid-year overhang of the average wage per capita in real terms should be +0.4%, against +0.7% one year earlier.

In general government, with the continuing freeze on the index point, the nominal average wage per capita should slow in 2019 (+1.5% as an annual average after +1.9% in 2018), despite the resumption of the Professional Career Paths, Careers and Remunerations (PPCR) protocol. The purchasing power of the average wage per capita is also expected to slow slightly in 2019 (+0.4% after +0.5% in 2018), and should continue to increase at the same pace in 2020: the annual mid-year growth overhang should be +0.2%, the same as the previous year.

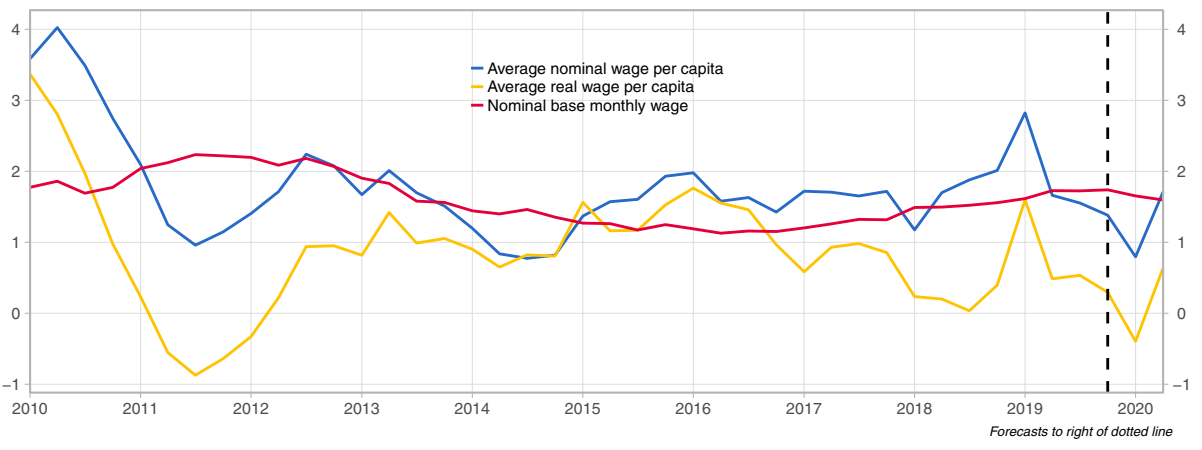
In 2019, wages in the market sectors are expected to pick up in real terms

In 2019, the minimum wage was increased by more than the previous year's rate (+1.5% on 1st January after +1.2% one year earlier). Across the whole year, unemployment should fall back slightly. Given this situation, the basic monthly wage in the non-farm market sectors should rise by 1.7% as an annual average in 2019, i.e. a little more than in 2018 (+1.5%, *Graph and Table*). The average wage per capita, which covers a wider range of remunerations (bonuses, profit-sharing, overtime), is expected to pick up slightly (+2.1% on average in 2019 after +1.7% in 2018). At the beginning of the year it was driven by the payment of 2.2 billion euros as a one-off bonus to boost purchasing power (PEPA), as part of the economic and social emergency measures adopted in December 2018.

As an annual average, prices look set to slow in 2019 (+1.1% after +1.5% in 2018), with the result that real wages should gather pace more than nominal wages: +0.6% in 2019 after 0.0% in 2018 for the basic monthly wage and +1.0% after +0.2% for the average wage per capita. The purchasing power of the average wage per capita should rebound in the second half of the year (+0.6% in H2 2019 after +0.2% in H1).

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

year-on-year variation in %



Scope: non-farm market branches
Source: INSEE, DARES

At the start of 2020, wages look set to pick up slightly

Taking into account annual inflation measured in November 2019 and assuming the absence of any extra boost, since the last dates back to July 2012, the increase in the minimum wage on 1st January 2020 is expected to be +1.2%. At the start of 2020, unemployment should continue to fall slightly and inflation is likely to be stable. In this context, the average nominal monthly wage should increase at a similar pace to that at the end of 2019: +0.8% in H1 2020 (semester-on-semester), the same as in H2 2019. The average wage per capita is expected to slow slightly despite the extension of the PEPA tax bonus into H1 2020: +0.9% in H1 2020 (after +1.1% in H2 2019). The effect of PEPA on the average wage per capita is likely to be less than in 2019, as the extension in 2020 is limited to companies that have put in place a profit-sharing scheme. Thus PEPA should be contributing about +0.1 points to the increase in the average wage per capita in H1 2020.

In H1 2020, real wages are expected to slow slightly. The annual growth overhang of the real average wage per capita should reach +0.4% in mid-2020, after +0.6% one year earlier and +1.0% across the whole of 2019.

In the civil service, wages are expected to slow in 2019

In 2019, the freezing of the index was maintained but the application of the Professional Career Paths, Careers and Remunerations (PPCR) protocol was resumed in general government. The compensation for the rise in the general social security contribution in 2018 sustained the nominal average wage per capita (+1.9%); in 2019 it is therefore likely to slow as a result of a backlash effect to +1.5%. Taking the drop in inflation into account, the real average wage per capita should maintain virtually the same pace as in 2018 (+0.4% in 2019 after +0.5%).

In 2020, it is likely that the terms of the PPCR protocol will continue to be applied, thus contributing +0.1 points to the mid-year growth overhang of the average wage per capita in general government. The freezing of the index point is likely to be renewed once again. All in all, the annual growth overhang of the average wage per capita in general government is expected to be +1.2% by mid-2020, as it was one year earlier; in real terms it should stand at +0.2%, after +0.2% the previous year. ■

Variation in the basic monthly wage and the average wage per capita

in %

	Quarterly growth rates						Half-yearly rates			Annual average		
	2019				2020		2019		2020	2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	H1	H2	H1			
Basic monthly wage	0.5	0.5	0.4	0.4	0.4	0.4	0.9	0.8	0.8	1.5	1.7	1.3
Average wage per capita in the non-farm market branches	1.1	–0.2	0.7	0.4	0.5	0.4	0.8	1.1	0.9	1.7	2.1	1.4
Average wage per capita in general government (GG)										1.9	1.5	1.2
Household consumer price index (quarterly national accounts)	0.2	0.4	0.2	0.3	0.4	0.4	0.6	0.4	0.7	1.5	1.1	1.0
Real basic monthly wage	0.3	0.0	0.2	0.1	0.0	0.0	0.3	0.3	0.1	0.0	0.6	0.3
Real average wage per capita (non-farm market branches)	0.9	–0.7	0.5	0.1	0.1	0.0	0.2	0.6	0.2	0.2	1.0	0.4
Real average wage per capita (GC)										0.5	0.4	0.2

Forecast

Source: INSEE, DARES

Household income

In 2019, household income picked up sharply (+3.2% in current euros after +2.7% in 2018), bolstered both by the drop in social and tax contributions and the buoyancy of wages and social benefits. Thus the purchasing power of households' gross disposable income (GDI) is expected to increase vigorously in 2019, by 2.1% after +1.2% in 2018. Per consumption unit (CU), the annual increase should reach 1.6% after 0.7% in 2018. GDI is likely to be buoyant at the end of the year, related to the second tranche of the reduction in the local residence tax. In H1 2020, the pace of growth of GDI is expected to slow (+0.3% per quarter), mainly related to the deceleration in earned income and property income. GDI should be bolstered by the reduction in income tax, despite the accounting after-effect of the reduction in the local residence tax. With a relatively dynamic carry-over price (+1.0%), the annual carry-over effect of GDI purchasing power should stand at +0.8% by mid-2020.

Earned income is expected to remain buoyant in 2019 then slow at the beginning of 2020

In 2019, households' earned income is expected to maintain its upward trend (+2.6% current euros after 2.5% in 2018; *Table 1*) in line with the increase in total payroll (+3.0% after +2.9%). In the non-farm market sectors, the slight acceleration in the average wage per capita in 2019 (+2.1% after +1.7% in 2018; *Graph*) should be offset by the slowdown in payroll employment (+1.5% after +1.7% in 2018). The operating income of sole proprietors is expected to fall back again (–0.3% as in 2018). Over the forecasting period, gross wages received by households should return to their trend pace (around +0.6% per quarter) after the backlash in Q2 2019 due toto the payment of the one-off tax- and social contribution-exempt bonus (*Table 2*).

1 - Household gross disposable income

in %

	Quarterly changes										Annual changes		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross disposable income (100%)	**0.0**	**1.3**	**0.6**	**1.3**	**0.8**	**0.2**	**0.8**	**1.0**	**0.3**	**0.3**	**2.7**	**3.2**	**1.8**
including:													
Earned income (72%)	0.7	0.6	0.4	0.6	1.1	0.2	0.7	0.5	0.4	0.4	2.5	2.6	1.6
Gross wages and salaries (64%)	*0.8*	*0.7*	*0.5*	*0.7*	*1.2*	*0.3*	*0.8*	*0.6*	*0.6*	*0.5*	*2.9*	*3.0*	*1.9*
GOS of sole proprietors (8%)*	*–0.4*	*–0.5*	*–0.3*	*–0.2*	*0.3*	*–0.2*	*–0.3*	*0.1*	*–1.1*	*0.0*	*–0.3*	*–0.3*	*–1.2*
Social benefits in cash (36%)	0.5	0.7	0.5	0.7	1.0	0.2	0.7	0.7	0.5	0.5	2.3	2.6	1.8
GOS of "pure" households (14%)	0.4	0.6	0.5	0.9	0.6	1.0	0.5	0.4	0.2	0.4	2.3	2.8	1.3
Property income (6%)	3.2	2.3	1.4	0.5	–0.5	–0.3	–0.1	0.3	–0.2	0.2	8.3	1.0	0.0
Social contributions and taxes (–28%)	3.0	–1.4	0.1	–1.8	1.5	0.6	0.2	–1.2	0.6	0.7	2.5	0.1	0.5
Contributions of households (–11%)	*–7.6*	*–0.9*	*0.4*	*–2.9*	*0.5*	*0.5*	*0.5*	*0.5*	*0.4*	*0.5*	*–7.7*	*–1.0*	*1.6*
Income and wealth tax (including CSG and CRDS) (–16%)	*10.5*	*–1.7*	*–0.1*	*–1.2*	*2.1*	*0.7*	*0.1*	*–2.3*	*0.7*	*0.8*	*9.6*	*0.8*	*–0.2*
Household consumer prices (quarterly national accounts)	**0.6**	**0.5**	**0.3**	**0.2**	**0.2**	**0.4**	**0.2**	**0.3**	**0.4**	**0.4**	**1.5**	**1.1**	**1.0**
Purchasing power of gross disposable income	**–0.6**	**0.8**	**0.2**	**1.1**	**0.6**	**–0.2**	**0.6**	**0.8**	**0.0**	**0.0**	**1.2**	**2.1**	**0.8**
Household purchasing power by consumption	**–0.7**	**0.7**	**0.1**	**1.0**	**0.5**	**–0.4**	**0.5**	**0.7**	**–0.2**	**–0.1**	**0.7**	**1.6**	**0.3**

Forecast

How to read it: the figures in parentheses give the structure of the year 2017.

* The gross operating surplus of "pure households" corresponds to the output of housing services, less the intemediate consumption required to generate this output (particularly financial services related to loans) and taxes (land tax). This output corresponds to the rents which properly awners receive from their tenants, or could receive if their property was rented ("imputed rents").

Source: INSEE

The gross operating surplus of pure households[1] is expected to gather pace in 2019 (+2.8% after +2.3%). The dynamism of net property income is likely to ease off considerably in 2019 (+1.0% after +8.3% in 2018, a year with some significant dividend payments which were particularly buoyant in the context of the introduction of the single flat-rate withholding tax). It should still nevertheless be driven by businesses' 2018 results which could encourage them to distribute more dividends. At the start of 2020, property income is expected to be less vigorous.

At the start of 2020, social benefits are likely to be less buoyant than in 2019

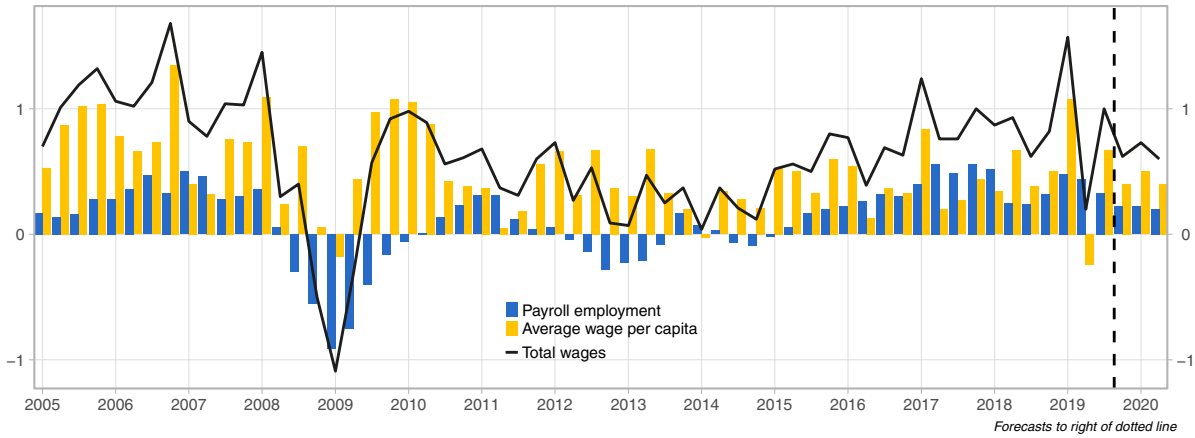
In 2019, social benefits in cash should pick up sharply (+2.6% after +2.3%; *Table 3*). They are likely to be sustained by the strong acceleration in social assistance benefits (+8.9% in 2019 after +1.0%). After a significant increase in Q1, due to measures relating to the activity bonus, these benefits should continue to grow at a rate of 0.6% in Q4 2019. This growth is the result mainly of the increase in the amount of adult disability allowance in November and a rise in the rate of eligibility for the activity bonus. The increase in social security benefits should maintain a steady pace in 2019 (+2.0% after +2.2% in 2018) despite the smaller increase in most benefits (+0.3%) and the slight slowdown in "other social assistance benefits" (+2.1% after +2.9%).

At the beginning of 2020, social benefits in cash are expected to increase by +0.5% per quarter, driving the carry-over effect to +1.8% by mid-2020. This pace is likely to be less dynamic than in 2019 when the activity bonus was increased; the reform of unemployment insurance is also likely to contribute to this slowdown as there will be changes to the conditions of eligibility and calculation of the reference wage. However, this negative contribution to changes in social security benefits could be offset by the increase in other social benefits.

1. The GOS of "pure households" corresponds to the output of housing services, minus the intermediate consumption required for this output (in particular financial services related to borrowing) and taxes (land tax). Output corresponds to the rents that private property owners receive from their tenants or could receive if they rented out their property ("imputed rents").

1 - Breakdown of the total gross wages received by household in the non-agricultural market sector

quarterly variations in %



Source: INSEE

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

in %

	Quarterly changes										Annual changes		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Non-financial enterprises (64%)	0.9	1.0	0.6	0.9	1.5	0.1	1.0	0.6	0.7	0.6	3.6	3.6	2.2
Financial corporations (4%)	0.0	–0.2	1.1	–0.8	2.1	1.4	–0.1	0.7	0.8	0.7	1.0	3.2	2.1
General government (22%)	0.7	0.2	0.2	0.2	0.4	0.5	0.5	0.6	0.2	0.2	1.6	1.5	1.2
Households excluding sole proprietors (2%)	0.6	0.3	–1.0	–0.2	0.6	0.0	–0.2	0.1	0.1	0.1	–0.1	–0.1	0.2
Total gross wages received by households (100%)	**0.8**	**0.7**	**0.5**	**0.7**	**1.2**	**0.3**	**0.8**	**0.6**	**0.6**	**0.5**	**2.9**	**3.0**	**1.9**
including: Non-agricultural market sectors (71%)	*0.9*	*0.9*	*0.6*	*0.8*	*1.6*	*0.2*	*1.0*	*0.6*	*0.7*	*0.6*	*3.4*	*3.6*	*2.2*

Forecast

How to read it: the figures in parentheses give the structure of the year 2017

Source: INSEE

At the beginning of 2020 households should benefit from the change in the income tax scale

Households' social and tax contributions are expected to remain relatively stable in 2019 (+0.1% after +2.5%). The drop in social contributions paid by households is likely to continue, but less forcefully than in 2018: −1.0% after –7.7%. Employee exemption from social contributions on overtime in January 2019 accounts for this new reduction. Taxes on income and wealth (including the general social contribution, CSG) are likely to slow significantly in 2019 (+0.8% after +9.6%), due to the reduction in CSG on replacement income in retired households and the reduction in the residence tax (progressive tax relief for 80% of households). However, because of better collection of income tax since the introduction of the pay-as-you-earn system and better revenue from the tax on real estate assets, revenue from income tax is expected to be greater than expected in the previous issue of Conjoncture in France.

At the beginning of 2020, social and tax contributions should increase at a moderate pace (+0.6% in Q1 then +0.7% in Q2). There is expected to be an accounting backlash linked to the local residence tax which will contribute to an increase in Q1[2] (*Focus "Treatment of the reduction of local residence tax in the quarterly national accounts"*, Household income sheet in the December 2018 issue of Conjoncture in France), and meanwhile the introduction in 2020 of the change to the income tax scale should benefit households to the sum of around 5 billion euros. Contributions are expected to return to their trend pace (carry-over of +1.6% in 2020), while the tax paid by households is expected to decrease (–0.2% carry-over).

The annual carry-over effect of purchasing power should be +0.8% by mid-2020

All in all, in 2019, nominal household gross disposable income (GDI) is expected to pick up (+3.2% after +2.7%), as a result of the slowdown in social and tax contributions and the buoyancy of social benefits, related to the different support measures for purchasing power. The payment of a one-off activity bonus at the beginning of the year has enabled earned income to grow at the same pace as in 2018. Meanwhile, consumer prices as an annual average are expected to slow (+1.1% after +1.5%), related to the drop in energy prices. As a result, the purchasing power of the GDI looks set to take on a brisk pace: +2.1% after +1.2%. When reduced to an individual level to take demographic changes into account, purchasing power per consumption unit looks set to increase by+1.6% in 2019, after +0.7% in 2018. This is the highest increase since 2007.

In H1 2020, earned income is expected to slow and GDI purchasing power should remain stable: it is likely to be sustained by the planned reduction in income tax, the effect of which would certainly be offset in the accounts by the backlash of the reduction in the local residence tax in Q4 2019. Consequently, the annual carry-over effect of GDI purchasing power looks set to stand at +0.8% by mid-2020, suggesting a slowdown compared with 2019. ■

2. For the year in which it is introduced, a permanent reduction in the residence tax is mainly taken into account in the quarter in which it takes effect, or in Q4. For the following years, this reduction will be incorporated directly into the seasonal profile of the series and will therefore be smoothed over four quarters.

3 - Social transfers received and paid by houshold

in %

	Quarterly variations										Annual variations		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Social cash benefits received by households (100%)	**0.5**	**0.7**	**0.5**	**0.7**	**1.0**	**0.2**	**0.7**	**0.7**	**0.5**	**0.5**	**2.3**	**2.6**	**1.8**
Social Security benefits in cash (72%)	0.5	0.7	0.5	0.5	0.6	0.1	0.7	0.8	0.5	0.5	2.2	2.0	1.8
Other social insurance benefits (19%)	0.6	0.8	0.5	0.6	0.4	0.5	0.6	0.4	0.5	0.4	2.9	2.1	1.5
Social assistance benefits in cash (9%)	0.0	0.3	0.0	2.4	5.8	0.6	0.8	0.6	0.6	0.5	1.0	8.9	1.9
Total social contribution burden by households (100%)	**–7.6**	**–0.9**	**0.4**	**–2.9**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**	**0.5**	**–7.7**	**–1.0**	**1.6**
Employers contributions[1] (79%)	–9.3	0.5	0.6	–3.8	0.6	0.7	0.4	0.6	0.4	0.5	–8.3	–1.0	1.6
Contributions of households (21%)	–0.6	–6.6	–0.1	0.9	0.1	–0.4	0.7	0.3	0.5	0.5	–5.0	–0.9	1.3

forecast

How to read it: the figures in parentheses give the structure of the year 2018

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

After dipping at the end of 2018, the household confidence indicators picked up in 2019 for households in all categories, albeit with certain nuances

In 2019, new measures included in the budget led to a strong increase in household purchasing power, but the overall effect on consumption was not as impressive. What can be learned from the consumer confidence surveys about the way households see these changes? While the balances of opinion regarding personal financial prospects and the chances of making major purchases revealed a surge of pessimism at the end of 2018, the situation turned around fairly rapidly in 2019.

Perceptions may vary between different categories of households. As early as H2 2017, well before the beginning of the "yellow vest" crisis, confidence among retired people was lower than it had been previously, probably on account of proposed reforms to the general social contribution (CSG). At the end of 2018, the indicators dropped for all categories of households. The rebound in 2019 was a little more pronounced for the wealthiest households.

In 2019, the upturn in purchasing power is expected to be the biggest increase seen in 12 years

The variation in household purchasing power reflects the variation in their overall income in relation to the evolution of consumer prices. In 2019, the purchasing power of the gross disposable income of households is expected to increase noticeably (+2.1% for the year, after +1.2% in 2018) as a result of various measures included in the budget, particularly in response to the "yellow vest" protests which erupted toward the end of 2018. Taking demographic evolution into account, purchasing power is expected to rise by 1.6% per consumption unit (CU) in 2019. This is the strongest increase seen since 2007. It comes after a decade in which purchasing power per CU has been virtually stagnant (*Graph 1*).

At the general level, the increase in purchasing power does not appear to have been immediately passed on in the form of increased consumption: household consumption expenditure is expected to grow less rapidly in 2019, at +1.2%, i.e. more than a whole percentage point below the increase in purchasing power. Generally speaking, after a positive shock to purchasing power, household consumption only adapts to the increase after a certain delay, which may take several quarters depending on the type of expenditure (Beatriz et *al.*, 2019).

The emergency measures introduced in 2019 were above all designed to boost the purchasing power of households in employment and lower-income households

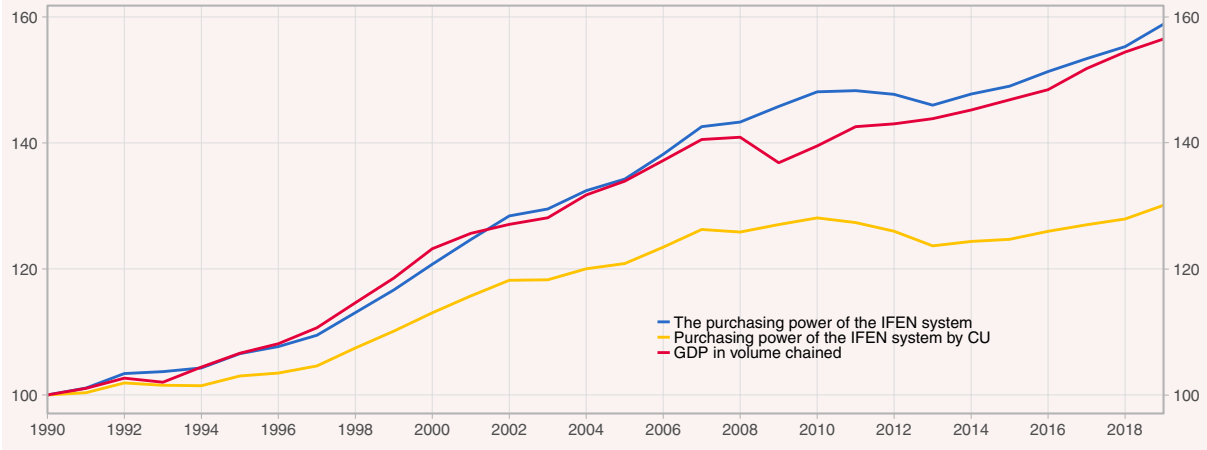
Furthermore, not all households benefited equally from the stimulus measures included in the budget, and the increase in purchasing power has not been uniform across the board. The removal of tax and social security contribution on overtime pay, the increase in the activity bonus and the incentive for employers to pay a one-off bonus have all primarily benefited households in employment. The decision to cancel the CSG increase scheduled for the start of 2019 was a boost to more modest retired households[1].1 Since late 2018, the gradual abolition of the local residents' tax now applies to the lowest-earning 80% of households. Moreover, households do not all have the same marginal propensity to consume: this marginal propensity is greater among lower-income households.

In order to study the factors which determine consumption at the household level, the data from the INSEE's "Family Budget" survey are included here. Nevertheless, this survey is conducted once every five years and is therefore not conducive to analysing the short-term outlook. The consumer confidence survey, on the other hand, is conducted monthly and provides,

1.I.e. households with a monthly income of between 1200 and 2000 euros.

1 -Variation in purchasing power and purchasing power per consumption unit

Index base 100 in 1990



Source: National accounts, INSEE

at the individual level, qualitative information on the components of household confidence. The tendency surveys include socio-demographic questions concerning the age, gender, standard of living and employment status of respondents, as well as the area in which they live. The responses to these questions can be used to class households into different categories[2]. In analysing the different categories of households, the data from the tendency surveys are not seasonally-adjusted, contrary to standard INSEE practice for publications concerning balances of opinion at the aggregated level.

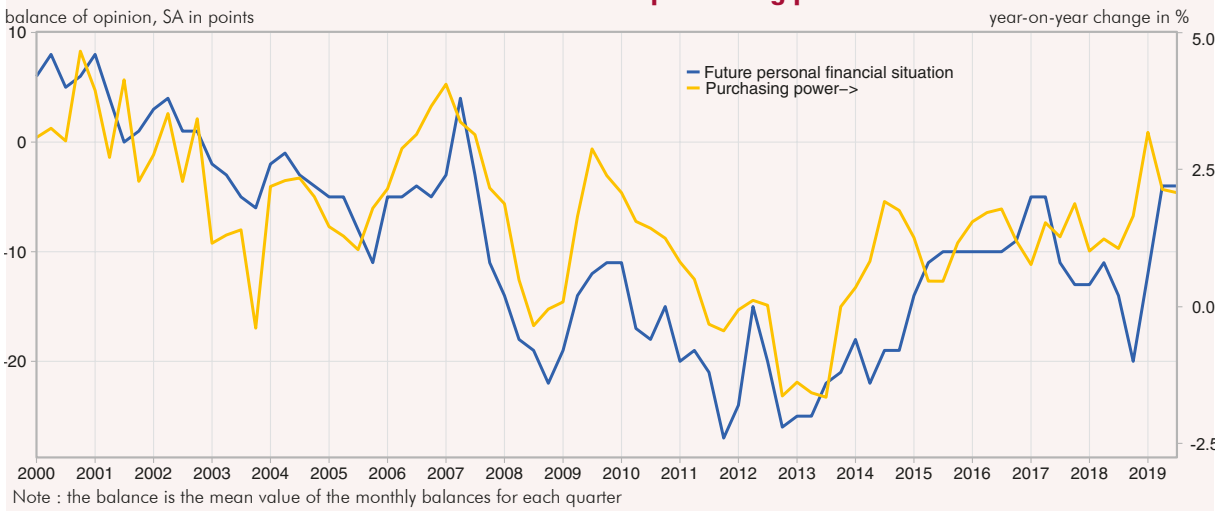
After reaching a low point at the end of 2018, household morale has rebounded fairly robustly, returning to the levels last seen in mid-2017

The INSEE's monthly tendency surveys ask households about, among other things, their personal financial prospects, their opinion regarding the general trajectory of living standards in France, the chances of them making major purchases in the near future and the evolution of prices (*Annex 1*).

The balance of opinion regarding personal financial prospects may theoretically be connected to the variation of household purchasing power, while the balance of opinion regarding major purchases may be linked to household consumption. These two balances have followed similar trajectories since the year 2000. After a period of pessimism following the great recession of 2008-2009 and the Eurozone debt crisis, household confidence levels began to rise again and reached a peak in 2017, a year of solid growth with also saw a presidential election. The downturn observed in 2018 may have been partly induced by the rise in oil prices combined with the timetable for implementing new fiscal measures (see Focus article in the Conjoncture in France for December 2018), in spite of the increase in purchasing power recorded in Q4 2018 (thanks to decreases in local residents'

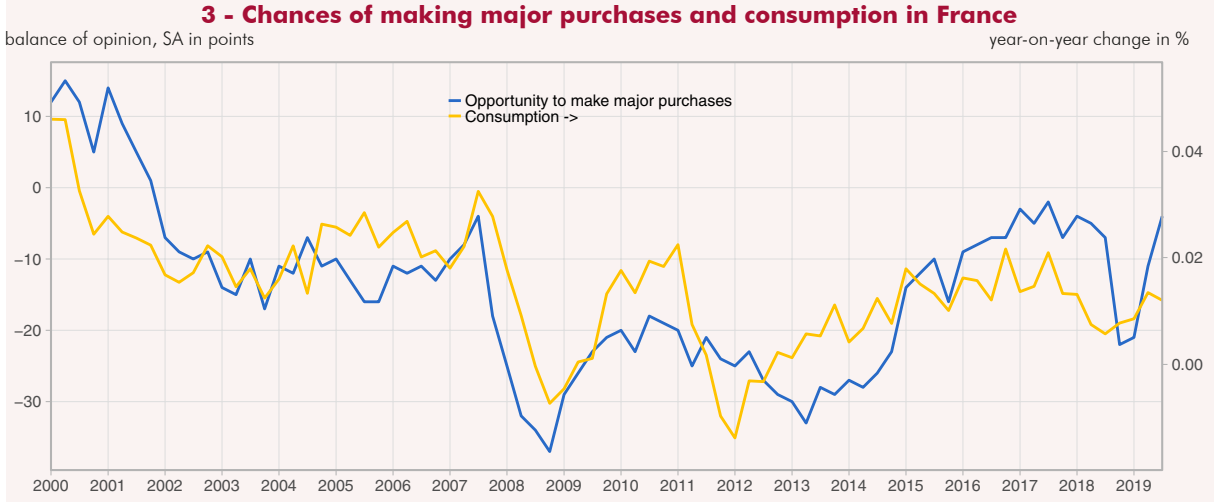
2. Nevertheless, since the sample sizes are smaller the results are less robust than those obtained for the aggregated balances (*Annex 1*). Moreover, since the published aggregated balances are not particularly sensitive to seasonal fluctuations, those which have been broken down by category of household have not been corrected for seasonal variation. A moving average over a three-month period has been applied instead, to make the series easier to read.

2 - Personal financial outlook and purchasing power in France



Note : the balance is the mean value of the monthly balances for each quarter
Source: Camme survey and quarterly national accounts (INSEE).

3 - Chances of making major purchases and consumption in France



Note : the balance is the mean value of the monthly balances for each quarter.
Source: Camme survey and quarterly national accounts (INSEE).

tax and employees' social security contributions).The drop-off observed in November and December 2018 was a direct result of the social crisis provoked by the "yellow vest" movement. The announcement and implementation of measures to bolster purchasing may then have contributed to the rapid turnaround of both indicators in early 2019. By the end of 2019 they should be back to their 2017 peak levels (*Graphs 2 and 3*)

While there is a certain correlation between the "hard" data of the national accounts and the balances of opinion from the household surveys, the latter are rarely directly used for forecasting purposes. Household perceptions diverge, sometimes considerably, from the actual variation in purchasing power and consumption at the aggregate level, particularly at times of economic crisis or immediately following the implementation of reforms.

The balance of opinion regarding respondents' personal financial outlook mirrors the general trajectory of purchasing power, albeit with a slight delay. However, significant disparities were observed in the crisis years of 2009-2011, with a prevailing sense of pessimism, again in 2014, when tax increases were introduced, and again in 2018. The balance of opinion regarding households' capacity to make major purchases broadly follows the year-on-year fluctuation of consumption, although these two indicators also diverged considerably during the period following the 2008 financial crisis and again in 2013-2014, with households revealing themselves to be more pessimistic than the aggregates would suggest. Between 2016 and 2018, on the other hand, they were more optimistic, and the same is true in 2019, following the negative spell at the end of 2018.

Nevertheless, aggregate consumption figures include forms of expenditure which households may not necessarily consider as "major purchases"[3], such as food, clothing and energy bills, but also spending on housing[4]. The category which best corresponds to this definition is capital goods[5]. The indicators for consumption of capital goods and the balance of opinion regarding major purchases thus follow relatively similar trajectories (*Graph 4*).

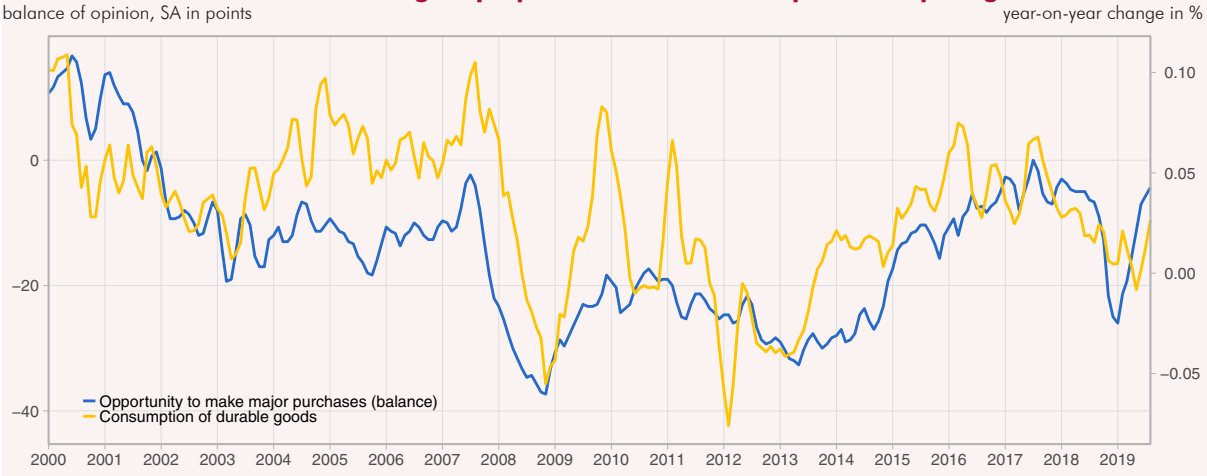
Balances of opinion among retirees have fluctuated considerably since mid-2017

Although the balances of opinion have picked back up for all of the categories of households considered here (*Graphs 5 to 10*), retired households have seen more variation than those in employment. Probably as a result of reforms affecting the general social contribution (CSG), their balance of opinion regarding their personal financial outlook declined considerably from mid-2017 onwards. In early 2019, however the rebound was rapid when the government abandoned its plans to raise the CSG on lower-income pensioners. *Graph 11* suggests that the biggest distinction in recent months has been between retired households and those in work, at least in terms of their respective balances of opinion. Other dimensions also play a role, but a logistic regression model reveals that, all other things being equal (and thus discounting disparities in age, gender, standard of living and geographical location), being retired has a negative impact on households' perception of their future financial prospects, with this pessimism among retired households appearing particularly strong between mid-2017 and the end of 2018 (*Annex 2*).

In 2018, rural households also succumbed more rapidly to pessimism regarding their future financial prospects than urban households (*Graph 9*). In 2019, the balance of opinion for wealthier households rebounded more significantly than that for lower-income households, a gap which continues to grow in this final quarter (*Graph 7*).

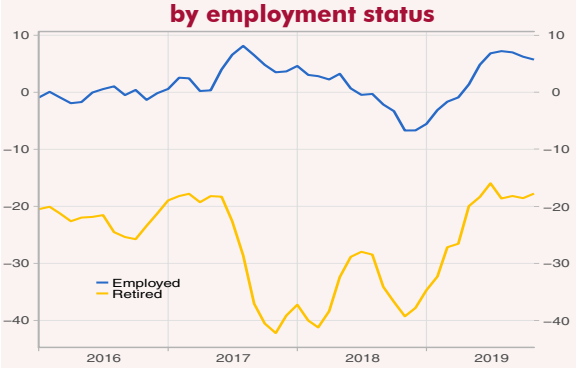
3. Business surveys give the following examples: "furniture, household appliances, electronic or computer equipment"
4. Counterintuitively with regard to the surveys, according to the national accounts this item relates to investment and not consumption.
5. Defined by the INSEE as vehicles, furniture, household appliances and leisure activities.

4 - Chances of making major purchases and consumption of capital goods

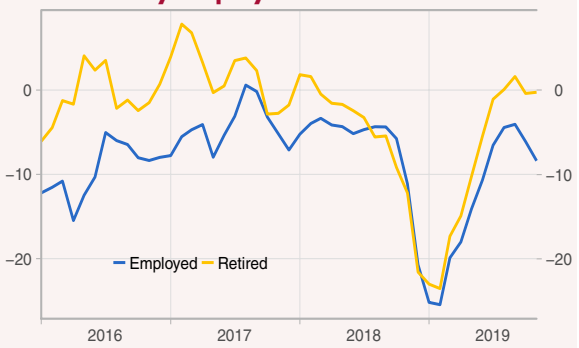


Note : the balance is the mean value of the monthly balances for each quarter
Source: Camme survey and quarterly national accounts (INSEE).

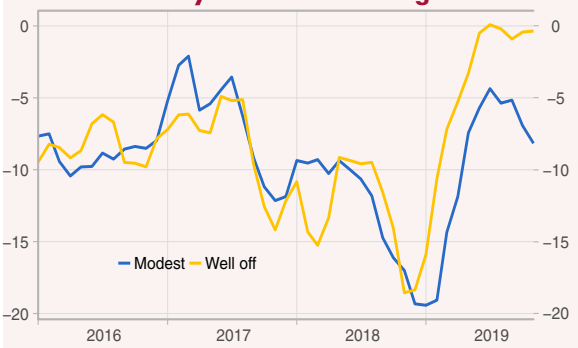
5 - Personal financial outlook, by employment status



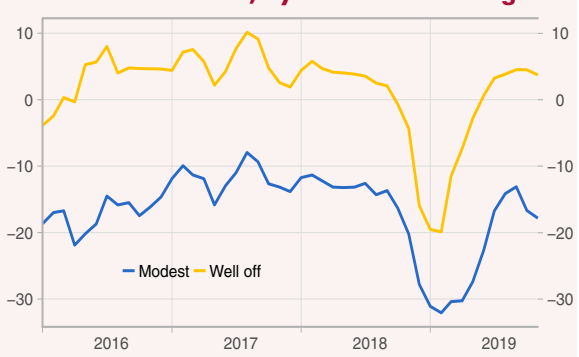
6 - Chances of making major purchases, by employment status



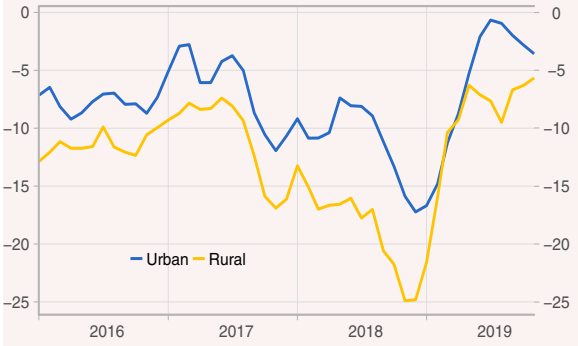
7 - Personal financial outlook, by standard of living



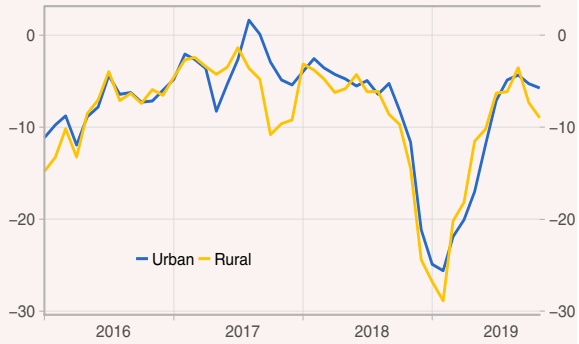
8 - Chances of making major purchases in the near future, by standard of living



9 - Personal financial outlook, by geographical zone of residence

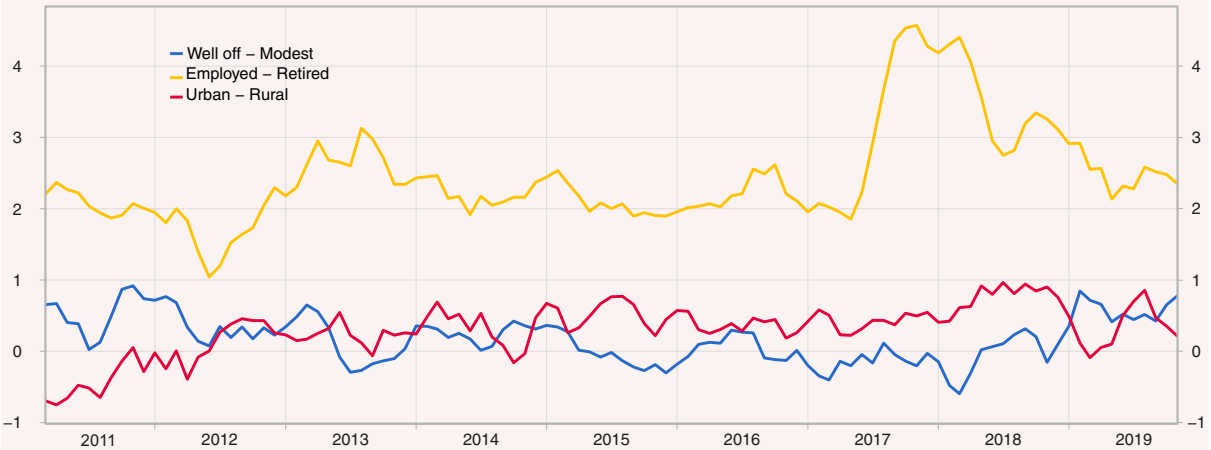


10 - Chances of making major purchases in the near future, by geographical zone of residence



Note: The balances presented are based on a three-month moving average
Source: Camme survey (INSEE).

11 - Personal financial outlook: differences between the balances for different categories



Key: For employment status, the disparity between the most optimistic households (those in employment) and the most pessimistic (those in retirement) is greater than the disparities between different standards of living and zones of residence. This perception gap peaked in 2017-2018.
Note: The balances shown here are the result of a moving average over three months.
Source: Camme survey (INSEE).

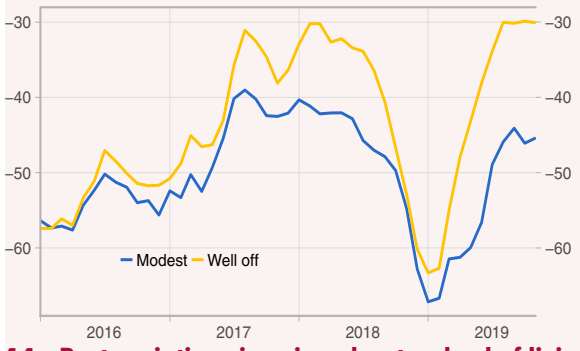
Variations in the balance of opinion regarding major purchases show less differentiation between household categories. The greatest disparities are between different levels of standard of living: wealthier households are generally more optimistic than lower-income households. The gap between retired households and those in employment was particularly small in 2018, but seems to have opened up again in 2019, with retirees once again becoming more optimistic about their consumption than those in work (*Graph 6*). The variations in this balance of opinion among rural and urban households are very similar (*Graph 10*).

The opinion of the wealthiest households regarding general standards of living in France deteriorated in 2018, albeit later than that of lower-income households, but has bounced back more vigorously in 2019

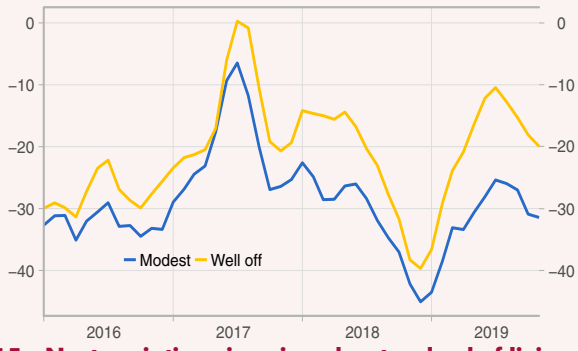
The INSEE's monthly tendency surveys also quiz households about their perception of standards of living in France, over the past twelve months and the coming twelve months.

Broken down into different categories of household, these balances show little difference between retirees and those in work, nor between urban and rural households. However, the deterioration in the balance of opinion among wealthier households regarding past standards of living in France was slower to come in 2018 than it was among lower-income households; the bounce-back in 2019, meanwhile, came more rapidly (*Graph 12*). The fluctuations in the respective balances of opinion regarding future standards of living followed a similar path, although the slide began in 2017: the gap between lower-income households and wealthier households has also grown recently (*Graph 13*).

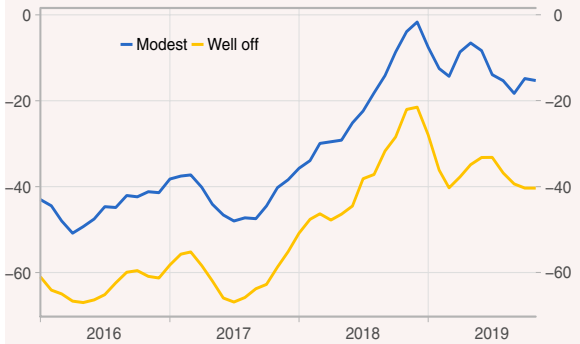
12- General standard of living in past 12 months, by standard of living



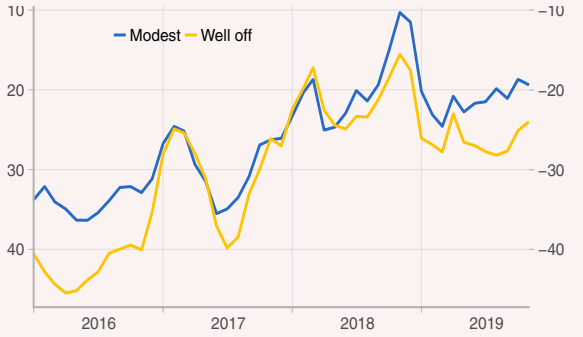
13 - General standard of living in next 12 months, by standard of living



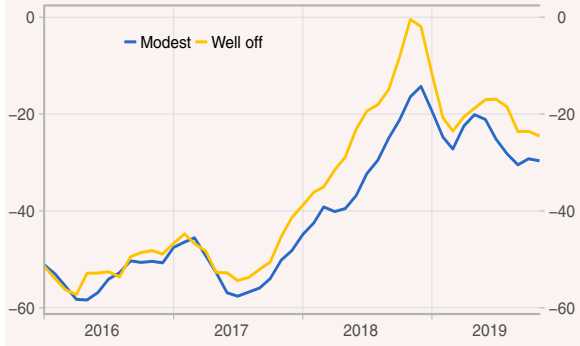
14 - Past variations in prices, by standard of living



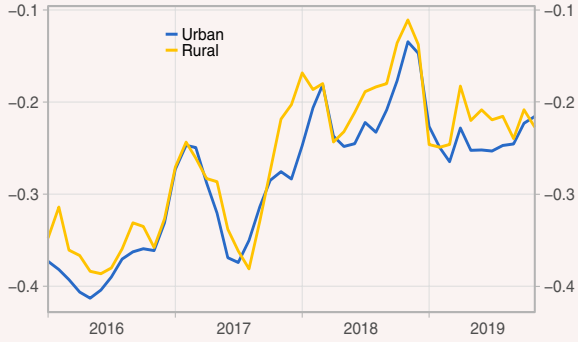
15 - Next variations in prices, by standard of living



16 - Past variations in prices, by geographical zone of residence



17 - Next variations in prices, by geographical zone of residence



Note: The balances shown here are the result of a moving average over three months.
Source: Camme survey (INSEE).

Opinions on prices: some differences depending on standard of living and geographical location

Finally, households are asked about their perception of variations in prices, over the past twelve months and the coming twelve months.

Breaking the answers down by category of household reveals there to be very little difference between respondents of different employment status. Lower-income households have a more acute perception of past price increases than wealthier households; the same is also true, though to a lesser extent, for future price expectations. For both balances, the gap between rich and poor widened in 2019 (*Graphs 14 and 15*). The difference between the balances calculated for different geographical zones also increased in 2018, and, after falling briefly, increased again in 2019 (*Graph 16*). The difference between the balances of opinion for rural and urban households has not, however, returned to the remarkably high level seen in 2018, which can probably be attributed to the rise in oil prices at that time. ■

Appendix 1

Consumer confidence surveys

Consumer confidence surveys (Camme) are conducted by telephone, with a sample of around 2000 households contacted over the first three weeks of each month. The balances of opinion are calculated as the difference between the respective shares of positive (+) and negative (–) responses.

These surveys provide socio-demographic information which can be used to calculate balances of opinion for different categories of households. Lower-income households are defined here as those whose income per consumption unit is below the median value identified in this survey. Wealthier households, on the other hand, are defined as those whose income per consumption unit is above the median value. Due to the small sample size no attempt is made to break the households down into quintiles, information which would be pertinent for analysing the impact of the gradual abolition of local residents' tax. The only reference value used is the median, i.e. the standard of living at which half of the surveyed households are above and half below.

Furthermore, the distinction between rural and urban settlements is based on the official geographical code issued on 1st January 2018. A unit is classed as urban when the municipality in which the household resides belongs to an urban unit with a population of more than 2000.

The questions selected for this study in this study are as follows:

Personal financial outlook: *Do you think that, over the next twelve months, the financial situation of your household will...* Improve considerably (+) Improve slightly (+) Remain stable Deteriorate slightly (–) Deteriorate considerably (–)	**Chances of making major purchases:** *Given the current economic circumstances, do you think the time is right for people to make major purchases? (furniture, electrical goods, electronic or computer equipment)* Yes, circumstances are favourable (+) Circumstances are neither favourable nor unfavourable No, circumstances are unfavourable (–)
Past variation in standards of living in France:*À votre* *In your opinion, over the past twelve months, has the general standard of living in France…* Improved considerably (+) Improved slightly (+) Remained stable (–) Deteriorated slightly (–) Deteriorated considerably (–)	**Future variation in standards of living in France:** *In your opinion, over the coming twelve months, will the general standard of living in France …* Improve considerably (+) Improve slightly(+) Remain stable(–) Deteriorate slightly (–) Deteriorate considerably (–)
Past prices: *Over the past twelve months, do you feel that prices have…* Increased sharply (+) Increased moderately Increased slightly (–) stagnated (–) fallen (–)	**Future prices:** *Compared with the preceding twelve months, how do you think prices will change over the coming twelve months?* Increase more rapidly (+) Increase at the same rate Increase more slowly (–) Prices will remain stable (–) Prices will decrease (–)

Appendix 2

Econometric model (logistic regression)

We consider the determinants of positive answers (more positive than negative) for the balance of opinion on personal financial prospects. The model used includes the different socio-demographic variables, an indicator for the period July 2017 to September 2018, and a cross-linked effect between this variable and occupation status.

Six potential cross-linked effects were tested using different period indicators (July 2017-September 2018 and October 2018-March 2019) and household categories (employment status, standard of living and geographical context). Cross-linking standards of living and geographical zone of residence did not yield significant results for either period. The link between the second period and employment status was not significant either: the significance was barely below the 5% threshold, and proved to be worse still if we adjusted the number of months covered. We therefore opted to retain only the cross-comparison between the first period and employment status, which was highly significant, coming in under the 0.01% threshold. The same was also true of the socio-demographic variables. ■

Table 1- Logistic regression of positive answers (more positive than negative) regarding personal financial prospects

Explanatory variables	Effect (probability) and significance
Gender	
Women	Réf.
Men	1,50***
Age	
Under 30	4,09***
30 - 44 years	2,36***
45 - 59	Réf.
60 - 74	0,50***
Over 75	0,36***
Income level	
Modest	Réf.
Wealthy	1,27***
Residential context	
Rural	Réf.
Urban	1,13***
Employment status	
In work	Réf.
Retired	0,64***
Retired x (July 2017 to September 2018)	0,61***
Other	1,14***
Other x (July 2017 to September 2018)	0,95
Period	
Rest of this period	Réf.
July 2017 to September 2018	1,48***
Constant	
Number of observations: 63468 Estimation period: January 2011 to November 2019 (monthly data series) Pseudo R2 : 14%	

How to read it: a respondent under the age of 30 is 4.1 times more likely to give a positive response regarding their personal financial outlook than a respondent from a household with the same characteristics but with an age in the 45-59 range. This estimated probability is significantly non-zero with a 0.01% threshold.

Source: INSEE, Camme survey. INSEE calculations

Household consumption and investment

In Q3 2019, household consumption expenditure gathered pace (+0.4%, after +0.2%). New car purchases were particularly dynamic. Consumption of services increased at the same rate as during the previous quarter (+0.4%).
In Q4 2019, consumption is expected to slacken slightly (+0.3% after +0.4%), largely due to the slowdown in spending on goods (+0.2% after +0.4%). Consumption of foodstuffs is likely to bounce back but energy consumption should edge down and consumption of consumer durables looks set to slow. Consumption of services is expected to increase again at the same rate as in the previous quarter (+0.4%), despite a decline in consumption of transport services due to strikes in this sector. In H1 2020, household consumption should therefore keep growing at this trend rate (+0.3% per quarter).
On average in 2019, household consumption is likely to increase at a slightly faster rate than in 2018 (+1.2% after +0.9%). Purchasing power should accelerate sharply (+2.1% after +1.2%), most notably due to the effect of the emergency economic and social measures implemented in Q1 2019. The savings ratio is therefore likely to reach its highest level since 2012 (14.9% against 14.2% in 2018; 15.2% at the end of 2019). However, it should gradually decrease during H1 2020 to stand at 14.7% in spring 2020.
Household investment is set to slow in Q4 (+0.3% after +0.7%), driven by the slowdown in the number of building permits for one-family dwellings in late 2019 and early 2020. Nevertheless, throughout 2019, household investment is expected to increase at the same rate as in 2018 (+2.0%).

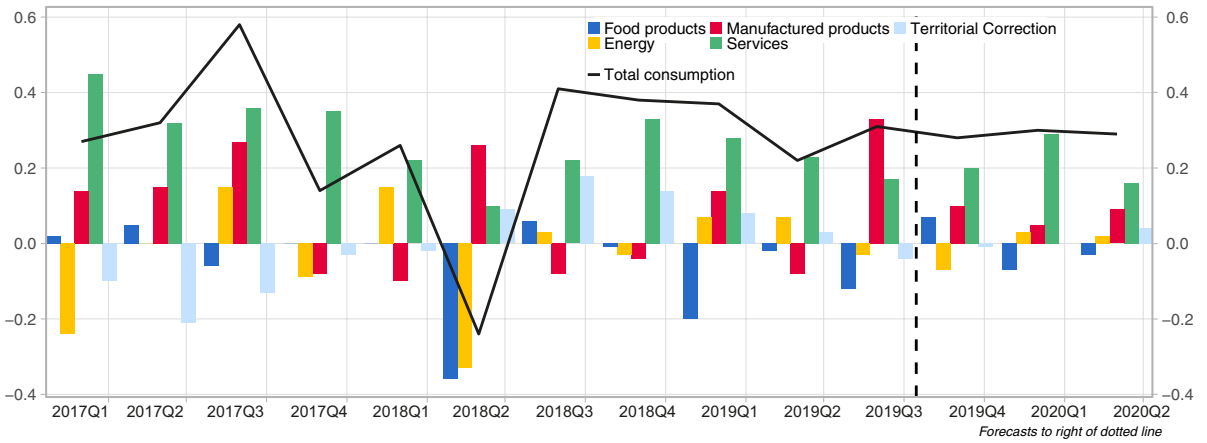
Consumption picked up marginally in Q3 2019

Household consumption accelerated again in Q3 2019 (+0.4% after +0.2% in Q2; Graph 1). Indeed, consumption of services increased at the same rate as in the previous quarter (+0.4%) and consumption of goods recovered (+0.4% after 0.0%). In particular, consumption of consumer durables rebounded sharply (+2.7% after –0.9%), driven by the buoyancy of new car sales in July and August, in anticipation of the second wave of stricter new car approval testing requirements in Europe on 1st September 2019. Consumption of household durables slowed, but that of other consumer durables ramped up sharply (+1.5% after +0.6%). Consumption of textiles edged down somewhat (–0.2% after +0.4%), while that of other manufactured goods rebounded (+0.7% after –0.1%) and food consumption slipped back for the fourth consecutive quarter (–0.6% after –0.1%). Energy consumption remained stable (0.0% after +1.0%), with the rebound in fuel spending being offset by lower gas and electricity consumption.

Consumption of services increased again, as the acceleration in consumption of leisure services and, to a lesser extent, of transport services offset the sharp slowdown in consumption of accommodation and food services.

1 - Contributions of the various items to quarterly household consumption

quarterly variations in %, contributions in points



Source: INSEE

Consumption should slow only marginally in Q4 2019

In Q4 2019, total household consumption is expected to slow down a little (+0.3%, Table), marked by the slowdown in household spending on goods (+0.2%, after +0.4%). Indeed, household spending on energy is likely to decrease, on both gas and electricity but also on fuels, and consumption of manufactured goods is set to slow down significantly, particularly the consumption of automotive-related goods. Consumption of household durables should pick up somewhat, but that of other consumer durables is expected to slow. Spending on clothing and textiles is likely to drop again slightly, and consumption of other manufactured goods is set to slow down. However, food consumption should increase (+0.4%) after four consecutive quarters of decline. All in all, consumption of manufactured goods is expected to be sluggish in Q4 (+0.2% after +0.9%).

Consumption of services is expected to increase at the same rate as the previous quarter (+0.4%), driven by the acceleration in consumption of accommodation and food services, despite a sharp decline in spending on transport services (–1.1% after +1.0%), linked to the strikes in October and December 2019.

In H1 2020, consumption is likely to maintain steady growth

Household consumption is set to increase again in H1 2020 (+0.3% per quarter). Indeed, despite household consumption of goods stabilising in Q1 2020 (0.0%), notably due to the decline in consumption of foodstuffs and the slowdown in consumption of manufactured goods, household consumption of services is expected to accelerate slightly (to +0.5%), driven by the rebound in consumption of transport services. In Q2 2020, consumption of goods is expected to pick up a little (+0.2% after 0.0%), whereas consumption of services should slow down slightly (+0.3% after +0.5%).

The savings ratio is set to rise in Q4 before falling in H1 2020

At the end of 2019, the household savings ratio is expected to increase again (from 14.8% in Q3 to 15.2% in Q4; Graph 2), due to the combined effects of accelerating purchasing power and relatively sluggish household consumption. Over 2019 as a whole, the savings ratio is likely to be higher than in the previous year (14.9% after 14.2% in 2018), and at its highest level since 2012. In H1 2020, it should gradually decline (from 15.2% at the end of 2019 to 14.7% in Q2 2020), while household purchasing power is expected to slow significantly (0.0% per quarter after +0.8% at the end of 2019).

1 - Household consumption and investment expenditure

in %

	Quarterly changes										Annual changes		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Total household consumption expenditure (1)+(2)+(3)	**0.2**	**–0.2**	**0.4**	**0.4**	**0.3**	**0.2**	**0.4**	**0.3**	**0.3**	**0.3**	**0.9**	**1.2**	**1.0**
Services (1)	**0.4**	**0.2**	**0.4**	**0.6**	**0.5**	**0.4**	**0.4**	**0.4**	**0.5**	**0.3**	**1.9**	**1.8**	**1.4**
Goods (2)	**0.1**	**–0.9**	**0.0**	**–0.1**	**0.0**	**0.0**	**0.4**	**0.2**	**0.0**	**0.2**	**–0.4**	**–0.1**	**0.5**
including													
Food	0.1	–2.0	0.4	–0.2	–1.1	–0.1	–0.6	0.4	–0.5	–0.2	–1.4	–1.8	–0.6
Agriculture goods (AZ)	0.2	–2.3	–0.9	–1.1	–0.9	1.9	–3.8	2.6	–1.2	–0.6	–3.0	–2.6	–1.2
Agri-food products (C1)	0.0	–1.9	0.7	0.0	–1.1	–0.5	0.0	0.0	–0.3	–0.1	–1.1	–1.6	–0.5
Energy	1.7	–4.1	0.3	0.2	0.5	1.0	0.0	–0.9	0.4	0.3	–1.0	0.2	0.2
Energy, water and waste (DE)	2.8	–7.3	1.9	–0.2	0.2	2.3	–0.9	–0.9	0.6	0.4	–0.8	0.1	0.4
Coke and refined petroleum (C2)	0.3	0.0	–1.6	0.6	0.8	–0.5	0.9	–0.8	0.2	0.2	–1.2	0.4	0.1
Engineered goods (C3 à C5)	**–0.4**	**1.2**	**–0.4**	**–0.2**	**0.7**	**–0.4**	**1.5**	**0.5**	**0.2**	**0.4**	**0.7**	**1.2**	**1.6**
Manufactured goods (C1 à C5)	**–0.2**	**–0.1**	**–0.1**	**–0.1**	**0.0**	**–0.5**	**0.9**	**0.2**	**0.0**	**0.2**	**–0.1**	**0.1**	**0.6**
Territorial correction (3) = (4) - (5)	**1.4**	**–5.5**	**–11.7**	**–10.4**	**–6.8**	**–2.9**	**3.7**	**1.3**	**0.0**	**–3.7**	**–1.5**	**–21.0**	**–0.7**
Imports of touristic services (4)	0.4	2.1	2.2	3.5	3.5	1.7	1.1	0.5	0.0	0.5	5.2	10.0	1.7
Exports of touristic services (5)	0.8	–0.5	–2.3	–0.5	0.8	0.6	1.7	0.7	0.0	–0.5	3.0	0.6	1.1
Investment expenditure	**0.1**	**0.7**	**0.3**	**–0.2**	**0.2**	**1.7**	**0.7**	**0.3**	**0.3**	**0.4**	**6.6**	**2.0**	**1.6**

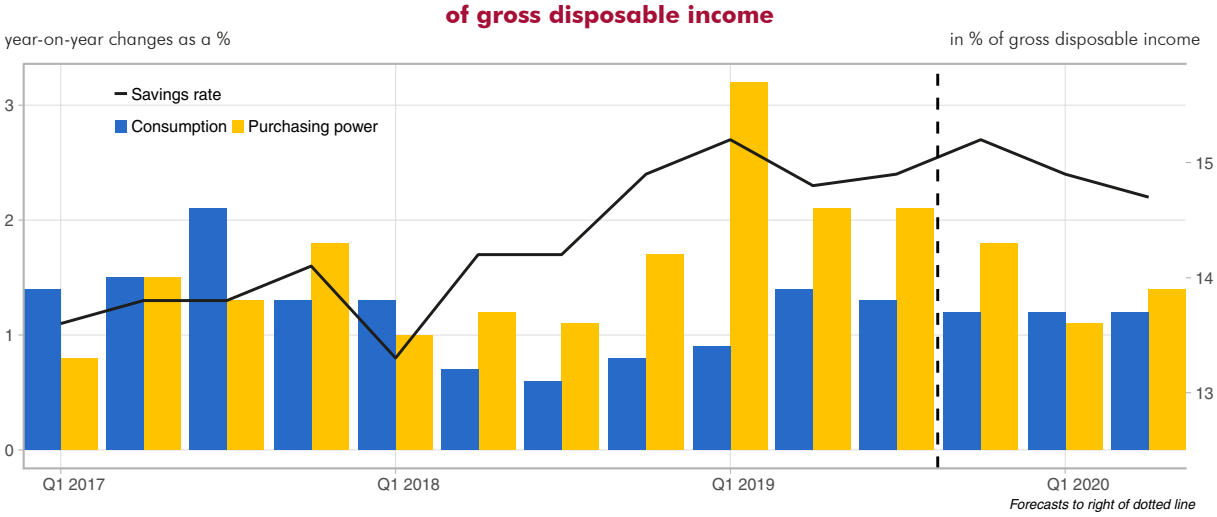
forecast

Source: INSEE

Household investment is likely to slacken in Q4 2019

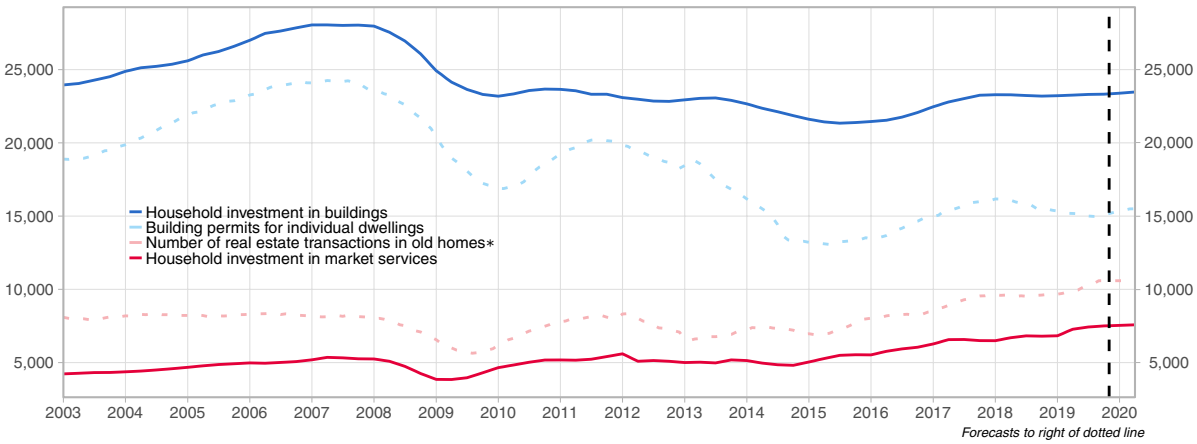
In Q3 2019, household investment slowed (+0.7%, after +1.7%). It is expected to slacken again in Q4 (+0.3%) and then maintain this rate in H1 2020 (+0.3% in Q1, followed by +0.4% in Q2). Indeed, the number of building permits for one-family dwellings is set to slow down in Q4 2019 and again in H1 2020 (*Graph 3*). Real estate transactions should remain at a high level but are not expected to increase. On an annual average basis, household investment in 2019 is likely to rise at the same rate as in 2018 (+2.0%) before slowing down slightly in 2020: the annual growth overhang for household investment should stand at +1.6% by mid-2020. ■

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



Source: INSEE

3 - Household investment on construction and housing starts



* monthly average over 18 months
** cumulated over 12 months, in thousands
Source: INSEE

Enterprises' earnings

In 2019, the margin rate of non-financial corporations (NFCs) should reach 32.5%, its highest level since 2008, due mainly to the one-off "double payment" from the competitiveness and employment tax credit (CICE), which has been transformed into an exemption from employer contributions.
At the beginning of 2019, although payment of the special bonus for purchasing power hampered the margin rate, it was also able to benefit in Q4 from the reduction in employers' contributions to unemployment insurance. The terms of trade are also expected to be favourable across the year.
In 2020, with the end of the "double payment" from the CICE, the margin rate is expected to come down to 31.7% in Q2. The positive effects of productivity gains and terms of trade are also likely to diminish over the forecasting period.

An important feature of 2019 was the transitional "double payment" from the CICE

In Q2 2019, the margin rate of NFCs reached 32.7%, a level not seen since 2007 (*Graph 1*). As a result of the transformation of the competitiveness and employment tax credit (CICE) into an exemption from employer contributions at the start of 2019, non-financial corporations benefited from a "double payment": one from the 6-point reduction in sickness contributions, the other linked with the pay-out of the CICE in 2019 based on 2018 wages. This transitional "double payment" has buoyed up the margin rate throughout 2019. In addition, the terms of trade have been favourable, partly offsetting the negative effect on the margin rate of companies paying exceptional bonuses. In Q2, real wages slowed dramatically as a backlash to the exceptional bonus at the beginning of the year. After this their moderate growth should be similar to that of productivity until Q4 2019 (*Graph 2*).

At the end of the year, the margin rate is expected to reach 32.8% (*Table*), with the extension of general reductions in contributions to unemployment insurance contributing +0.3 points to this increase. In industry, where the margin rate is structurally higher than in services, it has exceeded its level from the beginning of 2017 (*Graph 3*). On average in 2019, the margin rate for NFCs, all sectors combined, therefore looks set to rise by +1.3 points.

The margin rate is expected to fall in H1 2020 with the end of the CICE

In H1 2020, with notably the end of the CICE, the margin rate of NFCs is expected to decline and reach 31.7% in spring.

Breakdown of the margin rate of non-financial corporations (NFCs)
in % and in points

	Quarterly changes										Annual changes		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Margin rate (in level)	**31.5**	**30.9**	**31.2**	**31.5**	**32.3**	**32.7**	**32.4**	**32.8**	**31.5**	**31.7**	**31.2**	**32.5**	**31.7**
Variation in margin rate	**–0.3**	**–0.5**	**0.3**	**0.3**	**0.8**	**0.4**	**–0.3**	**0.4**	**–1.2**	**0.1**	**–0.5**	**1.3**	**–0.9**
Contributions to the variation margin rate													
Productivity gains	–0.2	–0.1	0.1	0.2	0.0	–0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Real wage per capita	0.2	–0.2	0.0	–0.3	–0.6	0.5	–0.3	–0.1	–0.1	0.0	–0.2	–0.6	–0.2
Employer contribution ratio	0.0	0.0	0.0	0.1	1.1	–0.1	0.1	0.3	0.0	0.0	–0.1	1.2	0.3
Ratio of the value-added price to the consumer price	–0.3	–0.2	0.1	0.1	0.4	0.0	0.1	0.1	0.1	0.1	–0.5	0.6	0.2
Other factors	0.1	0.0	0.0	0.1	–0.1	0.0	–0.1	0.0	–1.2	0.0	0.0	–0.1	–1.2

forecast

How to read it: : the margin rate (TM) measure the share of value-added which remunerates capital. Its varation 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]

$$TM = \frac{EBE}{VA} \approx 1 - \frac{WL}{YP_{va}} + autres\ facteurs = 1 - \frac{L}{Y}\frac{W}{SMPT}\frac{SMPT}{P_t}\frac{P_t}{P_{va}} + autres\ facteurs$$

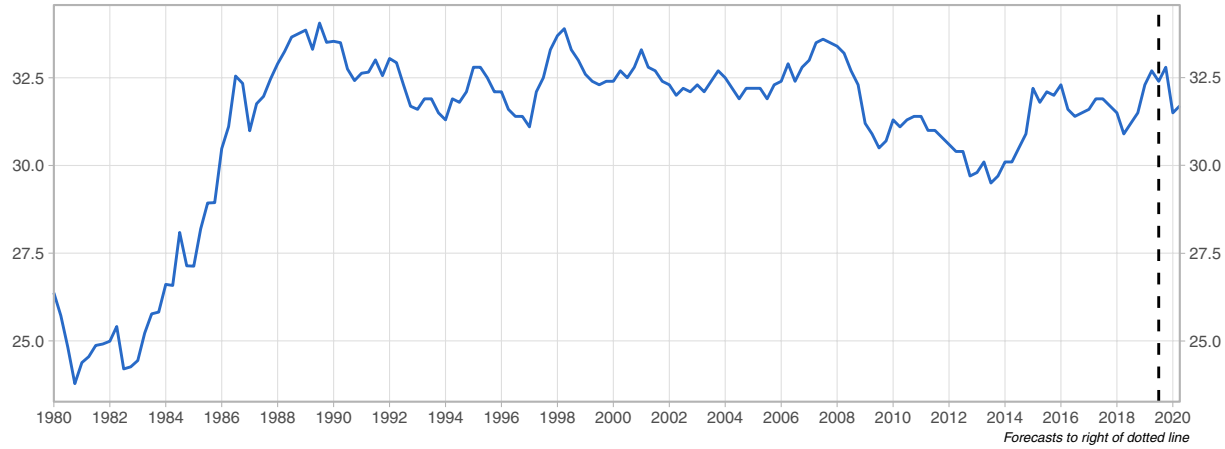
1. The CICE reduces companies' corporation tax, but in the national accounts it is recorded as a subsisty to companies, as recommented in the latest version of the European System of Account (SEC 2010).

Source: INSEE

However, this downturn should be offset in part by payments of the outstanding balance of loans passed from the CICE to certain companies that are still beneficiaries. Additionally, the renewal of the exceptional bonuses paid by companies to some of their employees could contribute negatively to the margin rate at the start of the year, although in a way that is less notable than at the start of 2019 due to the more restrictive conditions. In addition, real wages and hence payroll are expected to be relatively more dynamic than productivity, which can affect the margin rate of NFCs. The terms of trade are no longer expected to sustain the margin rate. ■

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

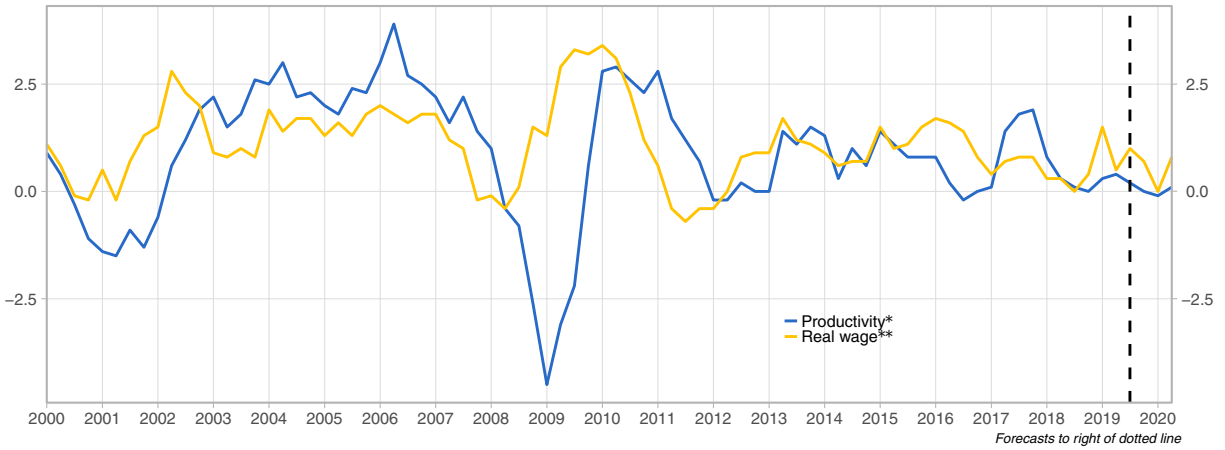
as a % of value added



Source: INSEE

2 -Productivity and real wages

year-on-year changes in %

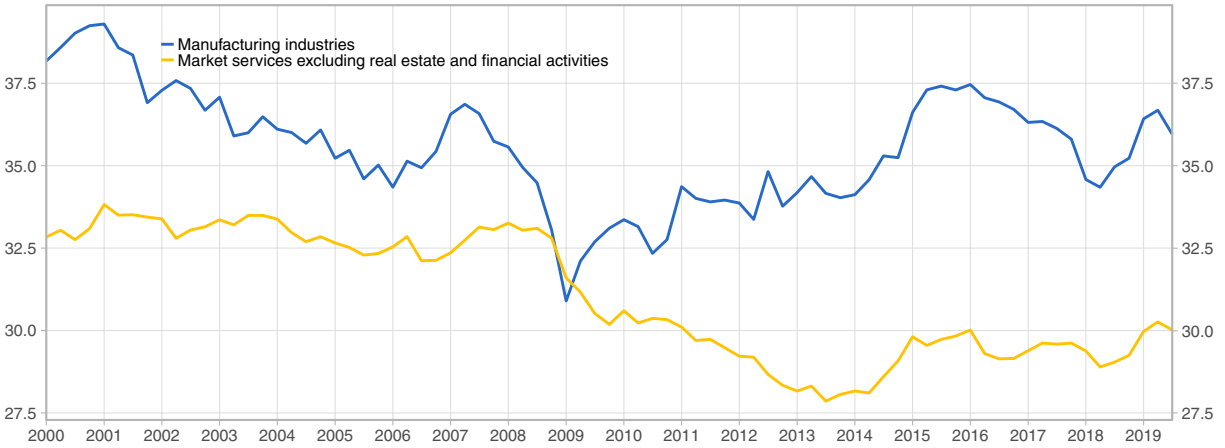


Source: INSEE

* Productivity: value added (in volume) of NFCs in relation to paid employment of NFCs
** Real wage: average wage per capita in relation to household consumption prices

3 - Margin rate in industry and services

year-on-year changes in %



Source: INSEE

Corporate investment and inventory

Investment by non-financial enterprises (NFEs) accelerated in Q3 2019 (+1.4% after +1.1% in Q2), driven once again by investment in services and buoyed by favourable financial terms. According to the business surveys, production capacity tensions continued to ease but remained high. In Q4, corporate investment is expected to slow down (+0.6%), due to the decline in spending on manufactured goods. In a macroeconomic context that is less favourable to investment, it should remain virtually unchanged in Q1 2020 (+0.7%) and in Q2 (+0.6%). On an annual average basis, overall investment by NFEs is expected to grow by +4.1% in constant euros in 2019, in keeping with 2018 (+3.9%), and then slow down through to mid-2020 (with a growth overhang of +2.6%). The investment rate should continue to rise and is likely to approach 25% over the forecasting period.
In Q3 2019, changes in inventories made a negative contribution to growth (–0.1 GDP points), due mainly to changes in inventories of "other industrial products". Inventories are expected to make a negative contribution to growth at the end of 2019 (–0.1 points), and then throughout H1 2020.

Corporate investment maintained a sustained pace in Q3 2019

In Q3 2019, investment by non-financial enterprises (NFEs) increased more vigorously than in the previous quarter (+1.4% after +1.1%, Table 1). NFE investment in services accelerated to +1.8% after +1.2%, boosted by investment in information and communication services (+3.4%). Investment in manufactured goods also picked up, to +1.5% after +1,0%, driven by investment in transport equipment. However, investment in construction slowed to +0.6% after +0.9% in Q2. Since NFE investment was more dynamic by value than value added in Q3 2019, the NFE investment rate increased again (*Graph 1*).

Corporate investment is likely to slacken in late 2019 and should maintain this pace in early 2020

According to the October 2019 business survey on investment in industry, business managers expect to increase their investment expenditure on tangible assets and software by 4% in value between 2018 and 2019. For 2020, business managers expect their investment to be virtual identical (–1%) to the 2019 level. This initial estimate for 2020 is below the first estimate given

Investment by non-financial enterprise (NFEs)

at chain-link previous year prices, SA-WDA

	Quarterly changes										Annual changes		
	2018				2019				2020		2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	T2			ovhg
Manufactured products (34%)	–2.3	1.4	1.4	0.0	1.5	1.0	1.5	–0.1	0.4	0.4	2.0	4.1	1.6
Construction (24%)	0.7	1.0	0.8	1.0	0.7	0.9	0.6	0.3	0.3	0.1	3.5	3.2	1.2
Other (42%)	1.3	1.0	1.8	1.9	–0.2	1.2	1.8	1.3	1.2	1.1	5.5	4.6	4.3
All non-financial enterprises (100%)	**–0.1**	**1.1**	**1.4**	**1.1**	**0.5**	**1.1**	**1.4**	**0.6**	**0.7**	**0.6**	**3.9**	**4.1**	**2.6**

forecast
Source: INSEE

for 2019 in October 2018, but close to the initial investment estimate for 2018 provided by the October 2017 survey (*Graph 2*). This means that industrial business managers are less optimistic about their investments in the year ahead than at the same time last year. Since 2014, business managers' initial estimates of their future investments have been systematically lower than their actual investments: investment in 2020 therefore certainly promises to be lower than in 2019 but should nevertheless be more dynamic than its initial estimate (–1%).

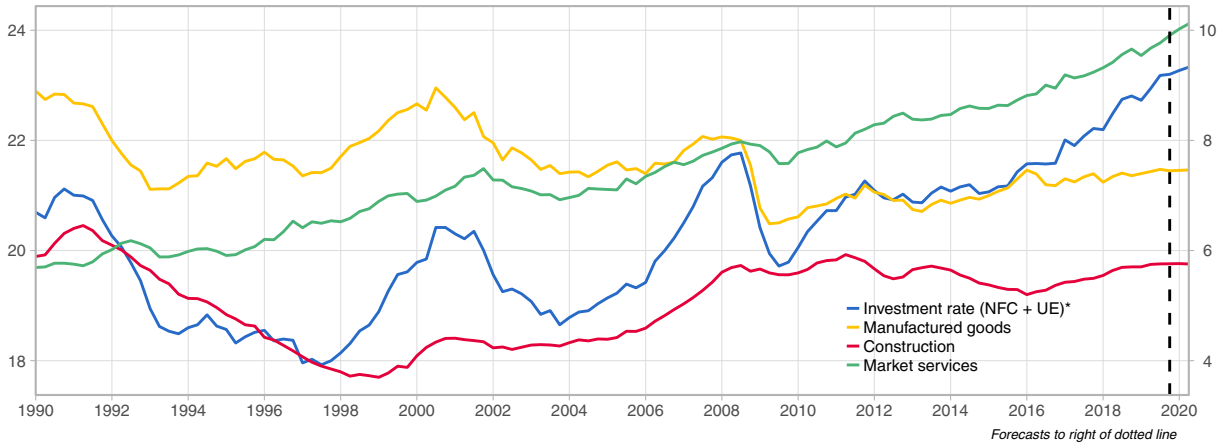
Production capacity pressures continue to ease but remain high. According to the quarterly business outlook survey on investment in industry, the production capacity utilisation rate, which stood at 83.2% in October 2019, is continuing its gradual decline after reaching a 10-year high in January 2018. Production bottlenecks are clearing again after a one-off increase in July, but remain at a high level (*Graph 3*). In the service sector, the balance of opinion on investment forecasts rebounded between July and November, and is well above its long-term average.

Financing terms at the beginning of 2020 are expected to be slightly less favourable to investment than in 2019. In particular, enterprises are no longer expected to benefit from the "double payment" of the competitiveness and employment tax credit (CICE) in 2020, now transformed into an exemption from employer contributions. The margin rate and the self-financing ratio of enterprises should therefore start falling in early 2020. In addition, real interest rates are expected to increase marginally.

NFEs' investment expenditure is therefore likely to remain vigorous but should slow down in Q4 2019 (+0.6%), and looks set to remain almost stable in Q1 2020 (+0.7%) and Q2 (+0.6%). As a result, NFE investment – driven by investment in services – is expected to grow by 4.1% in 2019, similar to the increase recorded in 2018 (+3.9%). Their investment rate should increase significantly.

1 - Investment rate of non-financial enterprises by type of product

in % of added value



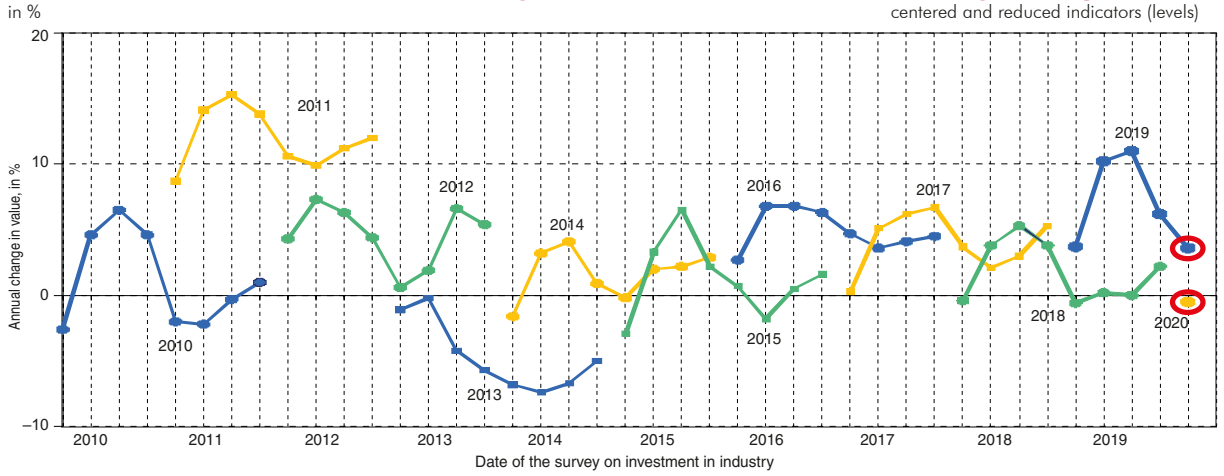
* Non-financial corporations (NFCs) = non-financial corporations (NFCs) and sole proprietorships (FS)

Source: INSEE

2 - Successive estimates of changes in investment in the manufacturing industry

in %

centered and reduced indicators (levels)



Note: Estimates from the last survey (October 2019) are surrounded. The growth in value of tangible capital expenditure and between 2018 and 2019 was successively estimated at 4% in October 2018, 10% in January 2019, 11% in April, 6% in July and 4% in October.

Source: INSEE

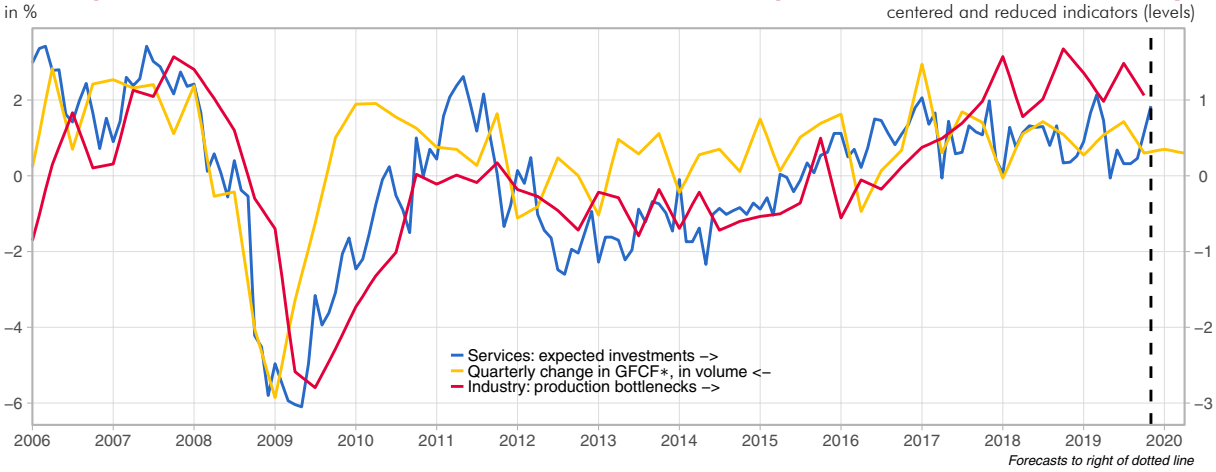
Investment in manufactured goods is set to slow sharply in Q4

The prospect of another change in the vehicle approval procedure (WLTP-RDE) on 1st September 2019 triggered a wave of registrations prior to this date, driving up investment in transport equipment (+2.6% in Q3 2019). This is likely to be counterbalanced in Q4 (–1.2%), driving down investment in manufactured goods (–0.1% after +1.5%). Over the year as a whole, NFE investment in manufactured goods is expected to grow by 4.1% in 2019, faster than in 2018 (+2.0%). It should then rise more moderately in H1 2020, still driven by the stabilisation of investment in cars and buoyant spending on capital goods.

Construction investment is likely to slacken in Q4 2019

The balances of opinion of civil engineering firms, based on their expected activity, weakened for both public and private clients in October. After initially bolstering government investment, the run-up to the municipal elections in March 2020 should lead to a slowdown (see Special Analysis entitled "The municipal election cycle"), dragging NFE investment down in its wake. Corporate investment in construction is therefore set to slacken in Q4 2019 (+0.3% after +0.6%), and then to maintain this pace in Q1 2020 before slowing again in Q2 (+0.1%). Growth in NFE investment in construction should stand at +3.2% in 2019, after a rise of +3.5% in 2018.

3 - Opinion on the future trend in investment in services and production bottlenecks in industry



* GFCF: Gross fixed capital formation

Source: INSEE, monthly survey in services and industry, quarterly national accounts

In 2020, investment in services is expected to lose some momentum

NFE investment in services declined in early 2019 before starting to rise again in Q2. It is likely to increase by 1.3% in Q4 and, on an annual average basis, it should remain almost as buoyant in 2019 as in 2018 (+4.6% after +5.5%). Investment in IT services and research and development remains driven by an underlying trend. Nevertheless, growth in investment in services is likely to slow in Q1 2020 (+1.2%) and Q2 (+1.1%), coinciding with the end of the «double payment» of the competitiveness and employment tax credit and with the decline in production capacity utilisation rates.

On average over 2019, changes in inventories should make a negative contribution to growth

In Q3 2019, the contribution of changes in inventories to GDP growth was slightly negative (–0.1 GDP points). The buoyancy of exports of "other industrial products", lower output and the decline in refinery output accelerated the destocking of this type of product. However, imports of "other transport equipment" were dynamic, while exports stalled, meaning that inventory change in these products made a positive contribution to growth. Indeed, aircraft deliveries slowed down after reaching very high levels in Q2 2019.

In Q4 2019, the contribution of inventory change to growth in activity is set to be slightly negative (–0.1 points). The delivery of an ocean liner, the catch-up effect of aeronautical deliveries at the end of the year, and the return to normal of transport equipment imports should see transport equipment inventory changes making a negative contribution to growth. Over 2019 as a whole, inventories are likely to make a negative contribution (–0.3 points).

In H1 2020, aeronautical and naval deliveries should return to their trend level, with a new ocean liner delivery at the beginning of the year offsetting the slowdown in the aeronautical delivery rate. Inventory changes should make a positive contribution to growth (+0.1 points) in H1 and then become neutral in H2. Throughout H1 2020, inventories are expected to make a negative contribution to the mid-year overhang. ■

2 - Contribution of inventory changes to growth

in GDP points

	Quarterly changes										Annual changes		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural products	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**–0.1**	**0.1**	**0.0**
Manufactured products	**0.0**	**0.2**	**–0.4**	**–0.3**	**0.1**	**–0.1**	**0.0**	**–0.1**	**0.0**	**0.0**	**–0.2**	**–0.4**	**–0.1**
Agrifood products	0.1	0.1	0.0	0.0	0.0	0.0	0.0						
Coke and refined petroleum product	–0.1	0.0	0.0	–0.1	0.2	0.0	–0.1						
Machinery and equipment goods	0.0	0.0	0.0	0.1	0.0	–0.1	0.0						
Transport equipment	0.0	0.1	–0.3	–0.1	0.0	0.1	0.2						
Other industrial goods	0.0	0.0	–0.2	–0.1	0.1	–0.1	–0.1						
Energy, water and waste	**0.0**	**–0.1**	**0.0**	**0.0**	**0.1**	**–0.1**	**–0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Others (construction, services)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
TOTAL[1]	**0.0**	**0.1**	**–0.4**	**–0.2**	**0.3**	**–0.2**	**–0.1**	**–0.1**	**0.1**	**0.0**	**–0.3**	**–0.3**	**–0.1**

forecast

1. changes in inventories include acquisitions net of sales valuables

Source: INSEE

International Development

Oil and raw materials

Demand is expected to slacken

In Q3 2019, the price of Brent stood at $62 per barrel on average, down 10% on Q2 2019.
The physical market was in deficit, according to the International Energy Agency (IEA), as supply has decreased (with the entry into force of OPEC production quotas) and demand has accelerated significantly. According to US Department of Energy (DoE) data, US commercial crude oil stocks declined in Q3.
The physical market is likely to remain slightly in deficit through to the end of 2019 before returning to surplus in Q2 2020, with global demand slowing down sharply.
The conventional assumption is that the price of Brent will stabilise at around $60 per barrel through to mid-2020.
This scenario is subject to several uncertainties. Firstly, it is based on the output of OPEC countries, and therefore on their compliance with production quotas until H2 2020, when the agreement expires. A possible escalation of geopolitical tensions in the Middle East could also lead to higher prices. There are also demand-side uncertainties, particularly concerning the extent of the global economic slowdown.
Commodity prices in euros rose marginally in Q3 2019 (+0.9%), driven by the prices of metals, in particular.

Price rises, following the attacks on Saudi facilities in September, were short-lived

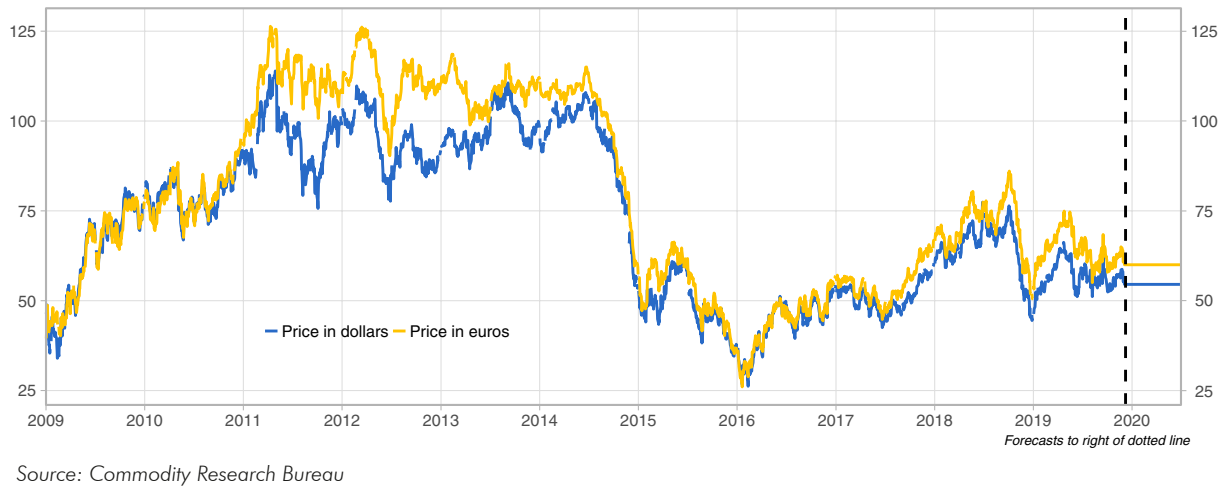
In Q3 2019, the average price of Brent crude stood at $62 per barrel (*Graph 1*), down 10% on Q2 2019 ($69) and 17% on Q3 2018 ($75). While it approached $72 per barrel of Brent crude oil in September after the attacks on oil facilities in Saudi Arabia, it quickly returned to its previous level. An oil price assumption of $60 per barrel applies throughout the forecasting period.

Demand is expected to slacken through to mid-2020

In Q3 2019, world demand accelerated sharply (*Graph 2*), driven by all consumer countries (European and American OECD countries, non-OECD countries and China). World demand is likely to slacken through to the end of the year, driven mainly by the emerging countries. In Q1 2020, world demand is expected to decline, primarily due to demand from the United States and China. Although it should bounce back in Q2 2020 – driven by American OECD member countries and China – it is likely to fall over the half-year as a whole, to +0.6 million barrels per day (Mbpd), after +1.3 Mbpd in 2019 and +0.6 Mbpd in 2018 (seasonally adjusted data).

1 - Brent prices in dollars and euros

monetary unit/barel



Source: Commodity Research Bureau

Supply looks set to rise

In Q3 2019, global supply decreased by 0.3 Mbpd, according to seasonally adjusted data (*Graph 3*), mainly due to the attacks on oil sites in Saudi Arabia in mid-September. As a result, in September, OPEC posted its lowest monthly oil production total since 2011. The attacks accentuated the dual impacts of the current agreement on reducing OPEC countries' production and the US sanctions against Iran and Venezuela.

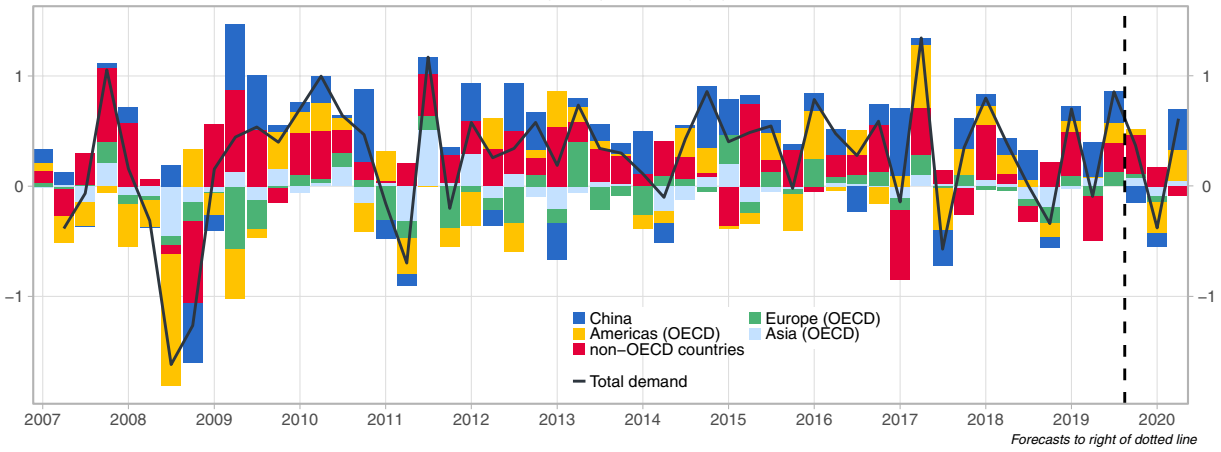
In this tense context, the output of OPEC countries declined in the third quarter, following the example of Saudi Arabia, Kuwait, the United Arab Emirates and Angola. In addition, Iranian output has fallen again. It is also down in Venezuela as US sanctions are preventing the investments required to restore the run-down oil network. Libyan output has also dropped. Iraq, however, is producing at a level that is once again higher than the ceiling set in the initial agreement. Lastly, US output increased slightly in Q3 2019, despite the decrease in the new rig count since October 2018.

In Q4 2019, OPEC output is expected to rise slightly. Libyan output also looks set to hold firm, but could be affected by political instability. Iraqi output is likely to be up, remaining above the agreed production limit. Iranian output should continue to suffer from US sanctions and the end of exemptions for some of Iran's trading partners. Venezuelan output is set to keep falling. Saudi Arabian output is expected to return to the levels reached before the attacks. According to the IEA, Russia also looks set to stabilise its output, whereas American output should rise moderately.

In Q1 2020, global supply is likely to be up again, driven mainly by the United States and Brazil as new oil projects come on stream. OPEC output is expected to decline again, as the agreement has been extended until June 2020. In Q2 2020, OPEC output should continue to fall, impacting the global supply, which is expected to slacken somewhat.

2 - Main contributors to the variation in global oil supply

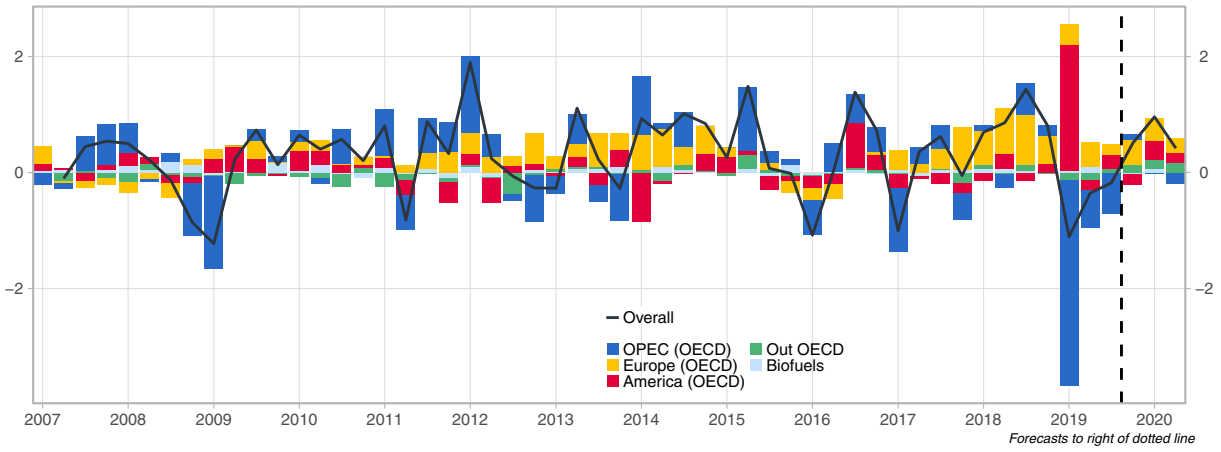
in million barrels per day, seasonally adjusted data



Source: AIE, INSEE

3 - proportion of companies reporting that they are limited in their activity due to a lack of manpower,

seasonally adjusted data in millions of barrels per day



Source: AIE, INSEE

All in all, world output is likely to rise until mid-2020. As demand looks set to slacken in early 2020, the market should be in surplus in H1 2020 (*Graph 4*).

Stocks remain high

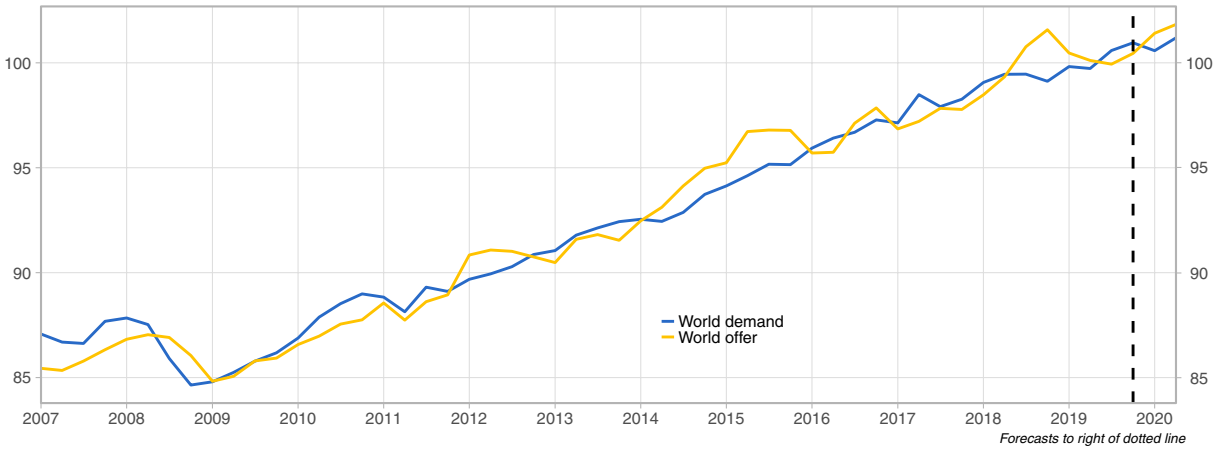
In Q3, US crude oil stocks decreased to 433 million barrels but remained well above (+30%) their 2011-2014 average. Any upward pressure on prices should therefore be curbed by this persistently high level of trade reserves.

Little variation in commodity prices as a whole

In Q3 2019, the prices of all commodities (in euros) increased significantly (+0.9%; *Graph 5*). This rise is mainly due to the increase in iron ore and scrap steel prices (+4.0%). Indeed, since the beginning of the year, iron ore prices have risen by nearly 20% due to the mining disaster in Brazil, tropical storm Veronica (which slowed down mining activity) and problems at major production sites in Australia. In contrast, cereal prices fell in Q3 (–0.2%), as did the prices of agricultural raw materials (–2.4%) and textile fibres (–14.6%). ■

4 - World oil market

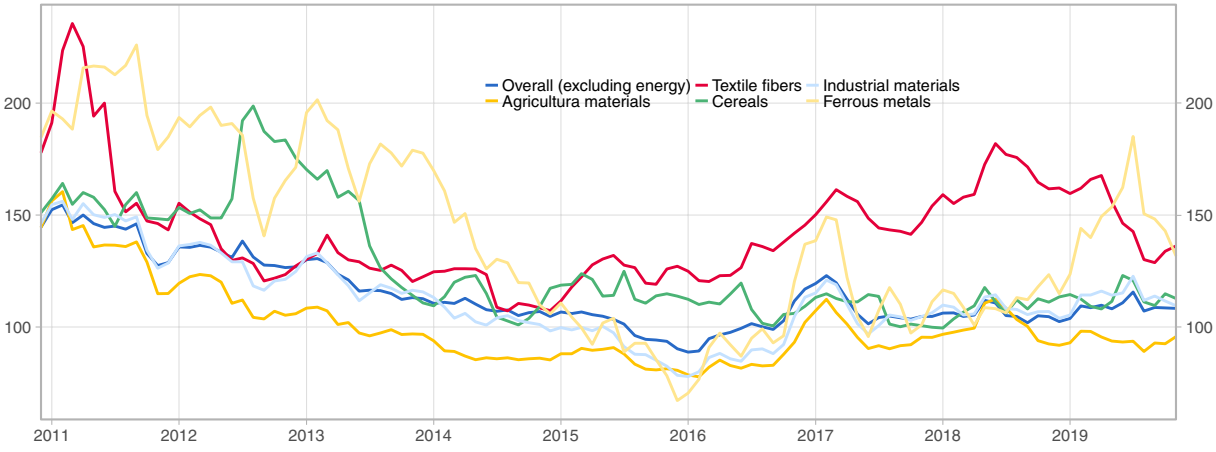
seasonally adjusted data in millions of barrels per day



Source: AIE, INSEE

5 - Commodity price indices in euros

base 100 in 2010



Source: HWWI

Financial markets

Central banks ease their monetary policy again

H1 2019 was marked by an easing of monetary policies on both sides of the Atlantic. The target range for the US Federal Reserve's effective interest rate has dropped by 75 basis points since July, standing at 1.5% to 1.75% in early November. The European Central Bank (ECB) has decided to lower the deposit facility rate to –0.5%, maintain its refinancing rate at 0% and relaunch the quantitative easing policy of buying assets on financial markets.
In addition, outstanding loans continue to increase throughout the Eurozone, despite persistent disparities: they are rising sharply in France and Germany but continue to decline in Italy and Spain.
In France, outstanding loans grow more than in the other major European partner countries, with lower interest rates for households, in particular.
The euro exchange rate forecasts are fixed at 1.11 dollars, 0.87 pound sterling and 120 yens. The real effective exchange rate for French exporters is expected to drop slightly in Q4 2019 and then stabilise over the forecasting period.

The US Federal Reserve (Fed) has reduced its base rates and is taking steps to offset the lack of liquidities on the interbank market

The Fed has reduced three times its main base rate by 25 basis points since the end of July. Its upper limit currently stands at 1.75% (*Graph 1*). At the press conference on 30 October, the Fed Chairman pointed out that in light of the good health of the US economy, the institution was not planning to lower its rates again in the coming months. The low levels of unemployment (3.6% in October) and inflation, which remains well below its 2% target (at 1.7% in September 2019), are the main arguments in support of this stable rate outlook.

In addition, in mid-September, the US collateralized interbank market suffered a liquidity squeeze when the rate on this market soared from 2.4% to 10% within a few hours. The effective rate briefly exceeded its upper limit set by the Fed, which then intervened to provide the markets with the liquidity they were lacking. As a result, the Fed has resumed an asset-purchasing policy, which has increased the size of its balance sheet again. Since then, it is up this right to make massive short-term asset purchases because the market is still thought to be exposed to risks of occasional shortages.

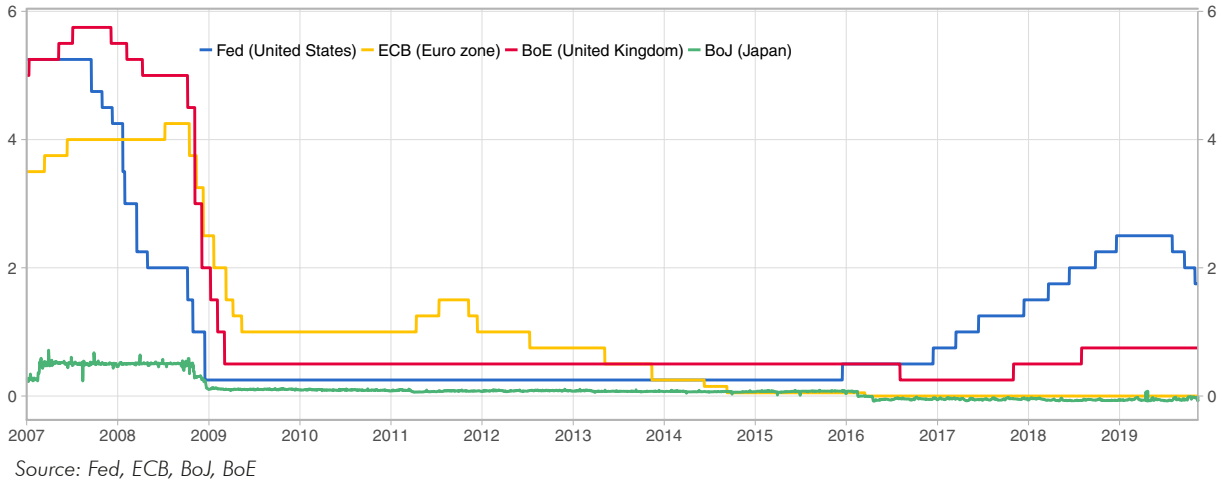
The ECB is striving to move closer to its inflation target by intervening directly on financial markets

On 12 September 2019, the ECB decided to reduce the deposit facility rate by 10 basis points to –0.5%, but without changing the other two rates. This measure is intended to further discourage banks from depending liquidity at the ECB.

In addition, on 1st November 2019, the ECB resumed its quantitative easing policy by buying €20 billion of assets per month on the financial markets. The size of the ECB's balance sheet is therefore expected to increase again in the future.

1 - Base rates of the main central banks

in %



Source: Fed, ECB, BoJ, BoE

The resumption of such a policy can be explained essentially by the fact that inflation (headline and core) remains below the 2% target level in the Eurozone. Indeed, inflation in the Eurozone stood at +1.0% in November and core inflation reached +1.5%.

US and European sovereign yields have fallen once again since the beginning of the year

The decline in US and European sovereign yields, observed since January 2019, can be mainly explained by the implementation of a more accommodating monetary policy than expected in the United States (*Graph 2*).

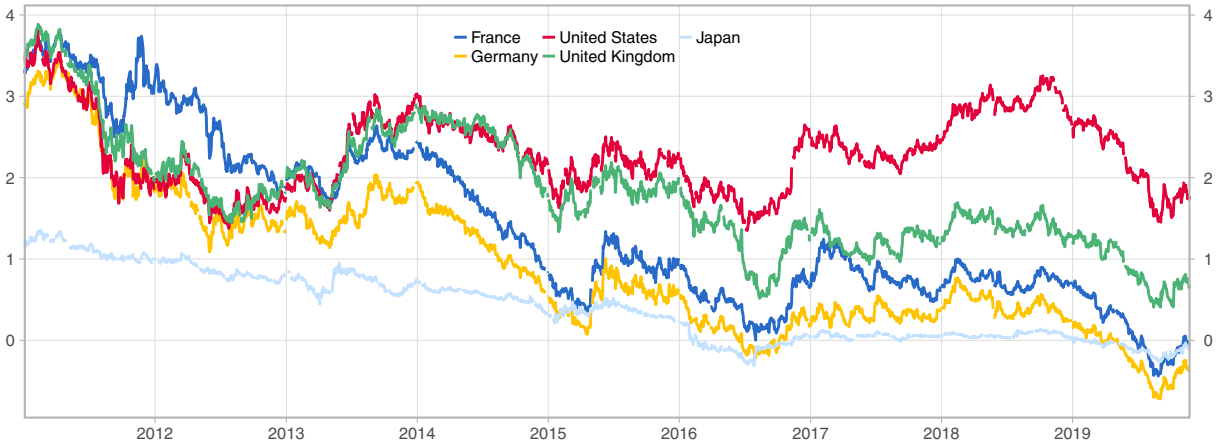
At the same time, the Italian rate has fallen significantly, from an average of 2.5% in April to 1.4% today, which will alleviate the future debt burden weighting on the Italian budget. In addition, the Italian spread, defined as the gap between the Italian and the German 10-year bound yields, has also dropped to 170 basis points (*Graph 3*). This period of calm on the markets appears to be related to the Italian budget proposal in the autumn, in line with European budgetary rules.

Prospects remain favourable for the credit markets

In October 2019, the growth rate of outstanding corporate loans year on year remained buoyant in France (+7.5%) and in Germany (+6.3%, *Graph 4*). Conversely, outstanding corporate loans have continued to fall in Spain (–0.9% in October) and Italy (–1.4%). These variations in outstanding loans are mainly due to the stabilisation of the average interest rate on corporate loans, standing at 1.2% in Germany, 1.4% in France, 1.3% in Italy and 1.7% in Spain. In light of this trend, European banks are anticipating stable credit supply and

2 - Ten-year interest rates

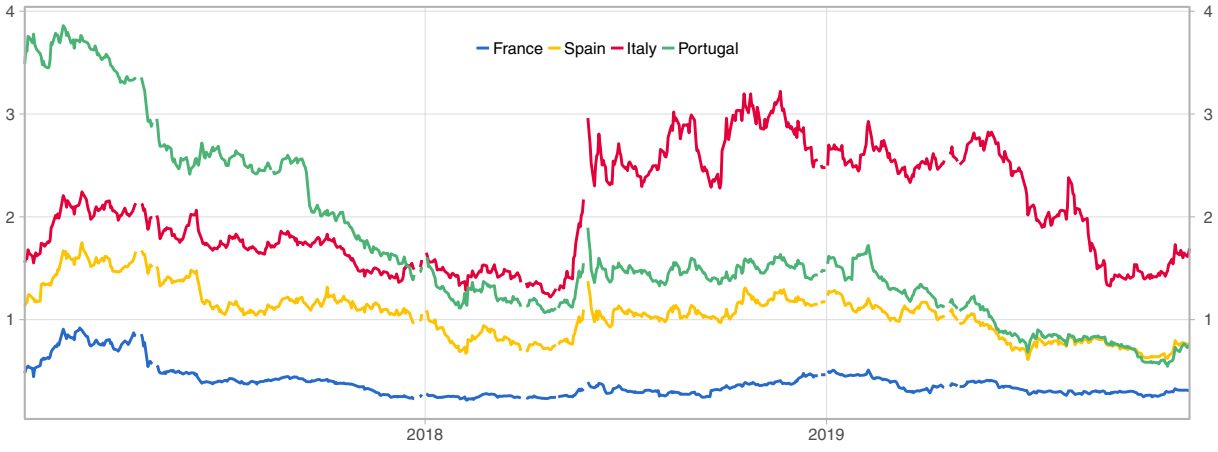
in %



Source: DataInsight

3 - 10-year sovereign interest rate differential with the German rate

in % points



Source: DataInsight

demand conditions in the Eurozone in Q4 2019, according to the Bank Lending Survey conducted by the ECB.

In addition, France once again stands out from its main European partners due to the buoyancy of its household credit (+6.3% year on year in October 2019, compared with +3.5% in the Eurozone) and a lower rate for new loans than in the rest of the Eurozone (1.2% in France against 1.4% in the Eurozone in October 2019).

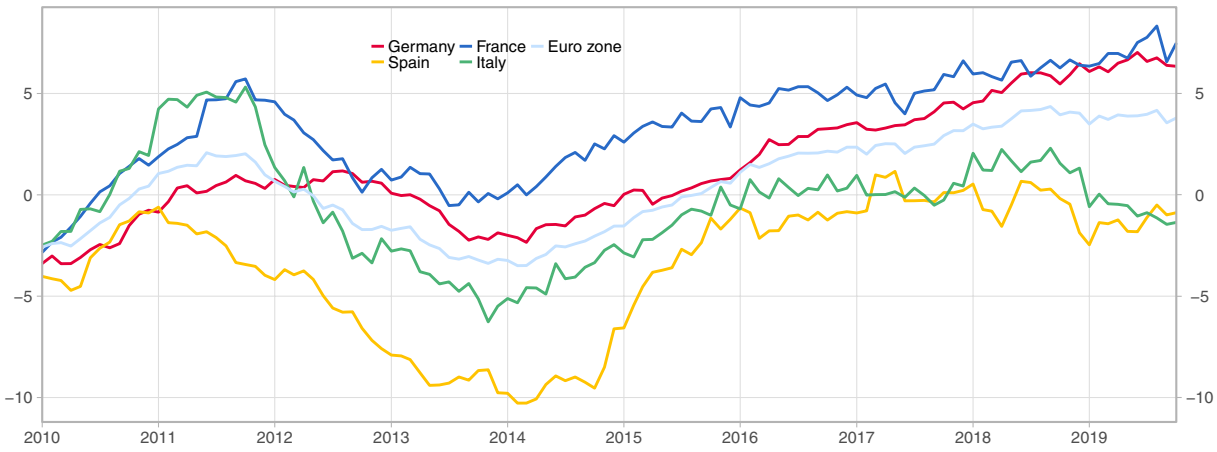
Increasing stock market indices in all zones

Since the summer, stock market indices have been reacting to bullish factors, including announcements about monetary easing, and conversely, to uncertainties following the Sino-American trade war and Brexit (*Graph 5*).

As for the emerging economies, the Argentine index (Merval) fell back sharply in early August due to pre-election uncertainties, in particular, but has since returned to the level recorded in April. In addition, the sharp depreciation of the peso prompted the central bank to raise its base

4 - Annual growth rate of outstanding business loans to companies in the euro area

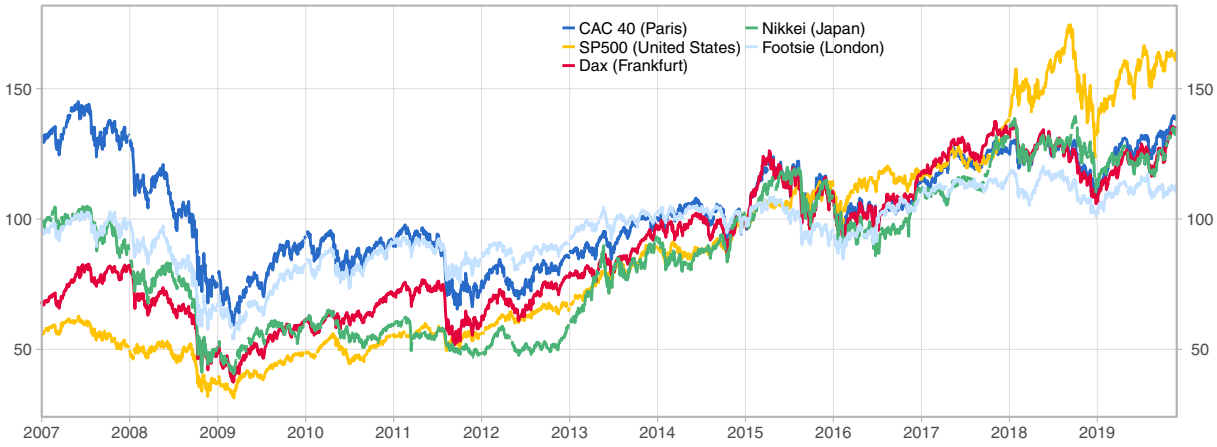
year-on-year changes in %



Source: ECB

5 -Stock market indices of the developed countries

base 100 at 01/01/2015



Source: DataInsight

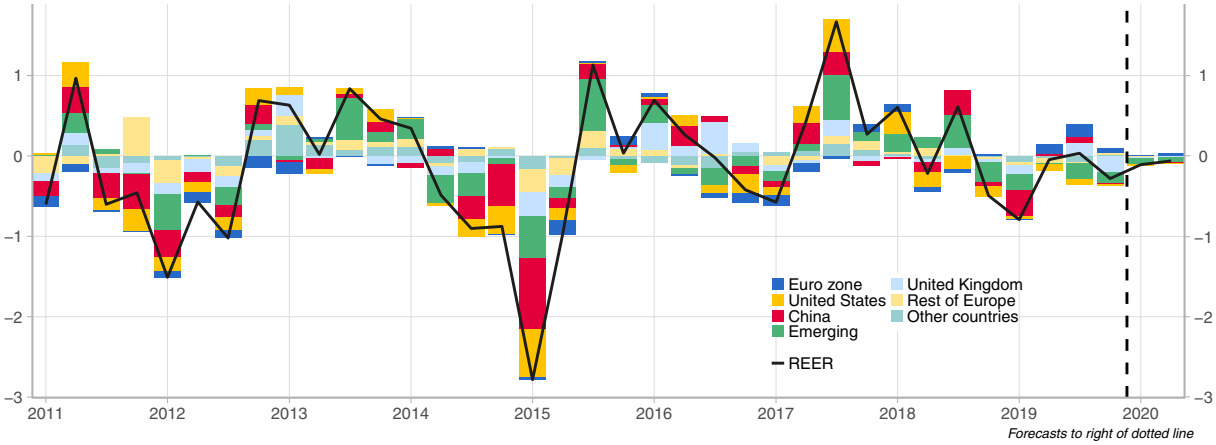
rates. The other emerging market stock indices have risen significantly since the beginning of the year, with the Chinese index gaining nearly 15%, the Brazilian 25% and the Russian 35%.

The French real effective exchange rate (REER) stabilised in Q3 2019

After depreciating continuously against the dollar since the beginning of the year – probably due to weaker growth prospects in the euro zone than in the United States – the euro appreciated slightly again to $1.11 in October, which was the level used as the forecasting hypothesis. The pound sterling and the yen remain stable at £0.87 and 120 yens to one euro respectively. After a relatively sluggish Q3, the French real effective exchange rate is expected to depreciate slightly in Q4 (–0.3%) before stabilising again in H1 2020 (–0.1%) in line with the exchange rate hypothesis (*Graph 6*). Overall in 2019, the real effective exchange rate is likely to depreciate by –1.4%, compared with +0.3% in 2018, and with the growth overhang standing at –0.4% in H1 2020. ■

6 - Real effective exchange rate (REER) in France and its main contributing components

quarterly changes in percentage points and main contributions in percentage points



Source: Banque de France, National statistical institutes, INSEE calculations

How has the fall in interest rates affected the income of economic agents in France?

Having been in decline for at least twenty years, interest rates have now hit extremely low levels, with some even straying below zero. This decline can be attributed both to structural factors – a slowdown in productivity and a surplus of savings – and to the expansionist monetary policies which have been introduced to bolster economic activity since the crisis of 2008-2009. Identifying the winners and losers of this phenomenon is no easy task, since it requires to imagine how overall activity levels and the circumstances for different categories of economic agents would have evolved in the absence of the prevailing structural factors and monetary stimulus measures. In this case our focus is a simple question of accounting: who are the apparent winners and losers of the decline in interest rates, adopting a static approach which does not take the behaviour of economic agents into consideration?

The decline in interest rates has primarily benefited general government and non-financial corporations, netting them average savings of 2 billion and 1 billion euros respectively every year between 1998 and 2018. The opposite is true of households who, as a whole, have lost approximately 2.5 billion euros each year. This mean estimate is calculated by comparing actual income measurements with the projections for a fictional scenario in which, every year between 1998 and 2018, interest rates remained unchanged from year to year.

For households, this loss comes primarily in the form of lost revenue from life insurance schemes: it will thus affect individual households differently, depending on the composition of their assets. Such sources account for a more significant proportion of the income of wealthier households, and the effects of falling interest rates may therefore be felt primarily by these households.

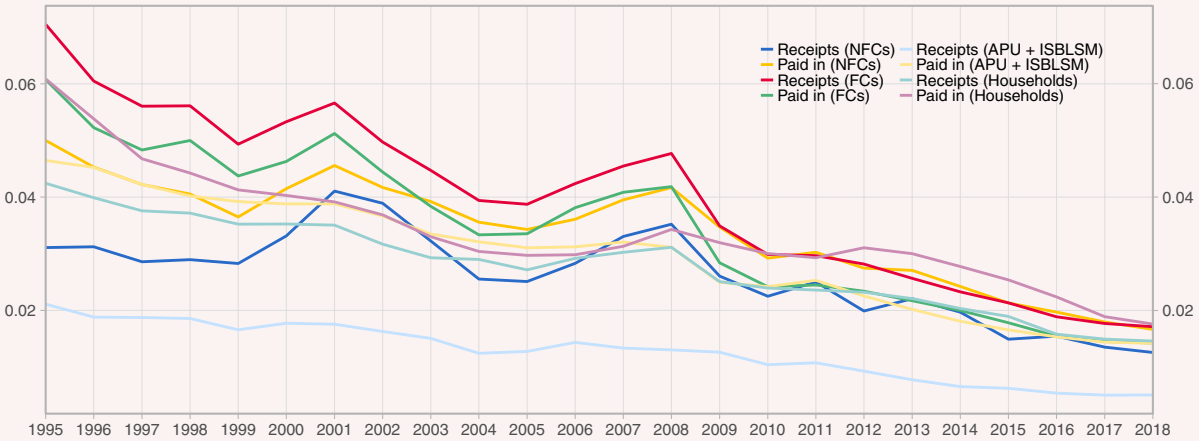
Interest rates have been falling gradually for over twenty years

Various different interest rates determine the flows of cash received and paid out by economic agents. For example, households pay out interest on their loans (mortgages and consumer lending), while receiving interest on their savings (savings accounts, home savings plans etc.). Using the data for all interest sums paid and received by all institutional sectors, we can estimate apparent interest rates[1] which incorporate banking margins (financial intermediation services indirectly measured; FISIM[2]). The rates paid and received have both undergone a progressive decline

1. For each institutional sector, the apparent interest rate is estimated at an aggregate level, taking into account all forms of income potentially affected by variations in interest rates and derived from assets within this sector (for interest received) or liabilities paid (for interest paid out, with reference to the stock of corresponding assets and liabilities). The forms of income included here are interest received and paid (D41; on assets and liabilities in the categories: deposits F2, securities F3, loans F4, other accounts receivable F8) or other forms of investment income received or paid out (D44; on assets and liabilities in the categories: technical insurance provisions, pension funds and standard loan guarantee reserves F6).
2. Apparent interest rates paid to all sectors excluding financial corporations, and received by financial corporations, include financial intermediation services indirectly measured (FISIM). FISIM represent that portion of the services provided by financial intermediaries for which clients are not invoiced. For these services, financial intermediaries remunerate themselves by taking a slice of the interest accrued by their clients' deposits and applied to the loans which they provide.

1 - Apparent interest rates by institutional sector

en %



Note: the sectors represented here are non-financial corporations (NFCs), financial corporations (FCs), general government (APU) non-profit institutions serving households (ISBLSM) and households

Source: INSEE, annual financial and non-financial accounts

over the past two decades or so (*Figure 1*), across all institutional sectors. For example, apparent interest rates on the income flows received and paid out by households fell by 2 and 4 points respectively between 1995 and 2018. This phenomenon could be attributed, in the long term, to the slowdown in productivity and a surge in demand for "safe" assets (Conseil d'analyse économique, 2016), and more recently to accommodating monetary policies (Héam et *al.*, 2015). What consequences has this decrease had on the income of French economic agents?

General government and non-financial corporations pay out more interest than they receive, while the opposite is true for households

While the decline in interest rates has applied to all institutional sectors, net income from interest (the difference between incoming and outgoing flows) including FISIM is not evenly distributed across the sectors (*Table 1*). In 2018, for example, taking into account their investment income and interest received, non-financial corporations (NFCs) paid out a total of 27 billion euros to other agents, of which 18 billion euros went to banking margins. By the same token, general government paid 40 billion euros to other agents, of which 5 billion euros in the form of FISIM. Meanwhile, while household income from interest on savings made up for the interest they paid on loans (meaning that net received interest was nil), households also received 44 billion euros in the form of income from investments (primarily from life insurance contracts). They nevertheless paid 16 billion euros in banking margins.

These income streams will have been affected by the decline in interest rates. If the net outstanding balance were to remain constant (i.e. with no increase in either assets or liabilities), a fall in apparent rates would reduce the flow of interest paid out by agents but also the flow of interest they receive (the "pure rate effect" would be the combined effect of both variations). For example, a decrease in mortgage rates increases household income but, at the same time, the decline in the interest rates applied to savings accounts has a negative impact on their income. If the former effect is more significant than the latter, the overall effect will be positive, if not it will be negative. To this we must also add the positive or negative effect induced by variations in the banking margins applied by financial corporations (known as the FISIM effect). Finally, the overall effect of the decrease for all agents, resident or not within the economy, must be nil: the income received by one agent has been paid by another, and *vice versa*.

In 2018, non-financial corporations, general government and households generally increased their debt

The flow of interest paid and received depends on interest rates, but also on the respective variations in the outstanding balance of assets (hereafter referred to as deposits) and liabilities (hereafter referred to

Table 1 - Flow of income from assets subject to variations in interest rates in 2018, by institutional sector

In billions of euros	Non-financial corporations	Financial corporations	General government and non-profit institutions	Households	Rest of the world
Net interest received	–11	42	–38	0	7
Other net income from investments (including from life insurance contracts)	2	–48	2	44	0
Total excluding FISIM	**–9**	**–6**	**–36**	**44**	**7**
FISIM (banking margins)	–18	43	–5	–16	–4
Total including FISIM	**–27**	**37**	**–40**	**27**	**3**

Key: in 2018, households received 44 billion euros in "other investment income" (primarily from life insurance contracts) and the flow of interests received from their savings deposits compensated for the flow of interest paid on their loans. They also paid 16 billion euros in FISIM.

Source: INSEE, annual financial and non-financial accounts

Table 2 - Growth in the stock of financial assets and liabilities subject to variations in interest rates in 2018, by institutional sector

Increase, in billions of euros	Non-financial corporations	Financial corporations	General government and non-profit institutions	Households	Rest of the world
*Financial assets**	201	567	5	26	323
*Financial liabilities**	230	493	60	48	292
Net financial wealth*	**–29**	**74**	**–54**	**–22**	**31**

N.B.: * this only includes those assets and liabilities which generate cash flows dependent on interest rates (i.e. deposits, securities, loans).

Key: in 2018, the stock of assets subject to interest rate variations held by households grew by 26 billion euros (property), whereas the stock of financial liabilities subject to rate variations grew by 48 billion euros. Households thus increased their debt more than they increased their assets. Their net financial wealth therefore shrank by 22 billion euros

Source: INSEE, annual financial statements.

as debt) held by the institutional sectors. To put it differently, if rates remain constant then an increase in deposits increases the flow of income received by an agent[3], while an increase in debt has the opposite effect of increasing the flow of interest paid out (the 'outstanding balance effect' is the balance of these two effects). For example, if the rates remain constant then the outstanding balance effect will be positive if a household pays down its debt, or if its savings grow more rapidly than its debt.

In 2018 it appears that, on the whole, non-financial resident agents increased their debt (*Table 2*), which may have negatively affected their income. For example, the rise in household debt levels (+48 billion euros) outstripped the increase in household savings (+26 billion euros), meaning that their net financial wealth (assets minus liabilities) subject to variations in interest rates decreased by 22 billion euros. This surfeit of debt may be due to low interest rates providing an incentive for people to take out loans, or may simply be a result of rising property prices or consumer prices. The phenomenon can also be observed for NFCs and general government. Mirroring this development, financial corporations and the rest of the world have been the counterparts to the rising debt levels of resident agents. Measuring the effect of declining interest rates on the income of these agents thus requires us to analyse the profile of variations in debt and savings levels.

Overall, and ex post, it is possible to break down the changes in flows received (and paid) by economic agents. These changes come from variations in interest rates and the margins demanded by the banks, but also from variations in levels of deposits and debts. Applying accounting methods allows us to measure the contribution of each of these three terms (*Annex*). On the other hand, the observed variations in interest rates may be caused, among other factors, by variations in the wealth of agents. Similarly, the variations observed in deposit and debt levels may also be attributed to rate increases and decreases. The method used here does not allow us to measure the impact of such endogenous and behavioural effects. Simply put, with the accounting method we use it is not possible to determine how household deposits and debt would have developed if interest rates had remained stable. Furthermore, it is not possible to estimate how general economic activity would have developed in the absence of monetary stimulus measures.

Over the past twenty years, general government and non-financial corporations have, on average, benefited from the decline in interest rates. Households, on the other hand, have suffered.

As an average over the past twenty years, the flows of income received and paid out have generally balanced one another out within each institutional sector (*Figure 2*). Nevertheless, this phenomenon has not affected all economic agents in the same manner.

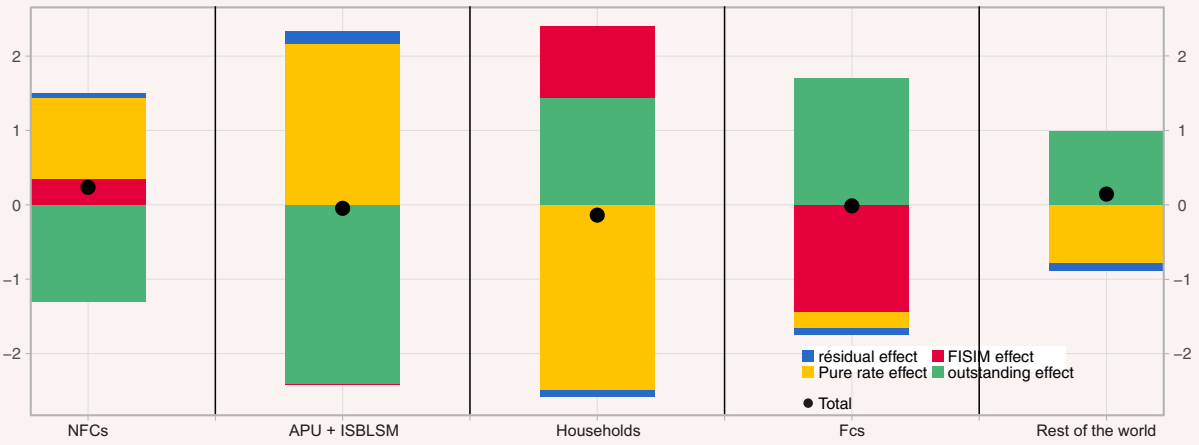
On average, NFCs and general government have benefited from the fall in apparent interest rates (the "pure rate" effect) to the tune of around 1 billion euros per annum for NFCs and 2 billion euros for general government. This dynamic has helped to compensate for the increase in the net debt of these two sectors over the period in question. These increases have come largely in the form of long-term securities for general government and outstanding loan balances for NFCs.

Meanwhile, households have increased their deposits more than their debts over this period, with a substantial increase in life insurance contracts

3. Except if apparent interest rates are negative, in which case an increase in net outstanding balance will reduce the flow of income received by agents.

2 - Average increase of income subject to variations in interest rates over the past twenty years, by institutional sector

in billions of euros



Key: between 1999 and 2018, on average, net household income subject to variations in interest rates remained broadly stable (black line). The decline in interest rates caused this income to fall by 2.5 billion euros per annum (blue), while the increase in net outstanding balance and the reduction of banking margins boosted income by 1.5 billion euros (red) and 1 billion euros (yellow) respectively.

Source: INSEE, annual financial and non-financial accounts.

and the like. This has helped to increase household income by 1.5 billion euros. They have also benefited from the reduction in banking margins. All in all, the combination of the outstanding balance effect and the FISIM effect has boosted income by an average of around 2.5 billion euros per annum. But this income boost has been counterbalanced by a more substantial decrease in the interest rates corresponding to incoming flows than in those corresponding to outgoing flows. There are two reasons for this. On the one hand, the flow of income received from deposits and other securities was similar in scale to the flow of repayment on loans, to the extent that they largely cancelled each other out. On the other hand, income from life insurance contracts – which represents, on average, 77% of income received from assets subject to interest rate variations – was severely affected by the fall in interest rates.

The flow of income and outstanding balance figures of financial societies are diametrically opposed to those of the non-financial sectors. As such the decline in margins has reduced their income (by an average of around 1.5 billion euros per annum), but this has been offset by a more substantial increase in deposits than in debt. However, the pure effect of the fall in interest rates on their income has been largely neutral.

Finally, the resident sectors increased debt to the rest of the world more than the debt owed to them by the rest of the world over this period on average. Nevertheless, the rise which this implies in the flow of payments from resident sectors (households, companies, general government etc.) to the rest of the world has been offset by the fall in interest rates.

Over the past five years, the effects of falling interest rates have gradually faded

While the long-term analysis indicates that the income flows subject to variations in interest rates have remained stable on average, the same cannot be said of the more recent period, for example the past five years (*Figure 3*). Since 2014, general government has, on average, received more than it has paid out (an average of 1 billion euros more per annum), primarily as a result of the continuing decline in interest rates and despite the gradual increase in the sector's debt levels. Nevertheless, this effect has gradually faded, to the extent that in 2018 the net change in their income subject to variations in interest rates was nil.

The household income subject to these variations, meanwhile, fell slightly before bouncing back in 2017 and 2018 (to the tune of 1 billion euros extra per annum on average). While households continue to suffer from the fall in rates, at least in accounting terms, the impact of this decrease has gradually faded while the decline in FISIM payments has boosted their income by, on average, around 2 billion euros per year over the past five years.

At the same time, the income of financial corporations has broadly fallen. The beneficial effects of falling interest rates have not been sufficient to compensate for the reduction in their margins. Finally, the income of NFCs subject to variations in interest rates fluctuates more substantially, but on average the effect has been nil over this period. In 2018, the fall in interest rates and reduction of banking margins nevertheless helped to boost their income by around 2 billion euros.

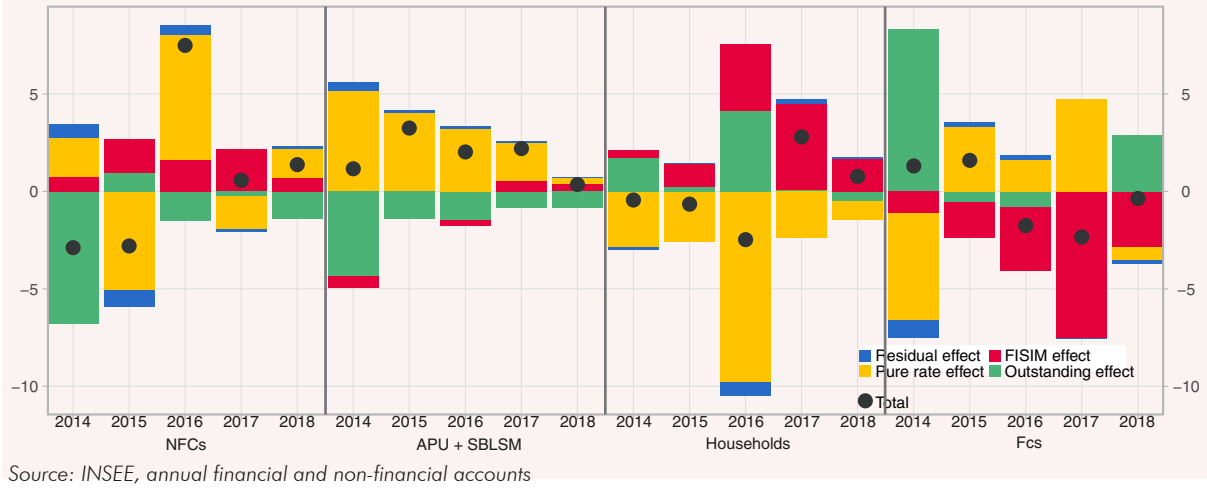
In total, the contribution of falling interest rates to the increase in income in the institutional and non-financial sectors has, on average, been nil since 2014, after contributing +2 billion euros per annum and per sector in the preceding five-year period.

The negative accounting effect of the reduction in interest rates on household income appears to have been felt most acutely by the wealthiest households

The negative effect of the fall in interest rates on the income received by households, in the long term and more recently, is a mean effect calculated for all resident households. But the structure of their financial assets and liabilities, as well as the sums

3 - Increase in the flow of net income subject to variations in interest rates since 2014

in billions of euros



Source: INSEE, annual financial and non-financial accounts

received and paid out in connection with them, differs considerably from one category of household to the next, depending in particular on their standard of living[4]. (*Table 3*)

Firstly, the proportion of net income from assets subject to variations in interest rates varies considerably from one household to the next (see Accardo et *al*. 2017 for the methodology). For the most modest households (who fall into the first quintile in terms of standard of living[5]), the share of gross disposable income (GDI) which comes from such sources (interest on deposits and income from life insurance contracts) is comparable to the proportion of income paid out to cover the interest on mortgages and consumer loans. But the wealthier the household, the more significant their other investment income (primarily from life insurance contracts) is as a share of GDI, and thus the greater the proportion of their income which is subject to variations in interest rates (up to 6% of GDI for the wealthiest households, belonging to the top quintile in terms of standards of living).

The negative accounting effect for households of the fall in interest rates therefore depends on their standard of living. The decline in income from life insurance contracts has probably had a far more pronounced impact on the wealthiest households than it has on the most modest. Furthermore, the reduction in terms of net interest rates (thus excluding income from life insurance contracts) may have been relatively neutral for wealthier households (since the interest they receive is broadly similar to the interest they pay out), but the effect has been positive for lower-income households who pay out more interest than they receive.

Finally, the accounting effects examined here are likely to have only a limited effect on household consumption: the negative effect of reduced income from life insurance policies applies primarily to the wealthiest households, whose marginal propensity to consume is lower. Furthermore, and moving beyond this accounting approach, it is difficult to accurately imagine a counterfactual scenario for households in which interest rates remain constant. For one thing, the decline in interest rates is largely the result of disiquilibrium on the market for risk-free assets, and it seems likely that economic activity (and thus household income) would have been weaker if monetary policies had been more restrictive over recent years. On the other hand, the decline in interest rates may also have had the effect of driving up the prices of financial and non-financial assets, and in doing so generating wealth effects which have benefited the wealthiest households. ■

4. The standard of living of households is defined as their gross disposable income per consumption unit.
5. In the income breakdown used here, households are split into five quintiles based on their standard of living.

Table 3 - Income from assets subject to variations in interest rates as a proportion of the gross disposable income of households, by category of standard of living in 2011

As a % of gross disposable income	**Q1** *(bottom 20% in terms of income)*	**Q2**	**Q3**	**Q4**	**Q5** *(wealthiest 20%)*	**All ordinary households**
Net interest	–2 %	–1 %	–2 %	–1 %	–1 %	–1 %
Of which interest received	*1 %*	*1 %*	*2 %*	*2 %*	*2 %*	*2 %*
Of which interest paid out	*–3 %*	*–3 %*	*–3 %*	*–3 %*	*–2 %*	*–3 %*
Other income from investments	1 %	2 %	3 %	4 %	6 %	4 %
Total	**0 %**	**1 %**	**1 %**	**2 %**	**6 %**	**3 %**

Key: for those households in the bottom 20% in terms of standard of living, received interest accounted for 1% of gross disposable income in 2011
Source: INSEE, national accounts

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Methodological appendix

Breaking down the increases in interest flows into increases of outstanding balance and interest rates.

General scope: income received and sums paid, excluding FISIM

Let i_t^r (inversely. i_t^v) represent the flow of income received (inversely paid out) in the year t by the holder of a financial asset (inversely a liability), for which the outstanding balance is equal to at (inv.pt). The apparent rate of this income is defined as the ratio between these two quantities, i.e:

year $\tau_t^r = \frac{i_t^r}{a_t}$ (resp. $\tau_t^v = \frac{i_t^v}{p_t}$)

It is possible to break down the increase in the flow of income $\Delta i_t^r = i_t^r - i_{t-1}^r$ between two years by measuring the respective contributions of the growth in the corresponding outstanding balance and its apparent rate:

$$\Delta i_t^r = a_{t-1}\Delta\tau_t^r + \tau_{t-1}^r \Delta a_t + \Delta a_t \Delta\tau_t^r$$

The first term on the right-hand side can be read as the effect of an increase in the apparent rate, with the outstanding balance remaining unchanged from the preceding period, hereafter referred to as the "rate effect." Symmetrically, the second term can be interpreted as the effect of an increase in the outstanding balance, with the apparent rate remaining unchanged from the preceding period, hereafter referred to as the "outstanding balance effect." The final term corresponds to the contribution of combined increases in both quantities, hereafter referred to as the "residual effect." The same reasoning can be applied to outgoing flows.

As such, the breakdown of the increase in net income received, i.e. the increase of $i_t^n = i_t^r - i_t^v$

Can be expressed thus:

$$\Delta i_t^n = \Delta i_t^r - \Delta i_t^v = \left(a_{t-1}\Delta\tau_t^r - p_{t-1}\Delta\tau_t^v\right) + \left(\tau_{t-1}^r \Delta a_t - \tau_{t-1}^v \Delta p_t\right) + \left(\Delta a_t \Delta\tau_t^r - \Delta p_t \Delta\tau_t^v\right)$$

Where the first term in brackets corresponds to the net rate effect on the increase of net income, the second term is the net effect of outstanding balance and the third term is the net residual effect.

Scope covered here: income received and sums paid out, including FISIM

Introducing financial intermediation services indirectly measured (FISIM) makes this breakdown slightly more complex. For a non-financial institutional sector, the flow of income received is reduced by commission paid to banks for services rendered, written as S_t^r, giving the $I_t^r = i_t^r - s_t^r$:

Meanwhile, the flow of sums paid out is increased by FISIM: $I_t^v = i_t^v + s_t^v$.

For financial corporations, on the other hand, the flow of income is increased by commission charged for services rendered, while the flow of sums paid out is reduced by FISIM. The income plus FISIM allows us to determine an apparent rate which incorporates FISIM: $T_t^r = \frac{I_t^r}{a_t}$ et $T_t^v = \frac{I_t^v}{p_t}$. It is thus possible to break down the net increase in revenue flows including FISIM in the same manner used above:

$$\Delta i_t^n = \Delta i_t^r - \Delta i_t^v = \left(a_{t-1}\Delta\tau_t^r - p_{t-1}\Delta\tau_t^v\right) + \left(\tau_{t-1}^r \Delta a_t - \tau_{t-1}^v \Delta p_t\right) + \left(\Delta a_t \Delta\tau_t^r - \Delta p_t \Delta\tau_t^v\right)$$

Or:

$$a_{t-1}\Delta T_t^r - p_{t-1}\Delta T_t^v = \left(a_{t-1}\Delta i_t^r - p_{t-1}\Delta i_t^v\right) + \left(a_{t-1}\Delta s_t^r - p_{t-1}\Delta s_t^v\right)$$

The rate effect can be broken down into a "pure rate effect" (first term on the right-hand side) and a "FISIM effect" (second term). ■

Eurozone

European activity holds firm, buoyed by domestic demand

In Q3 2019, GDP growth in the Eurozone, driven by domestic demand, remained at the same pace as during the previous quarter (+0.2%). Activity returned to moderate growth in Germany, while maintaining a more sustained pace in France and Spain. In autumn 2019, the business tendency surveys in industry and services were relatively stable. Growth is expected to continue at 0.2% in late 2019 and early 2020, driven by domestic demand, before accelerating slightly in Q2 2020 (+0.3%). As an annual average, activity is likely to be less dynamic than in 2018 (+1.1% after +1.7%), with a mid-year growth overhang of +0.7% expected in 2020. The relatively small increase in employment should stabilise the unemployment rate at around 7.5% until spring 2020.

Activity recovers slightly in Germany and holds firm in France and Spain

In Q3 2019, activity continued to grow by +0.2% (Table), as forecast in the October 2019 issue of Conjoncture in France. German exports and consumption regained momentum in the summer of 2019, enabling the German economy to return to growth (+0.1% after –0.2%). At the same time, growth in France and Spain continued at the same pace as in the spring (+0.3% and +0.4%, respectively), buoyed up by domestic demand but held back by foreign trade. Italian activity would also appear to have kept growing at +0.1%. In November 2019, confidence indicators in industry and services remained stable in France and Italy, while picking up in Spain, in contrast to the German balances of opinion, which were slightly down. Growth is likely to stand at +0.2% in Q4 2019 and then start accelerating slightly in Q2 2020, benefiting from the German recovery and widespread fiscal stimuli (*Graph 1*).

However, employment prospects remain mixed according to the November business tendency surveys. Employment is therefore expected to grow moderately at +0.1% – close to the level in previous quarters – and the Eurozone unemployment rate is expected to stabilise at around 7.5%.

Private consumption should be bolstered by rising purchasing power

Over the forecasting period, nominal wages look set to maintain their dynamic growth rate (around +0.5% per quarter until Q1 2020). Income is likely to benefit from fiscal stimuli in Germany and France, including an income tax cut scheduled for early 2020 in both countries. As a result, income dynamics are expected to remain robust in H1 2020 (+0.6% per quarter after +0.7% in Q4 2019). Assuming that energy prices fall, headline inflation should stabilise and fluctuate between +0.8% and +1.1% until mid-2020 (*Graph 2*). Overall, and on an annual average basis, purchasing power is expected to accelerate once again in 2019 (+2.1% after +1.7% in 2018), and its mid-year growth overhang should increase by +1.3% in 2020. In the wake of rising

Gross domestic product and main aggregates of Eurozone economies

quarter-on-quarter and year-on-year changes in %

	2018				2019				2020		2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			ovhg
Zone euro	**0.3**	**0.3**	**0.2**	**0.3**	**0.4**	**0.2**	**0.2**	**0.2**	**0.2**	**0.3**	**1.7**	**1.1**	**0.7**
France	*0.2*	*0.2*	*0.3*	*0.4*	*0.3*	*0.3*	*0.3*	*0.3*	*0.2*	*0.3*	*1.7*	*1.3*	*0.9*
Germany	*0.1*	*0.4*	*–0.1*	*0.2*	*0.5*	*–0.2*	*0.1*	*0.0*	*0.2*	*0.3*	*1.5*	*0.5*	*0.4*
Spain	*0.5*	*0.5*	*0.5*	*0.6*	*0.5*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*2.4*	*2.0*	*1.3*
Italy	*0.1*	*–0.1*	*–0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.7*	*0.2*	*0.4*
Household purchasing power in the Eurozone (yearon-year changes)	1.3	1.7	2.1	1.9	1.4	1.4	1.0	0.8	1.1	0.8	1.8	1.2	0.8
ILO unemployment rate in the Eurozone	8.5	8.3	8.0	7.9	7.8	7.6	7.6	7.6	7.5	7.5	8.2	7.6	7.5

forecast

Source: Eurostat, National statistical institutes, INSEE forecast

purchasing power, private consumption is likely to remain relatively vigorous (+0.2% in Q4 and close to +0.4% in 2020).

Equipment investment set to return to growth in early 2020

In Q3 2019, equipment investment fell (–0.5% after +1.4%) due to the decline in investment in Germany and Italy. In a context of weak production capacity pressures and persistent difficulties in industry, equipment investment is also expected to fall back in Q4 (–0.3%). At the beginning of 2020, benefiting from the accelerating German economy and incentive policies in Italy, it is set to return to growth of +0.3% per quarter.

Construction investment rebounded in Q3 (+0.3% after 0.0%) and is expected to accelerate in Q4 (+0.4%), due to the buoyancy of the sector in Germany and Spain and bolstered by public investment stimulus plans in Italy. In H1 2020, it is likely to remain brisk in the Eurozone, growing at slightly above +0.3% per quarter.

Foreign trade should continue to hamper growth in early 2020

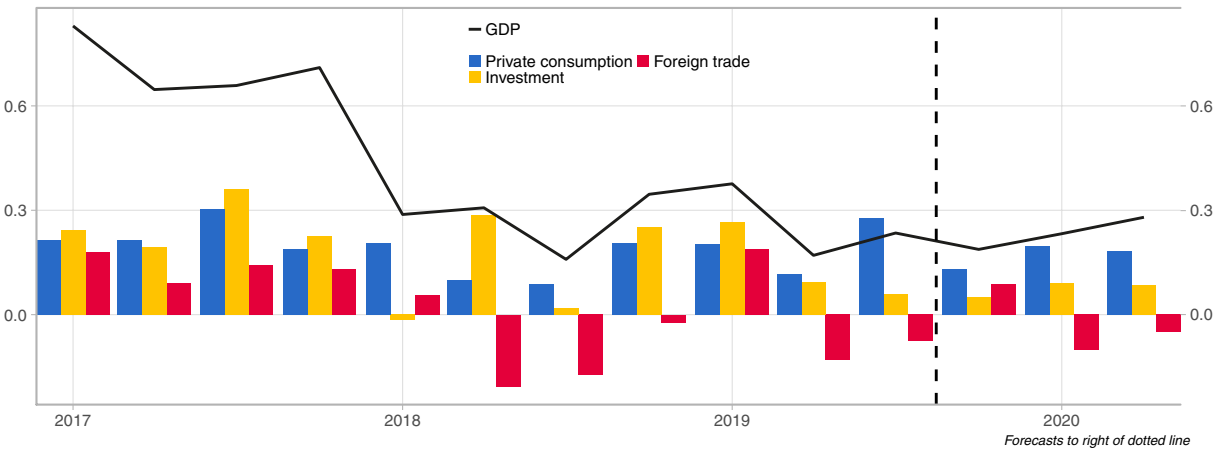
In Q3 2019, exports increased again (+0.4% after 0.0%), in line with the increase in Germany and despite the decline in Spanish sales (–0.8%), particularly in the automotive sector. In Q4, exports are expected to accelerate to +0.3%, driven by the buoyancy of French exports. They should then maintain moderate growth in Q1 2020 (+0.3%) and accelerate in Q2 (+0.4%), in line with the upswing in German activity.

Imports would appear to have grown faster than exports in Q3 2019 (+0.6% after +0.3%). Indeed, Spanish imports are rising sharply due to an upturn in private consumption, as are French imports, particularly in transport equipment. In a context of relatively strong domestic demand, imports are expected to grow faster than exports until spring 2020 (+0.6% in Q4 2019, followed by +0.5% and +0.6% in 2020).

All in all, Spanish and French foreign trade would appear to have held back growth in the Eurozone

1 - Quarterly GDP growth in the Eurozone and contributions

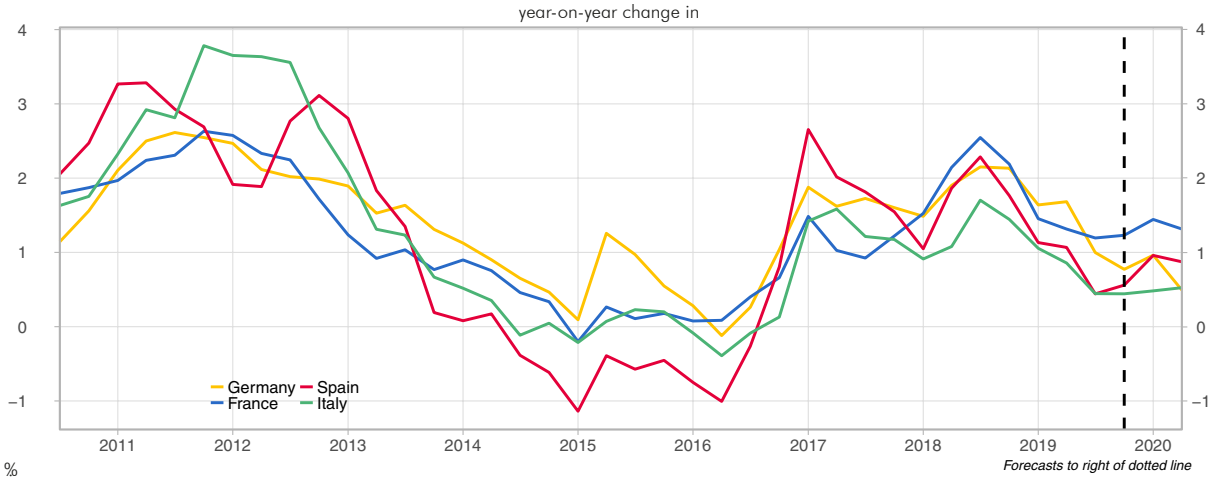
change in % and contributions in points



Source: Eurostat, INSEE forecast

2 -Harmonised inflation in the Eurozone

year-on-year change in



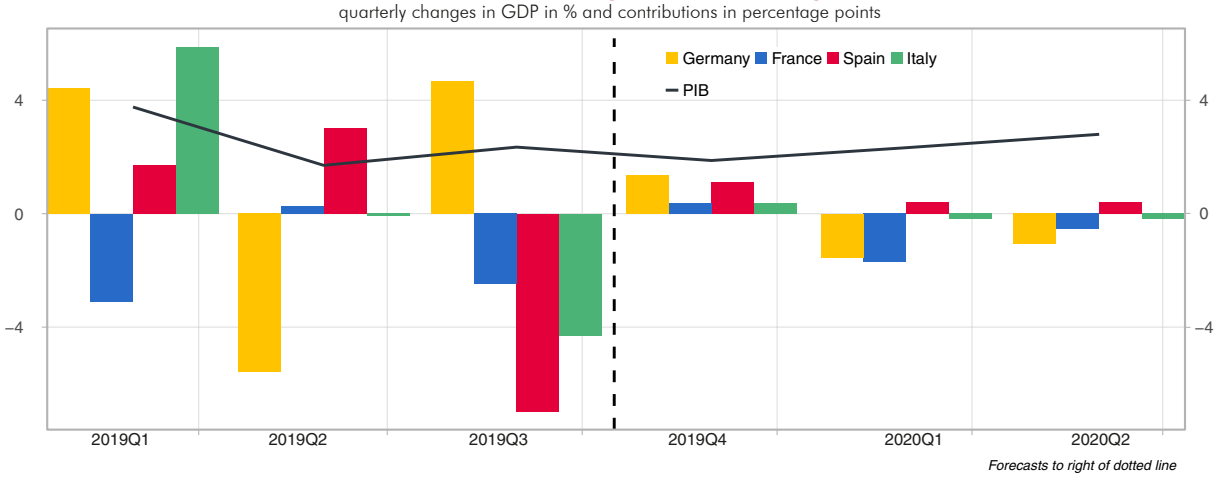
%

Source: Eurostat, INSEE forecast

in Q3 2019, due to imports being more dynamic than exports (*Graph 3*). In Q4, the slowdown in German exports in the context of *Brexit* should cause German foreign trade to make a negative contribution to Eurozone growth. In Q1 2020, foreign trade is likely to contribute negatively to activity (–0.1 points), with a neutral contribution expected in Q2. ■

3 -Contribution of foreign trade to GDP growth

quarterly changes in GDP in % and contributions in percentage points



Source: Eurostat, INSEE forecast

What is the link between labour shortages and unemployment in France and in Europe?

In France, the proportion of businesses reporting a shortage of labour has increased sharply over the past three years, peaking in mid-2019 (21%). In other European countries too, labour shortages reached record levels in 2018 and 2019. Labour shortages and unemployment are two indicators of tension on the labour market which follow opposing trajectories in all countries: on average, a reduction of 1 point in the unemployment rate will be reflected in a 5 point increase in the proportion of businesses reporting labour shortages. But over the past three years, in all countries and particularly in France, shortages have increased much more rapidly than unemployment has fallen. Between 2007 and 2019, in France, the effective fuctioning of the labour market appears to have deteriorated, with both unemployment and labour shortages at higher level.

In mid-2019, the proportion of businesses reporting a shortage of labour was at its highest level

In the business tendency surveys for Q4 2019, 20% of businesses in France reported that their activity was being restricted by a lack of qualified labour. This proportion has increased significantly since 2017: at the end of 2016, only 10% of businesses reported "labour shortages."

In the service sector, the proportion of companies being held back by a lack of qualified labour increased from 8% in mid-2016 to almost 20% by mid-2019 (*Graph 1*). This is the highest level recorded since 2004 (when this series began), higher even than the figures for 2007, at the peak of the previous economic cycle. Labour shortages in the construction industry have also increased since mid-2016 and now stand at 40%, a level similar to that seen in the period 2006-2007. This sector is subject to striking contrasts: depending on the period, either a large number of companies report labour shortages (around 40%) or else very few companies complain of such problems (around 10%). The transition phases between the two are short. Finally, shortages have also been observed in the industrial sector, albeit to a lesser extent than other sectors: the proportion of companies being held back by a lack of labour was 15% in mid-2019, up from 8% in 2016.

Here again, the levels reported since 2017 are the highest since records began (2004).

The labour shortage indicator is strongly correlated with other forecasting indicators relating to employment, particularly those concerning "recruitment difficulties" or "unfilled job ratios" (see *Box 1*).

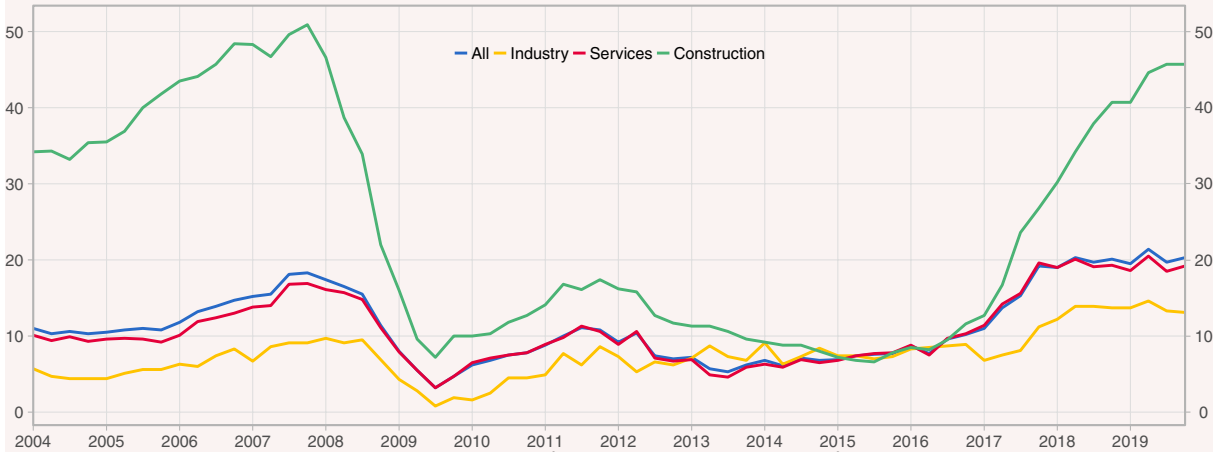
Unemployment and labour shortages: two measures of tension on the labour market

Labour shortages and unemployment are two measures of tension on the labour market. Labour shortages correspond to the demand for labour from businesses which is not being fulfilled by the labour force, while unemployment is the supply of labour going unused by businesses. As such, these two indicators follow opposing trajectories (*Graph 2*). When the outlook is favourable, the unemployment rate is low and businesses may be in a position to recruit but encounter difficulties in doing so. On the contrary, when the outlook is poor the unemployment rate is higher but businesses have less trouble recruiting when they need to.

The connection between labour shortages and unemployment can be measured by calculating a correlation coefficient between variations in the unemployment rate and in the proportion of companies reporting labour shortages (see *Box 2*). For France, over the period 2004-2016, this coefficient

1 - Labour shortages have increased in all sectors

Proportion of businesses declaring that their activity has been hindered by a shortage of labour, by sector of activity



Note: For each sector, the results are weighted using the headcount of the companies surveyed; the series for all sectors is obtained by calculating an average weighted by the headcounts in the three sector-specific series.

Key: in Q4 2019, 46% of businesses in the construction sector reported that their activity had been hindered by a shortage of labour.

Source: INSEE, business surveys

is –0.75, falling to –0.68 if we extend the period to 2004-2019. In recent years (2017-2019), labour shortages have been considerably more dynamic than the unemployment rate would suggest, in light of the historical statistical link between their respective fluctuations. In the past, the opposing trajectories of these two indicators were largely symmetrical, with the exception of 2009 when labour shortages fell more sharply than the increase in unemployment implied.

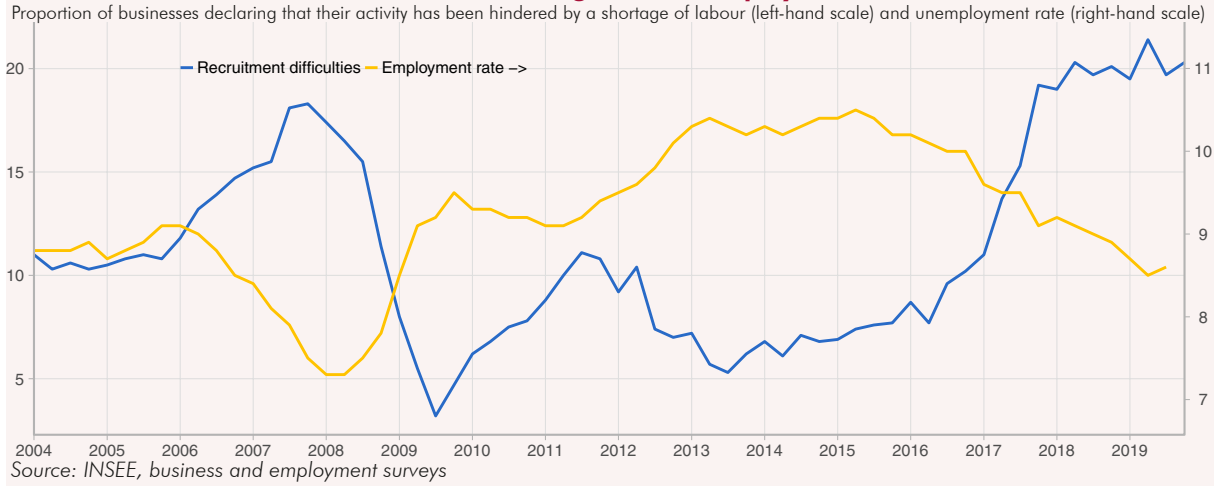
Labour shortages have increased significantly since 2017 in all European countries

In France's principal European partners (Germany, Italy, United Kingdom, Spain, the Netherlands, Sweden, Belgium, Austria, Czech Republic), labour shortages have also increased significantly since 2016 (*Graph 3*). At the end of 2018 they were at the highest levels seen since 2004, except in Italy which experienced a bigger spike in 2007. The situation in Germany over the past 15 years is quite different from that seen in other European economies, particularly between 2004 and 2010. In certain countries (Germany, Italy, Sweden, Czech Republic), shortages appear to have hit a tipping point and have begun to subside since the start of 2019. In France, as in the Netherlands, Austria and Belgium, they appear to have virtually stabilised since 2018.

In all of these countries, the unemployment rate and proportion of labour shortages tend to follow contrasting trajectories (*Graph 4*). The connection between labour shortages and unemployment is fairly strong in most economies for the period 2004-2016, except Italy and Spain. As in the French scenario, this link seems to become weaker when the more recent period is taken into account (2004-2019). Ultimately, in the majority of countries, when unemployment rises by one percentage point the proportion of companies reporting labour shortages falls by an average of 5 percentage points (*Box 2*).

2 - Labour shortages and unemployment

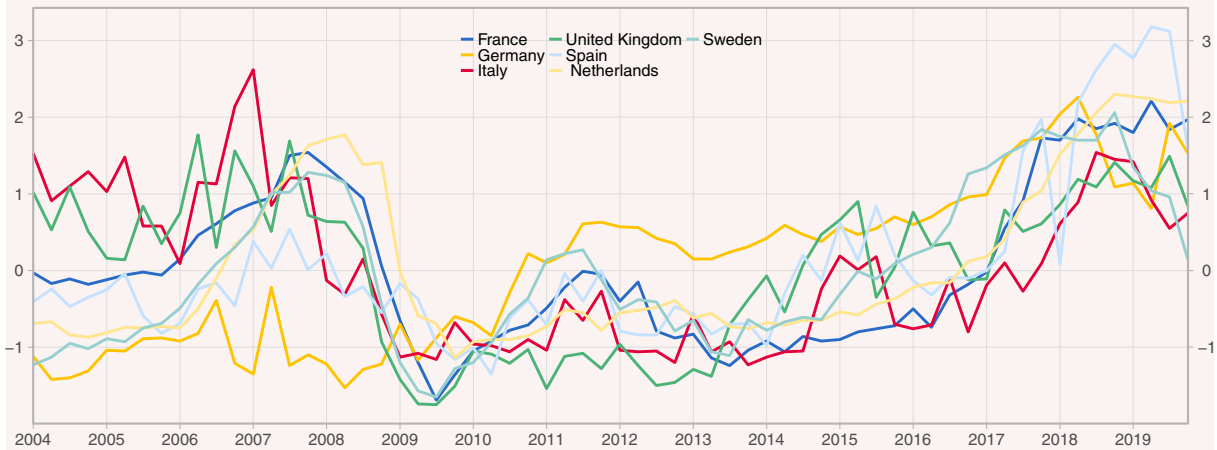
Proportion of businesses declaring that their activity has been hindered by a shortage of labour (left-hand scale) and unemployment rate (right-hand scale)



Source: INSEE, business and employment surveys

3 - Labour shortages have increased sharply across Europe since 2017

proportion of companies reporting that they are limited in their activity due to a lack of manpower, centered and reduced data



Note: since the proportion of companies reporting labour shortages varies considerably from country to country, the data has been centered and reduced for the period 2004-2019, in order to allow for comparisons. In order to avoid overloading the graph, not all countries have been included. Priority has been afforded to the largest economies.
Focus: France, Germany, Italy, United Kingdom, Spain, Netherlands, Sweden.
Source: Eurostat, INSEE calculations

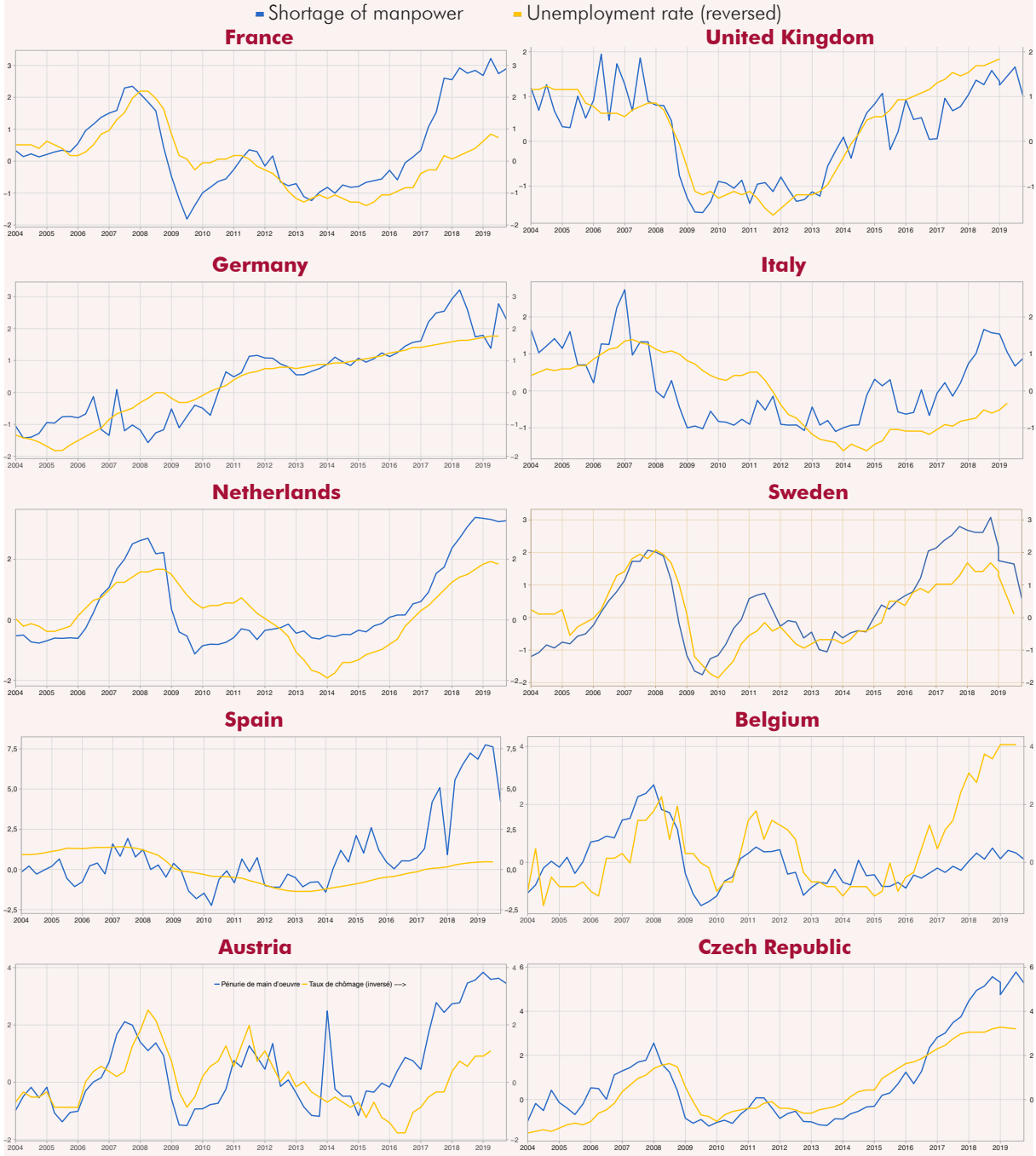
The French situation is fairly atypical in terms of the extent of shortages reported in 2019

Among those countries in which the connection seems sufficiently strong (Sweden, the Netherlands, Germany, Austria and the Czech Republic), labour shortages have risen more sharply in recent times than the variation in unemployment figures would suggest. In Belgium the opposite is true, since shortages have increased very little while unemployment has fallen significantly. In the United Kingdom, the connection between labour shortages and unemployment has not changed in recent months. Although France is not the only country where labour shortages have increased significantly recently, it is the country where the disconnect with the trajectory of the unemployment rate appears to be most pronounced. Since 2018, according to the business tendency surveys, a lack of skilled labour is the main barrier to recruitment reported by companies, far outstripping economic uncertainty, the cost of labour or regulatory concerns (see *Focus article in the Conjoncture in France* issue of December 2018).

The effective functioning of the labour market has deteriorated in Italy and France since the crisis

4 - Unemployment rate and labour shortages by country

Centered and reduced series for 2004-2016, inverted unemployment rate



Focus: France, Germany, Italy, United Kingdom, Spain, Netherlands, Sweden, Belgium, Austria, Czech Republic.
Source: Eurostat, INSEE calculations

It is possible to portray this phenomenon for each country using a graph where the x axis represents the rate of unemployment and the y axis represents labour shortages between 2004 and 2019 (*Graph 5*). This is essentially a pseudo-Beveridge curve, where the proportion of companies reporting labour shortages stands in for the rate of jobs going unfilled. Direct comparisons between countries should be handled with care: the average level of labour shortages varies significantly from one country to the next. However, we can easily compare the temporal dynamics at play. For a given country, the closer the trajectory tends towards its point of origin, the more effectively the labour market is functioning, with unemployment and recruitment difficulties both at low levels. In 2019, for example, the French labour market appears to be functioning less effectively than it was in 2007, with both unemployment and labour shortages at higher levels than they were during the last cyclical peak. ■

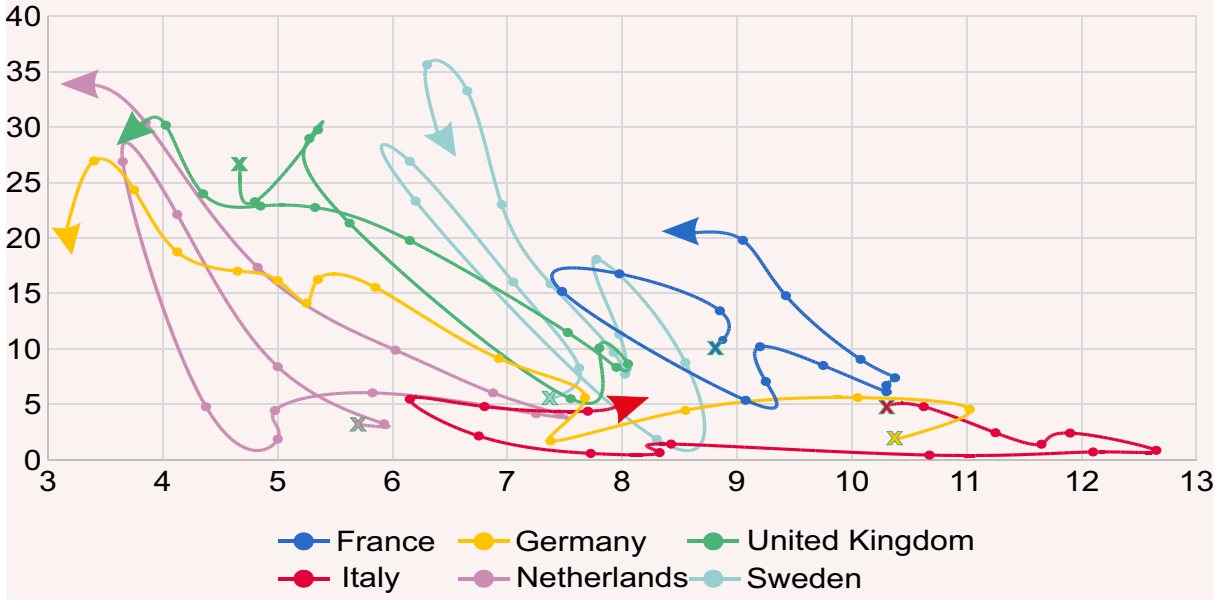
Bibliography

Insee, "At the end of 2018, companies were pointing to the lack of qualified workforce as the main barrier to hiring, even more so than at the start of 2017", *Conjoncture in France*, December 2018, p. 61-63.

Insee, "The unemployment rate decreased by 0.2 points in Q2 2019", *Informations rapides*, August 2019. ■

5 - Beveridge curves, combined fluctuations of unemployment rates and labour shortages in selected European countries between 2004 and 2019

National trajectories for combined variation in the unemployment rate (x axis) and proportion of businesses reporting labour shortages (y axis)



Note: each data point represents a year. The arrow indicates the temporal progression from 2004 to 2019. Spain is not shown here: with an unemployment rate which exceeded 25% in 2013, it would distort the whole graph and the other countries included here. On this graph, Spain's trajectory would look similar to that of Italy.
Champ : France, Germany, Italy, United Kingdom, Netherland, Sweden.
Source: Eurostat, INSEE calculations

Box 1

Labour shortages, recruitment difficulties and the rate of unfilled jobs: similar trajectories

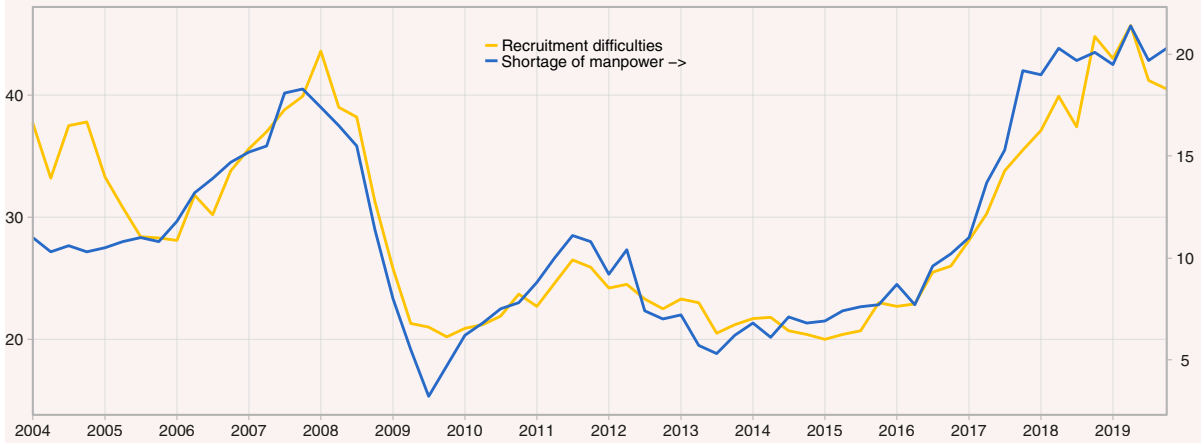
The labour shortage indicator is defined as the proportion of businesses reporting, in the INSEE's business tendency surveys, that they are unable to develop their activity as they would wish on account of a lack of manpower. Labour shortage indicators are established on a sectoral basis, one for industry (output restricted), one for services (activity restricted) and one for construction (activity restricted). The labour shortage indicator for all sectors is an aggregation of these three sub-indicators (industry, services, construction), weighted by the headcount of each sector.

These labour shortage indicators are harmonised at the European level, allowing for more accurate comparisons between countries than those permitted by similar indicators such as recruitment difficulties (proportion of companies reporting difficulties with recruitment, derived from the INSEE business tendency surveys) or the number of unfilled jobs (positions which are open or about to become open, and for which efforts are actively being made to recruit candidates from outside the organisation, figures derived from the Acemo surveys conducted by DARES).

Furthermore, labour shortages are more of an obstacle than recruitment difficulties: a difficult recruitment process need not necessarily inhibit a company's activity. These two indicators thus operate at different levels, with the proportion of companies reporting recruitment difficulties fluctuating at around 30%, an average rate twice as high as the proportion of companies complaining of labour shortages (averaging at around 15%). Nevertheless, the two are highly correlated (*Graph*). In France, the rate of unfilled posts also follows a relatively similar trajectory. As with recruitment difficulties, unfilled posts need not necessarily represent an obstacle to activity. ■

Recruitment difficulties and labour shortages in France followed very similar trajectories between 2004 and 2019

Proportion of businesses indicating that their activity has been hindered by a lack of manpower (labour shortage), and the proportion reporting difficulties recruiting sufficient staff (recruitment difficulties).
In % of companies



How to read it: In Q4 2019, 41% of companies surveyed reported recruitment difficulties, while 20% indicated that their activity was being hindered by a labour shortage.
Source: business survey, INSEE

Box 2

An estimate of the econometric link between labour shortages and unemployment

The statistical connection between labour shortages and unemployment can be quantified. In France, and for other European nations where data are available, the correlation between the proportion of businesses reporting labour shortages and the unemployment rate, both considered in terms of quarterly variation, is first calculated for the period 2004 - 2016 and then for 2004 - 2019. The same variations are also subjected to regression analysis based on the variations in the unemployment rate (« $\Delta pénurie = \alpha + \beta.\Delta txchom + \varepsilon$ ») over the period 2004-2019. In order to create homogeneous indicators in terms of their volatility, the labour shortage series is smoothed in advance (using a centered moving average of order 3). In most European countries the labour shortage series shows much greater fluctuation than the unemployment rate, which artificially undermines the correlation between the two series in terms of structural differences.

According to these correlations, France and Sweden are the two countries in which the labour shortage indicator and the unemployment rate are most closely connected, while at the other end of the spectrum Spain and Italy are the countries in which these two indicators are least correlated. Furthermore, in many countries the connection between labour shortages and unemployment is weaker if we take the period 2017-2019 into consideration. Finally, for the majority of countries, the constant value of this model is null and the coefficient β is close to –5 (generally between –4 and –6), which means that a one percent increase in unemployment will, on average, be reflected in a 5 percent decrease in the proportion of businesses declaring labour shortages. ■

Table - Correlations and modelling results for variations in labour shortages and the unemployment rate, by observation period (2004-2016 or 2004-2019) and by country

	Corrélations		Quarterly differences		
	2004-2016	2004-2019	R^2	Beta	Constant
France	–75%	–68%	46%	–3,6	0,1
Sweden	–65%	–65%	42%	–5,9	0,3
Czech Republic	–57%	–54%	30%	–2,1	0,2
Belgium	–54%	–51%	26%	–6,0	–0,1
Germany	–54%	–31%	10%	–4,0	0,0
Netherlands	–52%	–58%	33%	–5,2	0,2
United-Kingdom	–52%	–53%	26%	–4,7	0,0
Austria	–41%	–44%	16%	–4,1	0,2
Spain	–22%	–32 %	5%		
Italy	–20%	–25%	6%		

Note: the delta model ($\Delta shortage = \alpha + \beta txchom + \varepsilon$) is estimated for 2004-2019. For Austria and Belgium, the unemployment rate was also smoothed using a centered moving average of order 3, in order to reduce the volatility. For Germany, the period was restricted to 2010-2016 because structural reforms introduced between 2004 and 2009 had a marked effect on the German labour market. For Spain and Italy, the modelling quality is too weak and the parameters of the model (Beta and Constant) are therefore not presented here.

Germany

Tentative rebound incoming after avoiding recession

In Germany, activity rebounded slightly in Q3 2019 (+0.1%), avoiding a technical recession after a downturn in Q2 (–0.2%). Domestic demand picked up (+0.4 points after +0.1 point) and foreign trade buoyed up activity, as exports recovered (+1.0% after –1.3%). However, corporate destocking adversely affected growth (–0.7 points). Activity is expected to stagnate at the end of the year before rebounding in 2020: fiscal measures and moderate inflation look set to boost consumption, while exports are likely to grow. The mid-year growth overhang for 2020 should stand at 0.4%, after an annual average of +0.5% in 2019.

Income set to boost private consumption

After a lacklustre Q3, German activity is expected to stagnate in Q4 before ramping up in early 2020 (+0.2% in Q1, followed by +0.3%). Domestic demand should bolster activity once again: private consumption is likely to hold firm (+0.2% in Q4, then +0.4% per quarter until mid-2020) and the savings ratio is expected to reach 18.8% by mid-year, against 18.5% one year earlier. The increase in the minimum hourly wage to €9.35, moderate inflation and fiscal measures (lower taxes, higher family allowances and old-age insurance) should indeed boost consumption. However, the labour market looks likely to be sluggish after years of strong growth. With the slowdown in activity in partner countries leading to a relative dearth of orders, demand-side difficulties are gradually overshadowing supply-side problems, especially in the manufacturing sector. However, job creations are expected to continue at a moderate pace (+0.1% per quarter) and the unemployment rate should barely rise, reaching 3.2% in mid-2020.

Investment – steady in construction but flagging in equipment

Investment in construction is set to remain dynamic until mid-2020. Orders, after rising again in September, point towards relatively steady growth, at +0.4% per quarter through to June 2020. However, investment in capital goods is likely to suffer from low investor morale, a drop in production capacity utilisation rates and a previous nosedive in orders for manufactured goods. As a result, it is expected to slip back by 0.3% at the end of 2019, but thanks to the slight recovery in activity, it should return to modest growth in early 2020 (+0.1% per quarter).

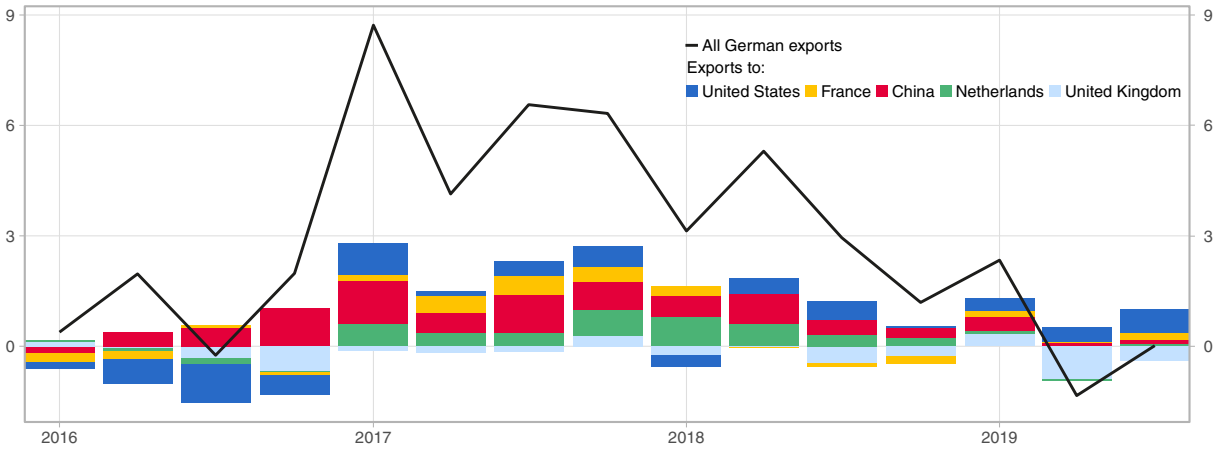
Foreign trade perks up

Anticipations of a possible Brexit at the end of October are unlikely to have adversely affected German exports in Q4 (+0.9%, *Graph*), which should subsequently slow down in early 2020 (+0.2% in Q1, +0.3% in Q2), with world trade picking up slightly and no further deterioration in international uncertainties. However, imports – boosted by domestic demand – are expected to remain more buoyant than exports. Foreign trade should therefore make a slightly negative contribution to activity at the beginning of 2020 (–0.1 to –0.2 points per quarter).

Overall in 2020, activity is expected to slow down significantly (+0.5% after +1.5%). For 2020, the mid-year growth overhang should stand at 0.4%. ■

German exports, buffeted by international uncertainties

value data, year-on-year change in %, contributions in points



Source: Eurostat, INSEE calculations

In Germany, consumer confidence and industrial confidence go hand-in-hand

In Germany, the outlook of households and that of businesses in the industrial sector are more strongly correlated than in neighbouring European countries. This correlation has persisted over the recent period, with industrial difficulties mirrored by a downturn in the morale of German households. The strength of this connection between consumer confidence and the business climate in the industrial sector no doubt reflects the substantial contribution of this sector to total value added and employment in Germany. With industry enduring a tough spell, this strong link could put the whole German economy at risk if the turbulence is passed on to consumption, which is currently the principal driver of German growth.

In spite of high wages and fiscal measures conducive to household consumption, the German household confidence survey suggests that consumer confidence has been in steady decline since 2018, after peaking at one of the highest levels seen since 2010. German households seem more concerned than their European neighbours by the growing economic uncertainty. Indeed their confidence levels appear to be more strongly correlated with the confidence indicator for industry than they are in other countries. The recent woes of German industry, caused by a downturn in domestic and international orders, as well as the difficulties witnessed in the automotive and chemical industries, could thus be undermining household morale (*Graph 1*).

In Germany this correlation is strong and stable over the long term

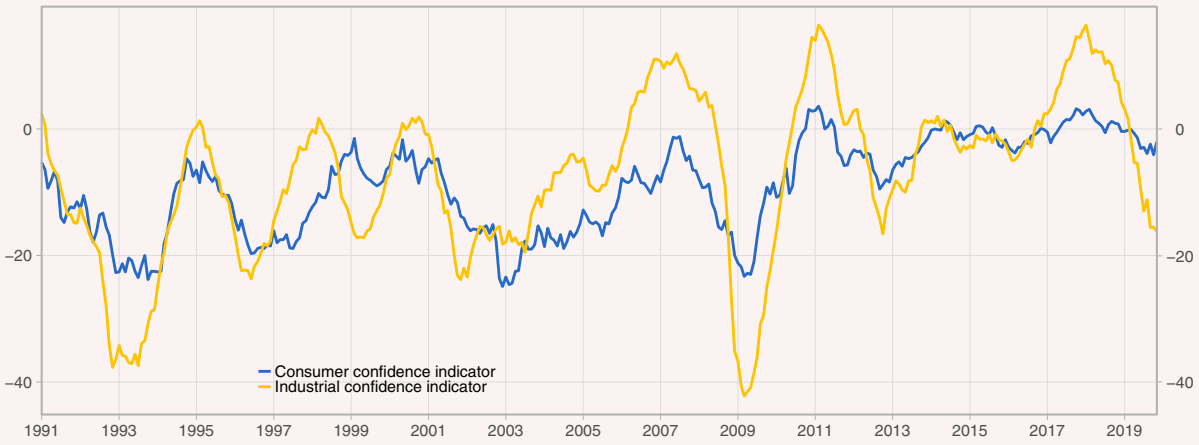
Between January 1991 and November 2019, the average correlation coefficient between the indicators of consumer confidence and industrial confidence in Germany was 0.76. Calculated for the same period, the correlation is weaker in Germany's neighbours (0.71 in Spain, 0.52 in France and 0.45 in Italy). Nevertheless, the correlation between household confidence and industrial confidence has varied over time. *Graph 2* represents the correlation values for successive five-year periods. In Germany, the correlation between the series for household confidence and industrial confidence has always been strong and has not dipped below 0.7 since 2006. In France, Spain and Italy, on the other hand, the connection between the two series deteriorated considerably following the economic crisis (particularly between 2009 and 2014). After rising for a time, that correlation has declined in recent years. In Germany, however, the correlation has remained higher than 0.8 in recent years.

However, not all components of household confidence[1] are correlated with industrial confidence in the same manner (*Graph 3*). The correlation is stronger when it comes to households' opinions on the general economic situation and the likelihood of making major purchases in the immediate future. German households thus appear to have a coherent view of the economic circumstances, and their confidence is impacted by the troubles affecting the industrial sector. Nevertheless, the industrial confidence indicator is less strongly correlated with future saving plans. The exposure of German industry to trade wars may thus not necessarily prompt

1. The household confidence indicator is constructed as the mean value of the balances of opinion from the questions pertaining to household finances over the past 12 months and for the coming 12 months, the general economic outlook for the coming 12 months and the major purchases households expect to make in the coming 12 months (in bold in *Graph 3*).

1 – Consumer confidence and industrial confidence in Germany

Balances of opinion in points



Note: the correlation coefficient between these two series for the period January 1991 to November 2019 is 0.76.
Source: DG ECFIN

German households to increase their precautionary savings.

In neighbouring countries, the degree of correlation between the different components of the consumer confidence survey and those of the industrial confidence indicator is most of the time lower than it is in Germany. A weakened industrial outlook therefore has less of an impact on the consumption behaviour and financial expectations of French, Spanish and Italian households. Similarly, households in these three countries appear to be less sensitive than German households to the general economic outlook, past and future.

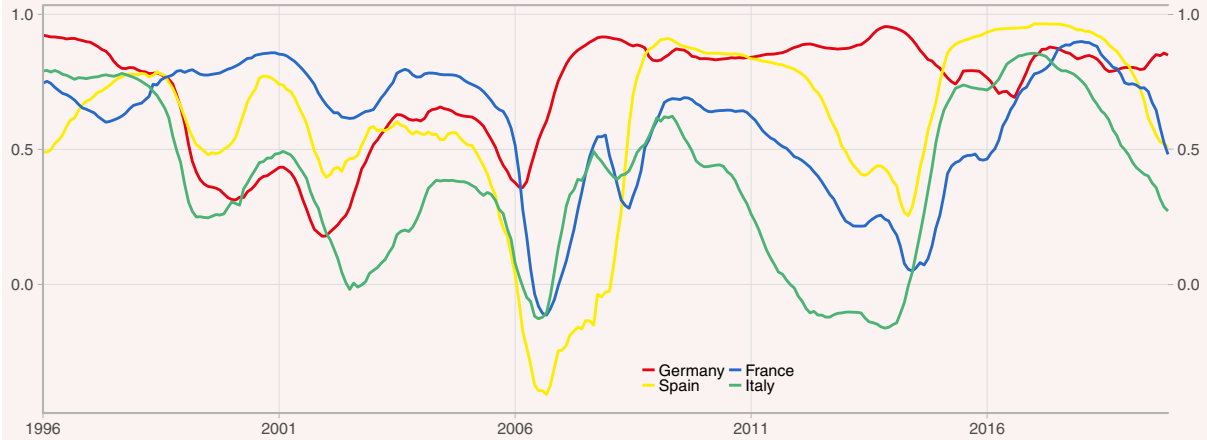
At the same time, studying the correlation between consumer confidence and the different components of the industrial confidence index cannot establish links different in nature between industrial balances of opinion. The different aggregates used to construct the industrial confidence indicator (order books, inventory of finished products and predicted variation in output for the next three months) are more closely linked to one another than the components of consumer confidence. The correlation with consumer confidence is therefore largely the same for all of the components of industrial confidence.

A correlation driven by the relative weight of the industrial sector

The strong correlation between the outlook of German households and the business climate in the industrial sector is no doubt linked to the important

2 – Variation in the correlation of the consumer confidence and industrial confidence data series for Germany, France, Spain and Italy

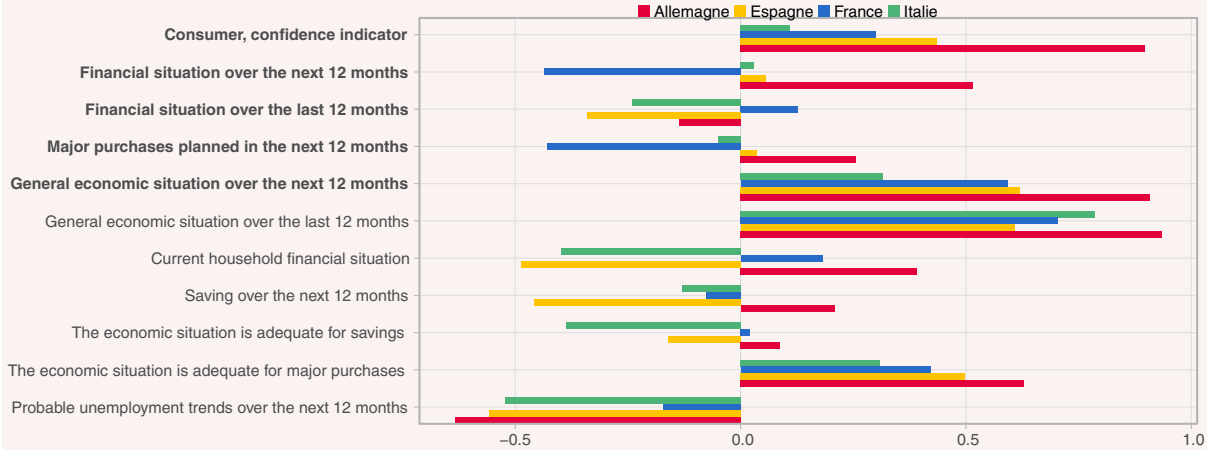
correlation coefficient over five rolling years



How to read it: each point on the x axis marked with a date «t» represents the correlation between the two series between the date t and t - 5 years. For example, between January 1991 and January 1996, the correlation calculated in level terms between the consumer confidence and industrial confidence indicators in Germany was 0.92.

Source: DG ECFIN, INSEE calculations

3 – Correlation between industrial confidence and the different components of the consumer confidence index in Germany, France, Spain and Italy, since 2015



How to read it: in Germany between January 2017 and November 2019, the correlation coefficient calculated in level terms between the industrial confidence indicator and the household indicator for the general economic outlook over the coming 12 months was 0.91. The highlighted components are those used to calculate the confidence indicator published by DG EcFin.

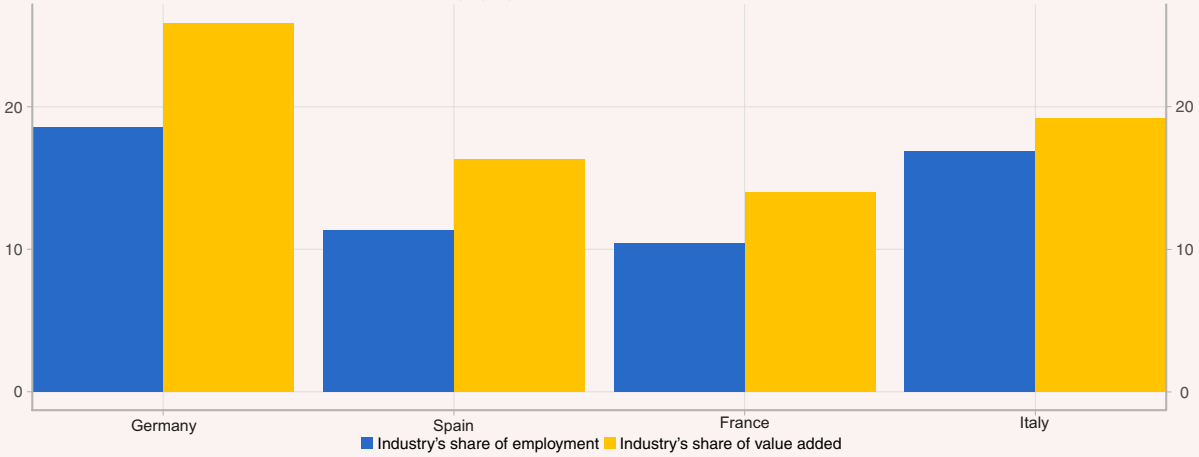
Source: DG ECFIN, INSEE calculations

role this sector occupies in the German economy, and particularly its contribution to overall value added and employment (*Graph 4*). Since 2015, an average of 18.6% of German jobs have been connected to industry (8 million out of a total of 43 million people in employment). The weight of industry in the total value added of the German economy is even greater, at 26%. Additionally, the difficulties faced by business are likely to spread more quickly in Germany than elsewhere, most notably France. In Italy, although industry is almost as big an employer as it is in Germany, its contribution to value added is considerably lower (19%); this might go some way to explaining why the correlation between household and business tendency surveys has been in decline since 2017 in Italy, while remaining stable in Germany. In France and Spain, where the proportion of industrial jobs does not exceed 12% of total employment and where the value added of industry accounts for less than 16% of the national total, the correlation has also deteriorated, especially since 2018.

While the household confidence indicators, influenced by other social and political factors, are not generally the best predictors of economic activity, they do still have a certain connection to consumption. The correlation between household morale and the industrial climate may thus not be entirely without consequences if it continues: the difficulties experienced by German industry, owing particularly to the fall in world demand, could potentially spread to domestic demand, which is currently the primary driver of German growth. ■

4 – Weight of industry in total employment and value added.

average proportion since 2015 in % since 2015



Source: Eurostat

Italy

Growth remains weak

After a technical recession in mid-2018, Italian activity has been growing at +0.1% per quarter over the past year. Handicapped by slack private consumption and sluggish investment, growth is expected to continue at this slow pace until spring 2020. On average in 2019, GDP is likely to slow down again (+0.2% after +0.7% in 2018), and the annual mid-year growth overhang for 2020 is expected to stand at +0.4%.

Private consumption looks set to regain a little momentum in early 2020

The downturn in employment prospects points towards sluggish growth in employment through to spring 2020 (+0.1% per quarter), in line with the labour force. Therefore, the unemployment rate should gradually stabilise at 9.8% over the forecasting period. Nominal wages would appear to have regained momentum in H2 2019 (+0.4% per quarter) before decelerating slightly in H1 2020 (+0.3% per quarter).

Household consumption grew by 0.4% in Q3, but should slow down at the end of the year (+0.1%), before picking up very slightly in 2020 (+0.2% per quarter), thanks to the stabilisation of the unemployment rate and the easing of political uncertainties. On average in 2019, purchasing power is likely to be sustained by the stimulus measures introduced during the year (+1.5% after +0.6%, Graph) while household consumption is expected to slow again (+0.6% after +0.8%).

The savings ratio looks set to increase from 9.4% in 2018 to 10.2% in 2019.

Investment should pick up again for equipment and remain buoyant in construction

With the confidence of business managers in industry declining over the past year, equipment investment fell back in the summer of 2019 (–0.5% after +2.0%). It is expected to stagnate at the end of the year (–0.1%) before perking up a little in H1 2020 (+0.3% per quarter) as a result of incentives provided by the 2020 budget, especially tax credits in industry.

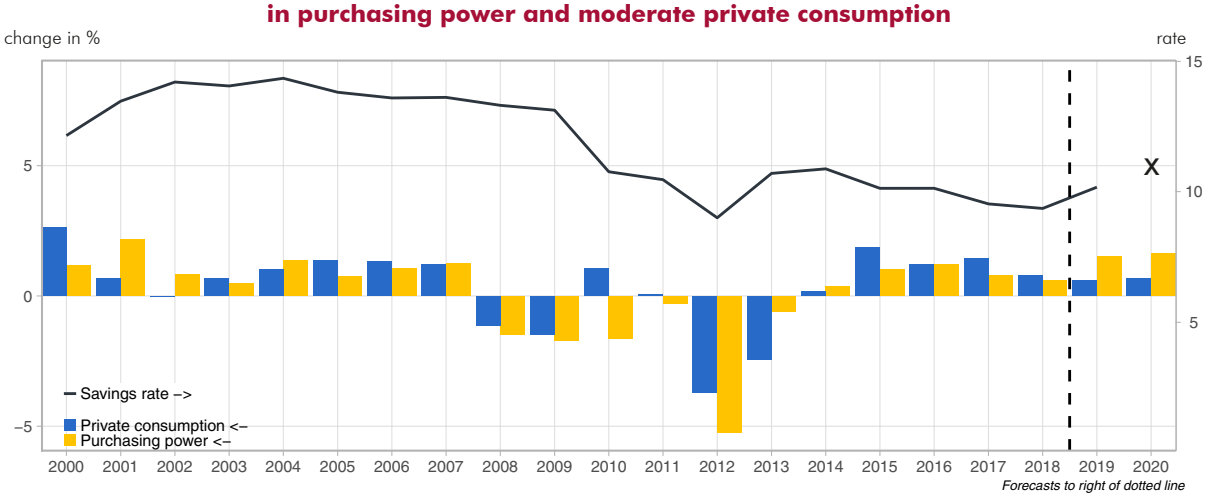
Investment in construction bounced back in Q3 (+0.2% after –1.3%). The reconstruction of the bridge in Genoa and public investment stimulus plans should help to boost investment in construction through to spring 2020 (+0.5% in late 2019 and then +0.4% per quarter in H1 2020).

Foreign trade is unlikely to contribute to growth in early 2020

Exports slipped back slightly in the summer (–0.1% after +0.9%), whereas imports gathered pace (+1.3% after +1.1%). With the slowdown in domestic demand, imports look set to decelerate at the end of the year (+0.2%), before rising again in H1 2020 (+0.4% per quarter). Exports are expected to rebound in Q4 (+0.3%) and to maintain this moderate pace in H1 2020.

Overall in 2019, exports (+1.7%) are expected to be much more buoyant than imports (+0.9%), and foreign trade should contribute positively to growth again (amounting to +0.3 points of GDP). However, it is likely to hold back growth in early 2020. ■

The savings ratio should increase in 2019 as a result of an uptum in purchasing power and moderate private consumption



Note: for 2020, the values represented are the mid-year growth gains
Source: Istat, INSEE forecast

Spain

Growth is holding up well, despite political uncertainties

In Q3 2019, Spanish activity grew at the same pace as in the spring (+0.4%), driven by strong domestic demand but penalised by foreign trade. The favourable business climate and buoyant consumer spending are expected to drive activity until spring 2020 (+0.4% per quarter), despite the political uncertainty generated by the fourth general election in four years. On average in 2019, activity is likely to slow again (+2.0% after +2.4%), and the mid-year growth overhang for 2020 is expected to stand at +1.3%.

Vigorous wages should sustain private consumption

In Q3 2019, private consumption surged (+1.1% after 0.0%) after two very dynamic quarters for wages, which should continue to be buoyant in Q1 2020 (+0.5% per quarter), driven by civil servants' wages. After slowing down again in the summer, employment is likely to grow very moderately in late 2019 and mid-2020, as suggested by the recruitment prospects reported by business leaders. With a stable labour force, the unemployment rate is likely to decline gradually to 14.0% in the spring.

All in all, relatively dynamic purchasing power should enable Spanish households to increase their consumption at the end of the year and in H1 2020 (+0.4% per quarter). The savings ratio is expected to stabilise at 9.1% at the start of 2020.

Investment in construction and equipment is set to regain momentum

Investment in construction plummeted in Q3 (–2.6% after +0.5%), reflecting a sharp decline in office space. As the number of building permits continues to rise, construction investment should recover at the end of the year and grow moderately in H1 2020 (+0.3% per quarter). On average over 2019, construction investment is expected to slow significantly and to increase at its slowest rate since the end of the crisis in 2014 (*Graph*).

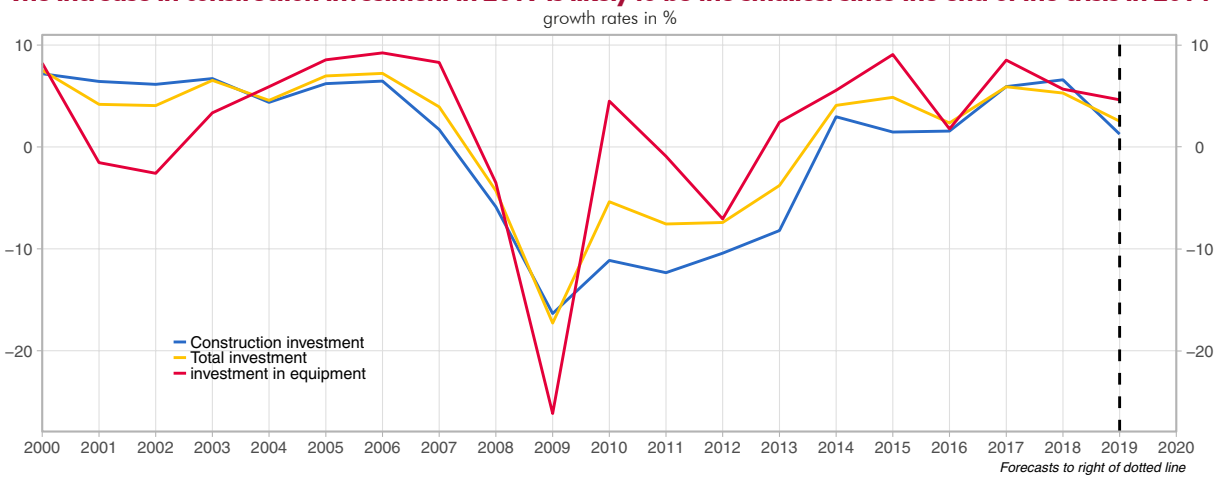
Equipment investment bounced back strongly (+7.1% after –1.8%). With political uncertainties undermining the confidence of business managers in industry, equipment investment should decline in Q4 (–1.0%) before recovering in H1 2020 (+0.8% per quarter).

In reaction, investment is likely to slow at the end of the year (–0.1%) before rising again in H1 2020 (+0.5% per quarter).

Foreign trade is set to make a neutral contribution to growth in early 2020

While exports declined in Q1 2019 (–0.8%), imports picked up sharply (+1.3%). Consequently, foreign trade hampered growth (–0.7 points). Exports are expected to recover at the end of the year (+0.6%), and then slow down in the first half of 2020, in an uncertain context for world trade. Imports look likely to slacken in Q4 (+0.3%) and should maintain this rate in H1 2020. Overall in 2019, exports are expected to be more buoyant than imports (+1.7% and +0.9%, respectively), and foreign trade should contribute positively to growth again (+0.3 points). In H1 2020, foreign trade is likely to make a neutral contribution to growth. ■

The increase in construction investment in 2019 is likely to be the smallest since the end of the crisis in 2014



Note : the change in growth rates for 2020 is the mid-year growth achievement
Source: Eurostat, INSEE forecast

United Kingdom

Brexit is still on the horizon

In Q3 2019, the United Kingdom returned to growth (+0.3%) after a downturn of 0.2% in Q2. The buoyancy of private consumption and the recovery in trade, in particular, have bolstered activity. From now on, activity is expected to slacken to +0.1% at the end of the year, penalised by weak domestic demand: imports and investment are likely to fall, and consumption should slow, due to the pre-electoral waiting game and prior to Brexit, *now scheduled for 31 January at the latest. Assuming that the United Kingdom ratifies an exit agreement with the European Union before this date, activity is likely to remain stable in early 2020, before rebounding tentatively in the spring (+0.1%,* Graph*). The mid-year growth overhang for 2020 should stand at just +0.2%, after +1.3% in 2019.*

Fragile recovery in foreign trade

In Q3 2019, imports bounced back slightly (+0.8%) after plummeting in the spring (–13.0%). Similarly, exports grew by +5.2% after a 6.6% downturn. However, this growth in trade is not necessarily set to last: in the context of *Brexit* and given the weakness of domestic demand, imports are expected to edge down by 0.5% at the end of the year and in early 2020, before perking up in Q2 (+1.5%). Exports also look set to slip back in Q4 2019 (–0.5%), and are also likely to edge down slightly in Q1 2020 (–0.1%), before stagnating in the spring. Overall in 2019, imports are expected to be more vigorous than exports (+2.5% and +0.20%, respectively).

Consumption is lacklustre

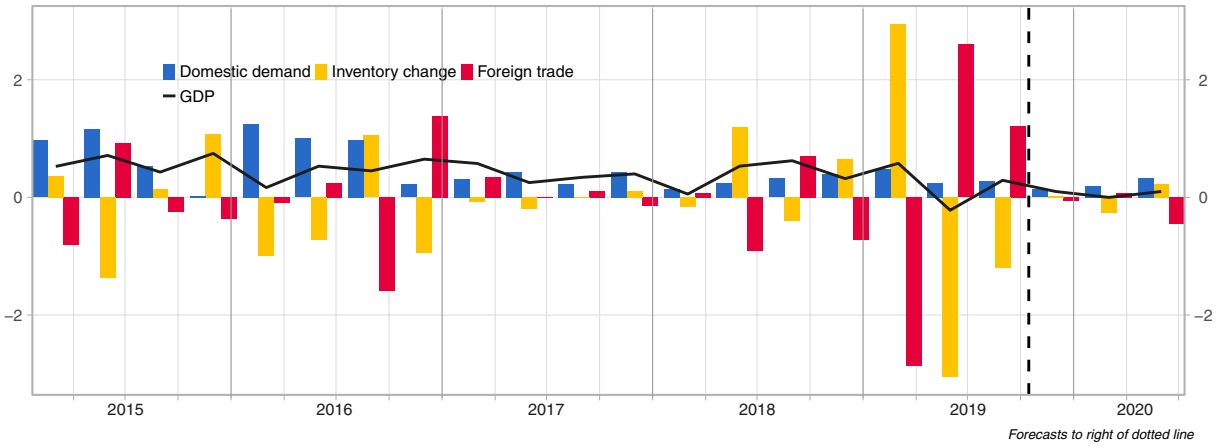
Household consumption kept growing by +0.4% in Q3, despite the slowdown in purchasing power (+0.4% after +0.8%), which should increase by +0.2% per quarter until mid-2020, held back by strong inflation (+2.2% year on year at the start of 2020). Consequently, as the new *Brexit* deadline approaches, consumption is expected to slow sharply, to +0.1% at the end of 2019 and in Q1 2020, before slowly recovering in the spring of 2020 (+0.2%). As a result, households are likely to increase their savings ratio to 7.0% in H1 2020.

Depressed private investment looks likely to be partly offset by public spending

The climate of uncertainty that continues to surround the terms of *Brexit* is hampering corporate investment in particular, which stagnated in Q3 2019 (+0.0% after –0.4%). Given the postponement of *Brexit*, enterprises are expected to postpone their investment decisions once again: private investment is therefore likely to edge down by 0.1% in late 2019, before picking up tentatively in 2020 (+0.1% in the winter, then +0.2% in Q2). Although public consumption slowed in Q3 (+0.3% after +0.8%), it is expected to increase at a more sustained pace (+0.5%) at the end of the year, before accelerating slightly in 2020 (+0.7% per quarter in H1). However, the holding of a general election on 12 December has generated uncertainty about public spending for 2020. ■

In the shadow of *Brexit*, counterbalancing variations in trade and inventories

changes in % and contributions in pointss



Source: ONS, INSEE forecast

United States

Soft landing

US activity remained vigorous in Q3 2019, (+0.5%, as in the spring), buoyed up by household consumption (+0.7%). Activity is likely to slow in Q4 (+0.3%), in line with household consumption, and should accelerate slightly in H1 2020 (+0.4% per quarter). On an annual average basis, activity is expected to grow by +2.3% in 2019, and its mid-year growth overhang for 2020 should reach +1.3%.

Activity is set to slow somewhat

In Q3 2019, US activity kept up a brisk growth rate (0.5%, as in Q2), driven by household consumption (+0.7%) but held back by corporate investment (–0.7%). Indicators derived from the business tendency surveys remained gloomy in November, suggesting a further slowdown in activity during Q4 (+0.3%).

Growth is expected to increase moderately in H1 2020 (+0.4% per quarter). On an annual average basis, activity looks set to slacken in 2019 (+2.3% after +2.9% in 2018), and its mid-year growth overhang for 2020 should rise to +1.3%.

Private consumption looks likely to slow down in the wake of purchasing power

Private consumption slowed in Q3 (+0.7% after +1.1%), partly as a result of higher customs duties on consumer goods imported from China. Wages should remain dynamic, buoyed by tensions on the labour market. However, taxes and social contributions are expected to rebound, investment income is likely to edge down, and core inflation looks set to rise. Household consumption should therefore weaken through to mid-2020 (+0.5% in Q4 followed by +0.4% per quarter), rising by +2.6% in 2019 after +3.0% in 2018. The mid-year growth overhang for 2020 should stand at 1.7%. The savings ratio is expected to stabilise at 7.6% in the first two quarters of 2020, after 8.0% in 2019.

Corporate investment is likely to pick up tentatively in 2020

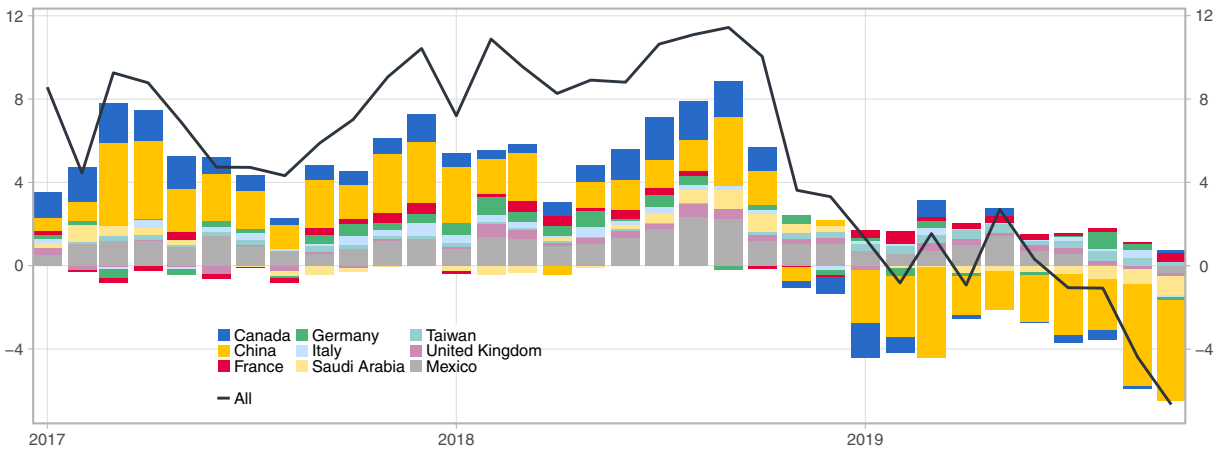
Corporate investment should dip again in Q4 (–0.1%) under the combined effects of the drop in oil prices, affecting investments in oil structures, and uncertainties over trade tensions. Assuming that these uncertainties ease, it is expected to pick up moderately in the first half of 2020 (+0.4% per quarter). All in all, corporate investment should slow sharply in 2019, to +2.1% after +6.4% in 2018, and its mid-year growth overhang for 2020 is likely to stand at just +0.1%.

Trade should remain sluggish

Exports recovered slightly in Q3 (+0.2% after –1.4%), as did imports (+0.4% after +0.0%). On an annual average basis, imports look likely to slow down in 2019 (+1.5% after +4.4%), especially those from China (Graph), and exports should to slow to a similar extent in 2019 (–0.2% after +3.0% in 2018). As a result, foreign trade is expected to hamper US activity again in 2019 (contributing –0.3 points, after –0.4 in 2018). The situation is unlikely to improve very much at the start of 2020 (expected contribution of –0.1 points to the mid-year growth overhang). ■

US imports of goods are decreasing, particularly from China

year-on-year change in % and contributions in percentage points (monthly data)



Last point: October 2019

Source: Census Bureau

Japan

Public spending is more buoyant than consumption

In Q3, Japanese activity slowed slightly (+0.4% after +0.5%), held back by the decline in exports. GDP is expected to edge down at the end of the year (–0.3%), in the wake of household consumption (–1.0%), following the increase in the consumption tax. It is likely to pick up again in H1 2020 (+0.2% followed by +0.3%), in line with the upswing in purchasing power.

Household consumption is set to slip back at the end of the year

Activity decelerated in Q3 (+0.4% after +0.5%). Industrial output declined (–0.5% after +0.7%), hampered by uncertainties – both domestic (due to the consumption tax rise) and external (related to trade tensions between China and the United States). In Q4, household consumption is expected to shrink (–1.0%) as a result of the tax rise, although this should be partly offset by measures such as the introduction of free pre-school services. It should then gradually recover through to mid-2020 (+0.3% and +0.4%). In the wake of consumption, Japanese GDP is likely to slip back in Q4 2019 (–0.3%) before growing moderately in H1 2020 (+0.2% in Q1, followed by +0.3%).

Public spending is likely to remain vigorous

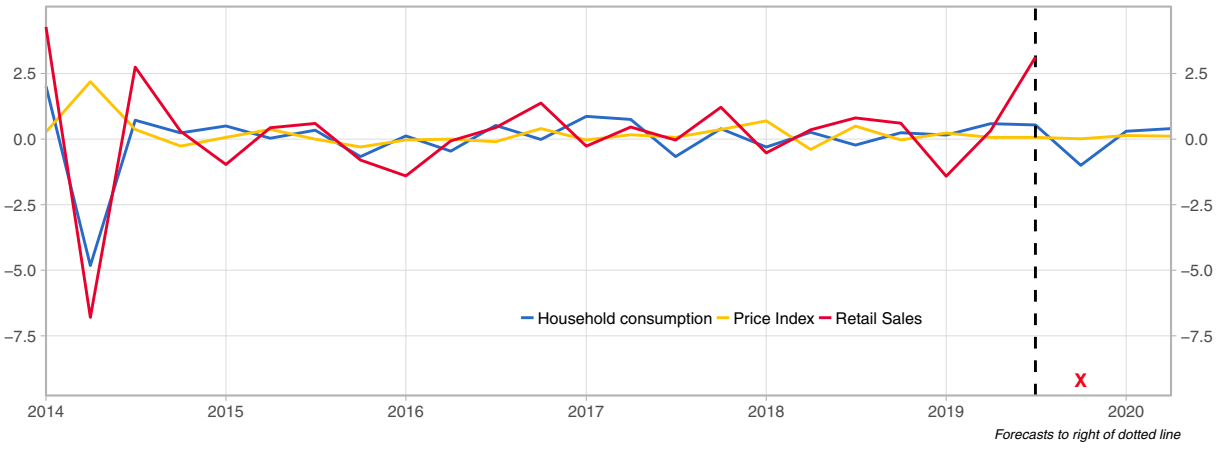
Public investment should remain dynamic until mid-2020 (+1.5% at the end of 2019 and then +0.5% per quarter over the forecasting period), boosted by projects for the Olympic Games and the reconstruction of areas hit by natural disasters. Public consumption should also maintain its momentum, buoyed up by fiscal stimulus measures such as free pre-school education. It is likely to accelerate to +1.0% at the end of the year, before rising again more moderately in H1 2020 (+0.3% per quarter). Corporate investment should come to a standstill at the end of the year (0.0%) before gradually increasing in H1 2020 (+0.2% then +0.5%).

Exports are suffering from the Chinese slowdown

Exports shrank in Q3 (–0.6%) due to the slowdown in Chinese demand. In this context of global tensions and uncertainties, they are expected to stall at the end of the year (+0.0%) and then increase slightly until June 2020 (+0.2% per quarter). Imports slowed sharply in Q3 (+0.3% after +2.1%) given the decline in purchasing power and should slow down at the end of the year (–0.5%), before bouncing back in H1 2020 (+0.7% in Q1, followed by +1.0%). Overall, foreign trade is likely to hold back activity in 2019 (contributing –0.3 points to the annual growth forecast of +1.2%), and in H1 2020 (contributing –0.3 points to the mid-year growth overhang forecast of +0.5% for 2020). ■

Substantial variations in consumption caused by a tax rise

quarterly variations in %



Note: the change in retail sales for Q4 2019 is the quarterly growth achievement at the end of October

Source: Cabinet Office of Japan

Emerging economies

The Chinese economy is faltering

In Q3 2019, Chinese activity slowed again (+1.4% after +1.5%) and is expected to maintain this pace until next June. On an annual average basis, activity looks set to decelerate in 2019, held back by the slowdown in both domestic and foreign demand, and its mid-year growth overhang should reach just +4.6% in 2020.
In Russia, after a dynamic Q3, activity is likely to slow slightly at the end of 2019 but then maintain a steady pace through to mid-2020. In India, domestic demand is struggling to recover and is holding back activity. Brazilian growth remains weak, but should hold firm with the support of domestic demand. In Turkey, activity has increased again and inflation has fallen: growth is also expected to continue, but should weaken in 2020. Lastly, growth in Central and Eastern Europe remains timid, in the wake of that of the Eurozone.

China: activity still hampered by trade tensions

In Q3, China posted a further decline in growth (+1.4% after +1.5%, according to the Chinese Statistical Institute), impacted by trade tensions with the United States (*Graph 1*). Industrial production decelerated to +5.0% year on year after +5.6%, and business climate indicators are down in the service sector.

The prospects through to June 2020 are as uncertain as the ongoing trade negotiations themselves. Industrial output should struggle to recover and the government's measures are unlikely to revitalise domestic demand. The published growth rate is expected to remain steady at +1.4% per quarter. On average, activity is likely to decelerate in 2019 (+6.1% after +6.6%), and the mid-year growth overhang for 2020 should stand at +4.6%.

While business and real estate investment has slowed year on year, household confidence indicators have picked up somewhat in recent months.

However, in Q3, retail sales and vehicle registrations continued to slow down year on year (+7.6% after +8.5%, and +0.8% after +4.2%, respectively).

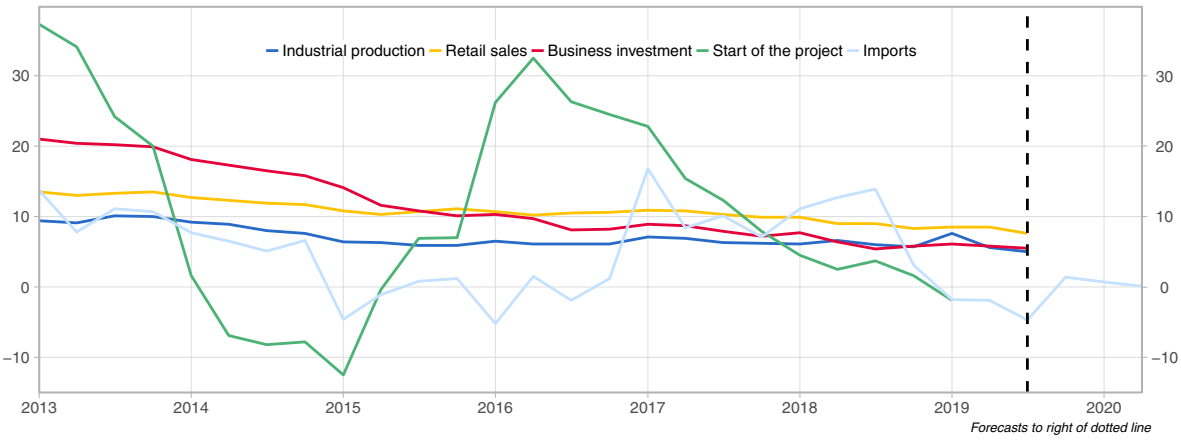
Chinese customs data – reprocessed in accordance with the National Accounts and adjusted to account for the seasonal effects of the Chinese New Year – show a recovery in exports in Q3 (+1.4% after –0.9%), driven by anticipations of further increases in US customs duties, which were subsequently suspended as part of the first phase of a trade agreement between the two countries. Exports are expected to fall back at the end of the year (–1.0%) after the increase in US customs duties on 300 billion imported goods, and should come to a standstill in early 2020 (+0.0%) before recovering in mid-2020 (+0.5%). On an annual average basis, exports are expected to decelerate in 2019 to +2.2% after +6.6% and to slow sharply in 2020 (mid-year growth overhang of +0.1%).

Imports look likely to edge down again at the end of 2019 (–0.5% after –0.1% in Q3) with domestic demand adversely affected by customs duties on US imports. They are expected to stabilise at the beginning of 2020 (+0.0%) and then accelerate slightly in Q2 (+0.5%). All in all, after a sharp decline in 2019 (–1.8% against +10.1% in 2018), they should get back on track in 2020, as suggested by their expected mid-year growth overhang (+0.3%).

Russia: continuous growth enabled by the slowdown in prices

Russian activity accelerated in Q3 (+1.1% after +0.9%), thanks to the drop in inflation, which stood at +4.3% year on year. The central bank

Slowdown in industrial output and domestic demand in China
year-on-year change in (%)



Source: National Bureau of Statistics of China (NBSC), INSEE calculations

took advantage of this decline to reduce its base rate in order to boost domestic demand.

Exports, as defined by customs, recovered after two quarters of sharp decline, but imports fell once again.

Russian growth is likely to hold firm, but should slacken a little at the end of the year (+0.8%). On an annual average basis, it is expected to stand at +1.4%, which is lower than in 2018 (+2.2%). Activity is then set to continue, with growth of +0.7% per quarter in H1 2020, for an annual growth overhang of 2.6%.

India: domestic demand is struggling to recover

In Q3, Indian activity, handicapped by the slowdown in domestic demand, would appear to have accelerated slightly (+0.8% after +0.5%). Industrial output is likely to have contracted (–1.7% after +1.1%) and the balances of opinion derived from surveys of purchasing managers have edged down.

Household confidence continues to deteriorate as a result of rising unemployment. Vehicle registrations fell again (–21.7% in Q3 after –12.8%). After contracting sharply in Q3 (–5.2% after –0.6%), imports are expected to decline at the end of the year (–1.0%) due to weak domestic demand. They are then likely to gather pace at the start of the year: +0.5% in Q1 followed by +1.0%.

Activity looks set to slacken at the end of the year (+0.7% after +0.8%) and should remain moderate in 2020 (+1.0% per quarter). On average in 2019, it is expected to slow sharply (+4.7% after +7.4%) and its mid-year growth overhang for 2020 should be +2.8%.

Brazil: growth is set to hold firm thanks to domestic demand

Brazilian growth accelerated slightly in Q3 (+0.6% after +0.4%). Industrial output recovered after two quarters of decline due to a dam failure. Inflation fell in Q3 (+3.2%), and retail sales rose by 1.6%. Activity is then expected to grow moderately: +0.4% in Q4 2019, followed by +0.5% per quarter until mid-2020. On average in 2019, activity is likely to slow down (+1.1%, after +1.3% in both 2018 and 2017). In 2020, the mid-year growth overhang should stand at +1.6%.

Turkey: tentative but probably long-term recovery after the crisis

Turkish GDP accelerated in Q3 (+1.3% after 0.9%). The business climate in the manufacturing sector has risen and inflation has fallen sharply. This price slowdown has enabled the implementation of a monetary easing policy, which should help to boost domestic demand (*Graph 2*). However, Turkish activity is expected to slow down at the end of 2019 (+0.5%), and it looks set to maintain this moderate growth in H1 2020 (+0.5% per quarter).

On an annual average basis, Turkish GDP should virtually stagnate in 2019 (+0.1% after +3.0% in 2018). Its mid-year growth overhang is likely to reach +2.2% in 2020.

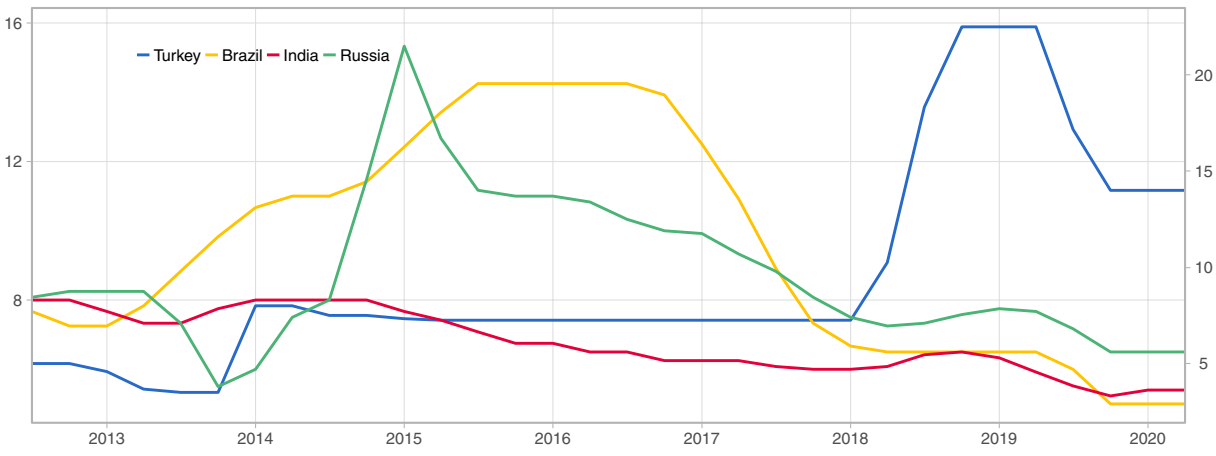
CEEC: moderate growth

In 2019, activity slowed down in the Central and Eastern European Countries (CEEC): +0.6% after +0.7%. Balances of opinion derived from surveys of purchasing managers have declined. However, activity is expected to carry on at this pace (+0.6% at the end of 2019 and early 2020, followed by +0.7% in Q2 2020), in the wake of the German recovery.

On average in 2019, growth is expected to decline again (+3.3%, after +3.9% in 2018). In 2020, the annual mid-year growth overhang should stand at +2.1%. ■

In emerging countries, the base rates of central banks are falling and stabilising

in %



Source: Turkstat, IBGE, MOSPI, Rosstat

Statistical French Appendix

Goods and services: sources and uses at chain-linked previous year prices

billion euros and percentage changes from previoux period and previous year
working-day and seasonally adjusted data

	2018				2019				2020		2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			ovhg
Gross domestic product (GDP)	569.4	570.5	572.4	575.0	576.6	578.6	580.2	581.9	583.2	584.7	2287.2	2317	2337
% change	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	1.7	1.3	0.9
Imports	188.6	189.9	189.7	192.1	194.2	193.6	194.9	196.7	198.1	199.6	760.4	779.4	797.0
% change	–0.7	0.7	–0.1	1.3	1.1	–0.3	0.7	0.9	0.7	0.8	1.2	2.5	2.3
Total ressources	1221	1224	1230	1238	1244	1248	1252	1258	1261	1266	4913	5002	5058
% change	–0.1	0.3	0.5	0.6	0.5	0.3	0.4	0.4	0.3	0.4	1.9	1.8	1.1
Household consumption expenditure	296.3	295.5	296.7	297.9	299.0	299.7	300.8	301.6	302.5	303.4	1186.5	1201	1213
% change	0.2	–0.2	0.4	0.4	0.3	0.2	0.4	0.3	0.3	0.3	0.9	1.2	1.0
General government consumption expenditure*	143.1	143.3	143.5	144.2	144.4	145.0	145.8	146.3	146.4	146.8	574.1	581.4	586.7
% change	0.0	0.2	0.1	0.5	0.1	0.4	0.5	0.3	0.1	0.3	0.8	1.3	0.9
of which General government individual consumption expenditure	*88.9*	*89.1*	*89.3*	*89.7*	*89.6*	*90.1*	*90.5*	*90.8*	*90.8*	*91.0*	*357.0*	*361.0*	*363.9*
% change	*–0.1*	*0.2*	*0.2*	*0.5*	*0.0*	*0.5*	*0.5*	*0.3*	*0.0*	*0.3*	*0.7*	*1.1*	*0.8*
Collective consumption expenditure	*46.5*	*46.6*	*46.5*	*46.8*	*47.0*	*47.2*	*47.5*	*47.7*	*47.8*	*47.9*	*186.4*	*189.4*	*191.4*
% change	*0.0*	*0.1*	*–0.1*	*0.6*	*0.4*	*0.4*	*0.6*	*0.4*	*0.2*	*0.2*	*0.9*	*1.6*	*1.1*
Gross fixed capital formation (GFCF)	129.4	130.4	131.7	132.7	133.4	135.1	136.7	137.4	138.2	138.8	524.3	542.6	554.5
% change	–0.1	0.8	1.0	0.8	0.5	1.3	1.2	0.5	0.5	0.4	2.8	3.5	2.2
of which : Non-financial enterprises (incl. unincorporated enterprises)	*73.1*	*73.9*	*75.0*	*75.8*	*76.2*	*77.0*	*78.1*	*78.6*	*79.1*	*79.6*	*297.8*	*309.9*	*318.1*
% change	*–0.1*	*1.1*	*1.4*	*1.1*	*0.5*	*1.1*	*1.4*	*0.6*	*0.7*	*0.6*	*3.9*	*4.1*	*2.6*
households	*30.0*	*30.2*	*30.3*	*30.2*	*30.3*	*30.8*	*31.0*	*31.1*	*31.2*	*31.3*	*120.7*	*123.1*	*125.1*
% change	*0.1*	*0.7*	*0.3*	*–0.2*	*0.2*	*1.7*	*0.7*	*0.3*	*0.3*	*0.4*	*2.0*	*2.0*	*1.6*
Government	*19.3*	*19.4*	*19.6*	*19.8*	*20.0*	*20.2*	*20.5*	*20.5*	*20.6*	*20.6*	*78.1*	*81.2*	*82.3*
% change	*0.6*	*0.9*	*0.8*	*1.2*	*0.9*	*1.3*	*1.0*	*0.4*	*0.2*	*–0.1*	*2.4*	*4.0*	*1.3*
Exports	180.3	181.4	182.9	186.2	186.4	185.9	185.8	187.7	188.1	189.3	730.8	745.8	755.8
% change	–0.4	0.6	0.8	1.8	0.1	–0.2	–0.1	1.0	0.2	0.6	3.5	2.1	1.3
Contributions to GDP growth: (in percentage points)													
Domestic demand excluding invetory changes**	0.7	0.5	0.7	0.4	0.1	0.1	0.4	0.4	0.4	0.3	2.3	1.3	1.4
Inventory changes**	0.8	–0.6	0.2	–0.1	0.1	0.1	–0.4	–0.2	0.3	0.0	0.2	–0.3	–0.1
Net foreign trade	–0.7	0.8	–0.2	0.4	0.1	0.0	0.2	0.3	–0.3	–0.1	–0.1	0.7	–0.1

Forecast

* Includes consumption expenditures by non-profit institutions serving households (NPISHs)

** Inventory changes include acquisitions net of sales of valuables

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

	2018				2019				2020		2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			ovhg
Output of the branches of activity	–1.5	0.0	0.7	0.2	0.4	–0.5	–0.6	0.0	–0.2	0.0	0.6	0.2	–0.6
Value added	–1.4	0.1	0.2	0.2	0.3	–0.3	–0.6	0.0	–0.2	0.0	0.1	0.1	–0.6
Intermediate consumption	–1.6	–0.1	0.8	0.2	0.4	–0.6	–0.6	0.0	–0.2	0.0	0.8	0.2	–0.6
Imports	–0.6	2.0	–1.0	1.7	1.0	0.2	1.1	1.0	0.5	0.6	2.5	3.3	2.3
Taxes on products excluding subsidies	–0.4	0.3	0.1	–0.4	0.5	–0.2	0.3	0.1	0.0	0.2	–0.2	0.3	0.2
Trade and transport margins	0.1	0.0	0.3	0.3	0.4	0.4	0.4	0.4	0.0	0.4	1.7	1.3	0.9
Total ressources	–0.7	0.6	0.1	0.6	0.5	–0.1	0.1	0.4	0.1	0.3	1.5	1.2	0.6
Intermédiate uses	–0.8	0.4	0.5	0.6	0.5	0.1	0.0	0.2	0.0	0.1	1.6	1.5	0.3
Household consumption expenditure	–0.2	–0.1	–0.1	–0.1	0.0	–0.5	0.9	0.2	0.0	0.2	–0.1	0.1	0.6
General government individual consumption expenditure	0.8	0.7	0.5	2.3	–1.7	1.3	2.0	1.0	1.0	1.0	2.9	2.7	3.8
Gross fixed capidal formation (GFCF)	–1.8	1.4	1.3	0.1	1.3	0.9	1.3	–0.1	0.4	0.4	2.1	3.7	1.5
Non-financial enterrises (incl. unincorporated enterprises)	–2.3	1.4	1.4	0.0	1.5	1.0	1.5	–0.1	0.4	0.4	2.0	4.1	1.6
Other	1.8	1.8	0.9	0.5	–0.2	0.1	0.3	0.3	0.6	0.3	2.5	1.4	1.2
Contribution of inventory changes to manufactured production*	0.1	0.7	–1.3	–0.8	0.4	–0.4	–0.1	–0.2	0.1	–0.1	–0.6	–1.1	–0.2
Exports	–1.2	0.3	1.4	2.5	0.3	0.1	–0.5	1.2	–0.2	0.6	3.6	3.0	0.8
Domestic demand excluding inventory changes*	–0.6	0.3	0.4	0.4	0.3	0.0	0.5	0.2	0.1	0.2	1.1	1.2	0.6

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 seasnally adjested data

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross domestic product (GDP)	0.4	0.2	0.3	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.8	1.5	1.0
Imports	0.3	0.9	1.3	–0.1	–0.9	0.3	–0.4	–0.1	0.0	0.0	2.0	–0.1	–0.2
Total ressources	0.3	0.4	0.7	0.1	0.0	0.2	0.0	0.2	0.2	0.2	1.3	0.6	0.5
Household consumption expenditure	0.6	0.5	0.3	0.2	0.2	0.4	0.2	0.3	0.4	0.4	1.5	1.1	1.0
General government consumption expenditure	0.2	0.1	0.1	–0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.5	0.3	0.4
Gross fixed capital formation (GFCF)	0.3	0.5	0.7	0.1	0.5	0.6	0.3	0.3	0.3	0.2	1.4	1.7	1.0
of which: Non-financial enterprises (incl. unincorp. enterprises)	0.3	0.4	0.6	0.1	0.3	0.6	0.2	0.3	0.2	0.1	1.1	1.5	0.8
Households	0.3	0.7	0.9	–0.2	0.8	0.6	0.4	0.3	0.5	0.5	1.9	2.1	1.5
Exports	0.1	0.5	0.9	0.0	0.2	0.1	–0.3	0.1	0.1	0.1	0.8	0.9	0.2
Domestic demand excluding inventory changes *	0.4	0.4	0.4	0.1	0.2	0.4	0.2	0.3	0.3	0.3	1.2	1.0	0.9

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

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Output of the branches of activity	0.3	0.6	0.9	–0.2	0.0	0.3	–0.5	0.1	0.1	0.1	1.4	0.5	0.1
Value added	0.0	0.2	1.0	0.5	1.4	0.4	–0.1	0.2	0.2	0.2	–0.5	2.7	0.5
Intermédiate consumption	0.4	0.7	0.8	–0.5	–0.6	0.3	–0.6	0.1	0.1	0.1	2.2	–0.4	0.0
Imports	0.1	0.9	0.8	–0.2	–0.2	0.1	–0.3	–0.1	0.0	–0.1	1.2	0.2	–0.3
Total ressources	0.4	0.7	0.7	–0.1	0.0	0.3	–0.3	0.1	0.1	0.1	1.4	0.4	0.1
Intermédiate uses	0.5	0.8	0.8	–0.6	–0.5	0.0	–0.6	0.1	0.1	0.1	2.0	–0.7	0.0
Household consumption expenditure	1.0	0.9	0.2	0.1	0.0	0.7	–0.2	0.2	0.1	0.2	2.2	0.9	0.5
General government individual consumption expenditure	–0.8	–0.7	–0.5	–1.0	1.4	–0.6	–0.9	–0.4	–0.4	–0.4	–2.5	–0.8	–1.5
Gross fixed capital formation (GFCF)	0.5	0.2	0.4	0.3	0.3	0.2	–0.1	0.2	0.1	0.0	0.7	0.9	0.3
of which: Non-financial enterprises (incl. unincorp. enterprises)	0.5	0.3	0.4	0.3	0.3	0.2	–0.1	0.2	0.1	0.0	0.8	0.9	0.3
General government	0.5	0.0	0.8	0.5	0.8	0.2	0.0	0.2	0.2	0.1	0.1	1.8	0.5
Exports	–0.1	0.6	0.7	0.0	0.2	0.2	–0.2	0.0	0.0	0.0	0.4	0.8	0.0
Domestic demand excluding inventory changes*	0.7	0.7	0.5	–0.3	–0.2	0.3	–0.4	0.1	0.1	0.1	1.9	0.0	0.2

Forecast

* Changes in inventories include acquisitions net of sales of valuables

Output by sector at chain-linked previous year prices

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agriculture	–0.1	–0.2	–0.3	–0.4	–0.4	–0.1	–0.3	0.1	0.0	0.0	1.1	–1.1	–0.1
Manufacturing	–1.5	0.0	0.7	0.2	0.4	–0.5	–0.6	0.0	–0.2	0.0	0.6	0.2	–0.6
Energy, water and waste	2.2	–3.7	0.9	0.4	0.0	1.3	–0.4	–0.4	0.3	0.2	0.4	0.4	0.2
Construction	–0.2	0.5	0.5	0.6	0.7	0.5	0.5	0.3	0.2	0.1	1.8	2.2	0.9
Trade	0.2	0.6	0.1	0.5	0.3	0.2	0.5	0.4	0.0	0.3	2.4	1.5	0.8
Market services excluding trade	0.7	0.5	0.8	0.8	0.5	0.8	0.7	0.5	0.4	0.5	3.2	2.7	1.7
Non market services	0.0	0.2	0.1	0.5	0.3	0.4	0.4	0.3	0.2	0.2	0.8	1.3	0.9
Total	0.1	0.2	0.6	0.6	0.4	0.4	0.3	0.3	0.2	0.3	2.0	1.7	0.9

Forecast

Value added by sector at chain-linked previous year prices

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agriculture	0.1	0.0	–0.2	–0.3	–0.3	0.1	–0.2	0.3	0.2	0.2	3.4	–0.6	0.5
Manufacturing	–1.4	0.1	0.2	0.2	0.3	–0.3	–0.6	0.0	–0.2	0.0	0.1	0.1	–0.6
Energy, water and waste	2.9	–3.7	0.2	0.6	–0.2	0.2	0.4	–0.4	0.3	0.2	0.3	–0.4	0.3
Construction	–0.3	–0.3	–0.2	0.3	0.5	0.7	0.5	0.1	0.1	–0.1	0.1	1.4	0.5
Trade	–0.3	0.2	–0.2	0.3	0.2	0.0	0.4	0.2	–0.1	0.1	1.1	0.6	0.3
Market services excluding trade	0.8	0.5	0.7	0.7	0.3	0.6	0.5	0.5	0.4	0.4	3.0	2.1	1.5
Non market services	0.0	0.2	0.1	0.3	0.1	0.2	0.2	0.3	0.2	0.2	0.9	0.8	0.7
Total	0.2	0.2	0.3	0.5	0.3	0.3	0.3	0.3	0.2	0.3	1.8	1.3	0.9

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

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Manufactured good	–2.3	1.4	1.4	0.0	1.5	1.0	1.5	–0.1	0.4	0.4	2.0	4.1	1.6
Construction	0.7	1.0	0.8	1.0	0.7	0.9	0.6	0.3	0.3	0.1	3.5	3.2	1.2
Other	1.3	1.0	1.8	1.9	–0.2	1.2	1.8	1.3	1.2	1.1	5.5	4.6	4.3
Total	–0.1	1.1	1.4	1.1	0.5	1.1	1.4	0.6	0.7	0.6	3.9	4.1	2.6

Forecast

Imports (CIF) at chain-linked previoux year prices

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	2.4	1.4	–1.7	3.6	1.2	–1.3	1.3	1.0	0.5	1.0	0.9	3.2	2.3
Manufactured goods	–0.6	2.0	–1.0	1.7	1.0	0.2	1.1	1.0	0.5	0.6	2.5	3.3	2.3
Energy, water and waste	–4.7	–13.9	9.2	–3.8	9.6	–5.9	–4.3	–2.0	0.8	1.2	–5.0	–0.3	–3.6
Total goods	–0.7	0.8	–0.4	1.4	1.6	–0.3	0.7	0.8	0.5	0.6	1.9	3.0	1.9
Total services	–1.2	–0.1	0.5	0.1	–1.7	–1.1	0.6	1.5	1.7	1.6	–2.6	–1.6	4.1
Total*	–0.7	0.7	–0.1	1.3	1.1	–0.3	0.7	0.9	0.7	0.8	1.2	2.5	2.3

Forcast

* Including territorial correction

Exports (FOB) at chain-linked previoux year prices

percentage changes from previous period and previous year
working-day and seasonally adjusted data

	2018				2019				2020		2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	–2.3	3.8	–7.5	2.3	1.8	–1.3	3.2	1.0	0.5	0.5	2.4	1.3	2.9
Manufactured goods	–1.2	0.3	1.4	2.5	0.3	0.1	–0.5	1.2	–0.2	0.6	3.6	3.0	0.8
Energy, water and waste	2.5	2.0	–2.9	–4.8	9.5	4.4	5.0	–3.0	–1.0	0.5	6.5	9.8	0.6
Total goods	–1.1	0.4	1.1	2.3	0.5	0.1	–0.3	1.1	–0.2	0.5	3.6	3.1	0.9
Total services	1.4	1.6	1.0	1.0	–1.4	–1.7	0.2	1.0	1.5	1.3	3.1	–0.7	2.9
Total*	–0.4	0.6	0.8	1.8	0.1	–0.2	–0.1	1.0	0.2	0.6	3.5	2.1	1.3

Forecast

* Including territorial correction

Changes in inventories at chain-linked previous year prices

percentage changes from previous period and previous year

working-day and seasonally adjusted data

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–0.1	0.1	0.0
Manufactured goods	0.0	0.2	–0.4	–0.3	0.1	–0.1	0.0	–0.1	0.0	0.0	–0.2	–0.4	–0.1
Energy, water and waste	0.0	–0.1	0.0	0.0	0.1	–0.1	–0.1	0.0	0.0	0.0	0.0	0.0	0.0
Other (construction, services)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.1	–0.4	–0.2	0.3	–0.2	–0.1	–0.1	0.1	0.0	–0.3	–0.3	–0.1

Forecast

Household consumption expenditure at chain-linked previous year prices

working-day and seasonally adjested data, percentage changes from previous period and previous year

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural goods	0.2	–2.3	–0.9	–1.1	–0.9	1.9	–3.8	2.6	–1.2	–0.6	–3.0	–2.6	–1.2
Manufactured goods	–0.2	–0.1	–0.1	–0.1	0.0	–0.5	0.9	0.2	0.0	0.2	–0.1	0.1	0.6
Energy, water and waste	2.8	–7.3	1.9	–0.2	0.2	2.3	–0.9	–0.9	0.6	0.4	–0.8	0.1	0.4
Trade	0.7	2.3	–1.8	0.2	0.9	–0.7	0.8	–0.3	0.3	0.4	4.1	0.5	0.6
Market services excluding trade	0.5	0.1	0.5	0.6	0.6	0.5	0.4	0.4	0.6	0.3	2.0	2.0	1.4
Non market services	–0.6	0.5	–0.1	0.6	0.3	0.2	0.3	0.2	0.3	0.3	–0.1	1.2	0.9
Territorial correction	1.4	–5.5	–11.7	–10.4	–6.8	–2.9	3.7	1.3	0.0	–3.7	–1.5	–21.0	–0.7
Total consumption expenditure	0.2	–0.2	0.4	0.4	0.3	0.2	0.4	0.3	0.3	0.3	0.9	1.2	1.0
Total consumption	0.2	–0.1	0.3	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.8	1.2	0.9

Forecast

Household income account

working-day and seasonally adjested data, percentage changes from previous period and previous year

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross operating surplus	0,1	0,2	0,2	0,5	0,5	0,6	0,2	0,3	–0,3	0,2	1,4	1,6	0,4
Unincorporated enterprises	–0,4	–0,5	–0,3	–0,2	0,3	–0,2	–0,3	0,1	–1,1	0,0	–0,3	–0,3	–1,2
Households excluding unincorporated enterprises	0,4	0,6	0,5	0,9	0,6	1,0	0,5	0,4	0,2	0,4	2,3	2,8	1,3
Gross wages and salaries	0,8	0,7	0,5	0,7	1,2	0,3	0,8	0,6	0,6	0,5	2,9	3,0	1,9
Net interests and dividends	3,2	2,3	1,4	0,5	–0,5	–0,3	–0,1	0,3	–0,2	0,2	8,3	1,0	0,0
Social benefits (in cash)	0,5	0,7	0,5	0,7	1,0	0,2	0,7	0,7	0,5	0,5	2,3	2,6	1,8
Total ressources	0,7	0,7	0,5	0,6	1,0	0,3	0,6	0,6	0,4	0,4	2,7	2,6	1,5
Income and wealth taxes	10,5	–1,7	–0,1	–1,2	2,1	0,7	0,1	–2,3	0,7	0,8	9,6	0,8	–0,2
Households' contributions	–7,6	–0,9	0,4	–2,9	0,5	0,5	0,5	0,5	0,4	0,5	–7,7	–1,0	1,6
Total charges	3,0	–1,4	0,1	–1,8	1,5	0,6	0,2	–1,2	0,6	0,7	2,5	0,1	0,5
Gross disposable income	0,0	1,3	0,6	1,3	0,8	0,2	0,8	1,0	0,3	0,3	2,7	3,2	1,8
Consumption deflator	0,6	0,5	0,3	0,2	0,2	0,4	0,2	0,3	0,4	0,4	1,5	1,1	1,0
Real gross disposable income	–0,6	0,8	0,2	1,1	0,6	–0,2	0,6	0,8	0,0	0,0	1,2	2,1	0,8
Social benefits (in kind)	0,1	0,3	0,2	0,4	0,2	0,6	0,5	0,5	0,1	0,4	1,3	1,5	1,2
Adjusted gross disposable income	0,0	1,1	0,5	1,1	0,7	0,3	0,7	0,9	0,3	0,4	2,4	2,8	1,7

Forecast

Main ratios (households)

working-day and seasonally adjested data, in percentage points

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Saving ratio	13.4	14.3	14.2	14.8	15.0	14.6	14.8	15.2	14.9	14.7	14.2	14.9	14.7
Financial saving ratio*	3.2	4.2	3.9	4.6	4.9	4.2	4.3	4.8	4.5	4.2	4.0	4.5	4.2
Weight of taxes and social contributions**	22.3	21.8	21.7	21.2	21.3	21.4	21.3	20.9	21.0	21.0	21.7	21.2	21.0
Gross wages and salaries/gross disposable income	65.0	64.7	64.6	64.2	64.5	64.5	64.6	64.3	64.5	64.6	64.6	64.5	64.5
Social benefits (cash)/gross disposable income	35.8	35.5	35.5	35.3	35.4	35.4	35.3	35.2	35.3	35.3	35.5	35.3	35.3

Forecast

* Gross operating surplus

** Gross fixed capital formation

*** Savings / Gross fixed capital formation

Opering account of non-financial corporations and unincorporated enterprises

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Value added	0.3	0.2	0.9	1.0	1.2	0.7	0.6	0.7	0.6	0.7	2.7	3.5	2.2
Subsidies	5.6	–0.5	1.5	3.0	8.5	–0.9	–4.6	0.0	–42.7	1.4	5.2	8.3	–43.6
Total ressources	0.5	0.2	0.9	1.0	1.4	0.7	0.4	0.7	–0.6	0.7	2.7	3.7	0.8
Compensation of employees	1.0	1.0	0.6	0.8	–0.2	0.2	0.9	0.2	0.7	0.6	3.7	1.7	1.8
of which: Gross wages and salaries	0.9	1.0	0.6	0.9	1.5	0.1	1.0	0.6	0.7	0.6	3.6	3.6	2.2
Employers' social contributions	1.1	1.1	0.7	0.4	–5.5	0.6	0.3	–1.1	0.5	0.5	3.9	–4.4	0.4
Taxes on production	1.7	0.8	1.0	0.3	8.4	–0.4	0.0	–0.3	0.2	0.0	4.4	9.0	–0.1
Total charges	1.0	1.0	0.7	0.8	0.5	0.2	0.8	0.2	0.7	0.5	3.8	2.2	1.6
Gross operating surplus	–0.5	–1.2	1.4	1.5	3.2	1.6	–0.2	1.6	–2.7	1.0	0.9	6.3	–0.5
Unincorporated enterprises	–0.4	–0.5	–0.3	–0.2	0.3	–0.2	–0.3	0.3	–1.0	0.1	–0.3	–0.4	–0.9
Non-financial corporations	–0.5	–1.5	1.9	2.0	4.0	2.1	–0.2	2.0	–3.2	1.2	1.3	8.3	–0.4

Forecast

Non-financial corporations' income account

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Value added	0.4	0.3	1.0	1.1	1.4	0.8	0.6	0.8	0.7	0.7	3.0	4.0	2.3
Subsidies	6.2	–0.5	1.6	3.2	9.3	–0.9	–4.6	0.0	–43.4	1.4	5.9	9.3	–44.2
Total ressources	0.6	0.3	1.0	1.2	1.6	0.8	0.5	0.8	–0.6	0.7	3.1	4.1	1.0
Compensation of employees	1.0	1.1	0.6	0.8	–0.1	0.2	0.9	0.2	0.7	0.6	3.8	1.8	1.8
Taxes	–4.6	–3.4	–6.1	14.5	–0.9	–0.6	9.0	–6.6	0.0	2.6	–0.2	7.7	0.9
of which: Taxes on production	1.5	0.6	0.9	0.3	8.4	–0.4	0.0	–0.3	0.2	0.0	3.9	8.9	–0.2
Corporate taxes	–11.6	–8.6	–16.2	39.3	–12.5	–0.9	23.2	–14.5	–0.4	6.4	–5.6	6.0	2.4
Net interests and dividents	12.4	8.6	5.2	1.9	0.1	0.2	0.3	1.5	0.1	1.1	25.2	6.8	2.3
Other net charges	–2.0	–1.7	–0.3	1.1	2.5	1.9	1.3	0.7	0.6	0.7	–4.2	5.0	2.8
Total charges	0.6	0.8	0.1	2.3	–0.1	0.2	1.8	–0.5	0.6	0.8	3.9	2.7	1.7
Gross disposable income	0.4	–1.4	4.5	–2.7	7.8	2.8	–3.8	5.2	–4.3	0.4	0.3	9.1	–1.5

Forecast

Breakdown of non-financial corporations' profit share

working-day and seasonally adjusted data, percentage changes from previous period and previous year

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Margin rate* (in %)	31.5	30.9	31.2	31.5	32.3	32.7	32.4	32.8	31.5	31.7	31.2	32.5	31.7
Margin rate % change	–0.3	–0.5	0.3	0.3	0.8	0.4	–0.3	0.4	–1.2	0.1	–0.5	1.3	–0.9
Contributions to margin rate variation													
Productivity (+)	–0.2	–0.1	0.1	0.2	0.0	–0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Real wages (–)	0.2	–0.2	0.0	–0.3	–0.6	0.5	–0.3	–0.1	–0.1	0.0	–0.2	–0.6	–0.2
Employers' social contributions rate (–)	0.0	0.0	0.0	0.1	1.1	–0.1	0.1	0.3	0.0	0.0	–0.1	1.2	0.3
Ratio of value added price and consumption price (+)	–0.3	–0.2	0.1	0.1	0.4	0.0	0.1	0.1	0.1	0.1	–0.5	0.6	0.2
Other items	0.1	0.0	0.0	0.1	–0.1	0.0	–0.1	0.0	–1.2	0.0	0.0	–0.1	–1.2

Forecast

* Gross operating surplus/value added

Main ratios (non-financial corporate sector)

working-day and seasonally adjusted data, in percentage points

	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Wage costs / Value added (VA)	66.1	66.7	66.4	66.2	65.3	64.9	65.0	64.7	64.7	64.6	66.4	65.0	64.6
Taxes on production / VA	5.2	5.3	5.3	5.2	5.6	5.5	5.5	5.4	5.4	5.4	5.3	5.5	5.4
Margin rate (GOS* / VA)	31.5	30.9	31.2	31.5	32.3	32.7	32.4	32.8	31.5	31.7	31.2	32.5	31.7
Investment rate (GFCF** / VA)	23.8	24.1	24.3	24.4	24.3	24.5	24.7	24.7	24.8	24.8	24.1	24.5	24.8
Saving ratio (savings / VA)	22.8	22.4	23.1	22.3	23.7	24.1	23.1	24.1	22.9	22.8	22.6	23.7	22.9
Tax pressure (income taxes / gross disposable income before taxes)	14.9	14.0	11.5	15.7	13.1	12.7	15.7	13.2	13.6	14.3	14.0	13.7	14.2
Self-financing ratio (cash earnings)	95.7	92.9	95.1	91.4	97.6	98.6	93.4	97.4	92.3	92.0	93.7	96.7	92.1

Forecast

* Gross operating surplus

** Gross fixed capital formation

*** Savings / Gross fixed capital formation

Countries Accounts

Eurozone	Quarterly change in %										Annual change in %		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
GDP	**0.3**	**0.3**	**0.2**	**0.3**	**0.4**	**0.2**	**0.2**	**0.2**	**0.2**	**0.3**	**1.7**	**1.1**	**0.7**
Private consumption (54%)	0.4	0.2	0.2	0.4	0.4	0.2	0.5	0.2	0.4	0.3	1.3	1.3	1.1
Investment (21%)	–0.1	1.4	0.1	1.2	1.3	0.4	0.3	0.2	0.4	0.4	3.3	3.1	1.1
Public consumption (20%)	0.1	0.3	0.1	0.4	0.4	0.5	0.4	0.2	0.3	0.3	1.1	1.5	1.0
Exports (48%)	–0.2	0.5	0.2	0.7	0.8	0.0	0.4	0.8	0.3	0.4	2.8	1.9	1.3
Imports (44%)	–0.3	1.1	0.6	0.8	0.4	0.3	0.6	0.6	0.5	0.6	3.0	2.3	1.8
Contributions to GDP growth													
Domestic demand excluding inventories	0.2	0.5	0.1	0.5	0.6	0.3	0.4	0.2	0.4	0.3	1.6	1.6	1.1
Change in inventories	0.0	0.1	0.2	–0.2	–0.4	0.0	–0.1	–0.1	0.0	0.0	0.1	–0.5	–0.2
Foreign trade	0.1	–0.2	–0.2	0.0	0.2	–0.1	–0.1	0.1	–0.1	0.0	0.0	–0.1	–0.2

Forecast

* In the second quarter of 2019, Ireland's GFCF grew by more than 182%, making a positive contribution of 5.4 points to euro area investment. In contrast to this increase in investment, the increase in Irish imports (+43% in the second quarter) contributed 2.6 points to the increase in imports from the region. As may have already occurred in the past, for example in 2017, such variations led to the exclusion of Ireland from the euro area accounts presented above.

Consumer prices in Eurozone

change in a % and contributions in points

GPI groups (2018 weightings)	Q3 2019		Q4 2019		Q1 2020		Q2 2020		Annual averages		
	ga	cga	ga	cga	ca	cga	ca	cga	2018	2019	2020
All (100.0%)	**1.0**		**0.8**		**1.1**		**0.8**		**1.8**	**1.2**	**0.8**
Food (including Alc. and Tabacco) (19.6%)	1.8	0.4	1.8	0.3	1.5	0.3	1.4	0.3	2.2	1.8	1.0
Energy (10.6%)	–0.6	–0.1	–2.7	–0.3	–0.2	0.0	–2.0	–0.2	6.3	1.0	–0.6
"Core" inflation (69.8%)	0.9	0.7	1.1	0.8	1.1	0.8	0.9	0.7	1.0	1.0	0.8

Forecast

* The 2018 figure is the growth overhang at the end of H1

France (20%)[1]	Quarterly change in %										Annual change in %		
	2018				2019				2020		2018	2019	2020 ovhg
	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2			
Supply and use table (in real terms)													
GDP	**0.2**	**0.2**	**0.3**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.3**	**1.7**	**1.3**	**0.9**
Private consumption (54%)	0.2	–0.2	0.4	0.4	0.3	0.2	0.4	0.3	0.3	0.3	0.9	1.2	1.0
Investment (23%)	–0.1	0.8	1.0	0.8	0.5	1.3	1.2	0.5	0.5	0.4	2.8	3.5	2.2
Public consumption (23%)	0.0	0.2	0.1	0.5	0.1	0.4	0.5	0.3	0.1	0.3	0.8	1.3	0.9
Exports (31%)	–0.4	0.6	0.8	1.8	0.1	–0.2	–0.1	1.0	0.2	0.6	3.5	2.1	1.3
Imports (32%)	–0.7	0.7	–0.1	1.3	1.1	–0.3	0.7	0.9	0.7	0.8	1.2	2.5	2.3
Contributions to GDP growth													
Domestic demand excluding inventories	0.1	0.1	0.5	0.5	0.3	0.5	0.6	0.4	0.3	0.3	1.3	1.8	1.2
Changes in inventories	0.0	0.1	–0.4	–0.2	0.3	–0.2	–0.1	–0.1	0.1	0.0	–0.3	–0.3	–0.1
Foreign trade	0.1	0.0	0.3	0.2	–0.3	0.0	–0.2	0.0	–0.2	–0.1	0.7	–0.2	–0.3

Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2018.
yoy: year-on-year
cyoy: contributions year-on-year

1. Share in Eurozone GDP in 2018

Sources: Eurostat, INSEE

Germany (29%)[1]	Quarterly change in %										Annual change in %		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.1**	**0.4**	**–0.1**	**0.2**	**0.5**	**–0.2**	**0.1**	**0.0**	**0.2**	**0.3**	**1.5**	**0.5**	**0.4**
Private consumption (52%)	0.1	0.2	0.0	0.4	0.8	0.1	0.4	0.2	0.4	0.4	1.2	1.6	1.1
Investissement (21%)	0.9	1.0	0.7	0.9	1.6	–0.3	–0.1	0.2	0.4	0.4	3.5	2.7	0.6
Public consumption (20%)	0.0	0.6	0.1	0.4	0.6	0.6	0.8	0.3	0.7	0.5	1.4	2.0	1.8
Exports (47%)	–0.2	0.8	–0.9	0.2	1.6	–1.3	1.0	0.9	0.2	0.3	2.3	1.3	1.3
Imports (41%)	–0.4	1.5	1.3	0.6	0.8	–0.1	0.1	0.7	0.6	0.6	3.7	2.4	1.6
Contributions to GDP growth													
Domestic demand excluding inventorie	0.2	0.4	0.2	0.5	0.9	0.1	0.4	0.2	0.4	0.4	1.5	1.7	1.0
Change in inventories	–0.2	0.2	0.7	–0.1	–0.9	0.2	–0.7	–0.3	–0.1	0.0	0.4	–0.8	–0.5
Foreign trade	0.1	–0.2	–1.0	–0.1	0.4	–0.6	0.5	0.1	–0.2	–0.1	–0.4	–0.4	0.0

Forecast

Italy (15%)[1]	Quarterly change in %										Annual change in %		
	2018				2018				2019		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.1**	**–0.1**	**–0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.7**	**0.2**	**0.4**
Private consumption (60%)	0.4	0.0	0.1	0.3	0.0	0.1	0.4	0.1	0.2	0.2	0.8	0.6	0.7
Investissement (18%)	0.1	1.1	–0.9	0.1	2.4	0.2	–0.1	0.2	0.3	0.3	3.0	2.4	0.6
Public consumption (19%)	0.4	0.0	–0.2	0.0	0.4	0.1	0.1	0.0	0.0	0.0	0.4	0.5	0.1
Exports (32%)	–1.4	–0.1	1.6	0.8	–0.4	0.9	–0.1	0.3	0.3	0.3	1.3	1.7	0.9
Imports (29%)	–1.8	1.1	0.7	1.6	–2.4	1.1	1.3	0.2	0.4	0.4	2.4	0.9	1.8
Contributions to GDP growth													
Domestic demand excluding inventorie	0.3	0.2	–0.1	0.2	0.5	0.1	0.2	0.1	0.2	0.2	1.1	0.9	0.5
Change in inventories	–0.3	0.1	–0.3	0.1	–0.9	–0.1	0.2	0.0	0.0	0.0	–0.2	–0.9	0.1
Foreign trade	0.1	–0.4	0.3	–0.2	0.6	0.0	–0.4	0.0	0.0	0.0	–0.3	0.3	–0.2

Forecast

Spain (10%)[1]	Quarterly change in %										Annual change in %		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)	**0.5**	**0.5**	**0.5**	**0.6**	**0.5**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**2.4**	**2.0**	**1.3**
GDP	0.3	0.4	0.2	0.2	0.2	0.0	1.1	0.4	0.4	0.4	1.8	1.2	1.5
Private consumption (58%)	0.2	3.5	0.2	–0.5	1.4	–0.2	1.3	–0.1	0.5	0.5	5.3	2.5	1.4
Investissement (19%)	0.5	0.5	0.6	0.6	0.5	0.4	0.9	0.2	0.2	0.2	1.9	2.2	1.1
Public consumption (19%)	0.4	–0.2	–1.0	0.9	0.6	1.7	–0.8	0.6	0.4	0.4	2.2	1.7	1.2
Exports (35%)	0.2	1.2	–1.4	–0.2	0.1	0.9	1.3	0.3	0.3	0.3	3.3	0.9	1.6
Imports (32%)													
Contributions to GDP growth	0.3	1.0	0.3	0.1	0.5	0.1	1.0	0.3	0.4	0.4	2.4	1.6	1.4
Domestic demand excluding inventorie	0.1	0.0	0.1	0.1	–0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.1
Change in inventories	0.1	–0.4	0.1	0.4	0.2	0.3	–0.7	0.1	0.0	0.0	–0.3	0.3	–0.1
Foreign trade													

Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2018

1. Share in Eurozone GDP in 2018

Sources: Eurostat, INSEE

United States of America	Quarterly change in %										Annual change in %		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.6**	**0.9**	**0.7**	**0.3**	**0.8**	**0.5**	**0.5**	**0.3**	**0.4**	**0.4**	**2.9**	**2.3**	**1.3**
Private consumption (68%)	0.4	1.0	0.9	0.4	0.3	1.1	0.7	0.5	0.4	0.4	3.0	2.6	1.7
Private Investissement (17%)	1.3	1.3	0.2	0.7	0.8	–0.4	–0.3	0.1	0.4	0.3	4.6	1.3	0.5
government expenditures and public investment (17%)	0.5	0.6	0.5	–0.1	0.7	1.2	0.4	0.5	0.5	0.5	1.7	2.3	1.7
Exports (12%)	0.2	1.4	–1.6	0.4	1.0	–1.4	0.2	–0.2	0.2	0.2	3.0	–0.2	–0.1
Imports (15%)	0.2	0.1	2.1	0.9	–0.4	0.0	0.4	–0.2	0.4	0.4	4.4	1.5	0.7
Contributions to GDP growth													
Domestic demand excluding inventorie	0.6	1.0	0.7	0.3	0.5	0.9	0.5	0.4	0.4	0.4	3.0	2.3	1.5
Change in inventories	0.0	–0.3	0.5	0.0	0.1	–0.2	0.0	–0.1	0.0	0.0	0.3	0.3	–0.1
Foreign trade	0.0	0.2	–0.5	–0.1	0.2	–0.2	0.0	0.0	0.0	0.0	–0.4	–0.3	–0.1

Forecast

United Kingdom	Quarterly change in %										Annual change in %		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	**0.1**	**0.5**	**0.6**	**0.3**	**0.6**	**–0.2**	**0.3**	**0.1**	**0.0**	**0.1**	**1.4**	**1.3**	**0.2**
Private consumption (63%)	0.5	0.5	0.3	0.2	0.3	0.4	0.4	0.1	0.1	0.2	1.6	1.2	0.6
Investissement (17%)	–0.9	–0.4	0.5	–0.1	0.9	–0.9	–0.2	–0.1	0.1	0.3	–0.1	0.1	–0.1
Public consumption (22%)	–0.1	–0.1	0.4	1.5	0.7	0.8	0.3	0.5	0.7	0.7	0.7	2.9	2.0
Exports (28%)	–0.7	–2.6	3.4	0.5	1.6	–6.6	5.2	–0.5	–0.1	0.0	–0.9	0.2	0.3
Imports (30%)	–0.9	0.4	0.9	2.8	10.3	–13.0	0.8	–0.5	–0.5	1.5	0.7	2.5	–3.0
Contributions to GDP growth													
Domestic demand excluding inventorie	0.1	0.2	0.3	0.4	0.5	0.2	0.3	0.2	0.2	0.3	1.0	1.3	0.7
Change in inventories	–0.2	1.2	–0.4	0.7	3.0	–3.1	–1.2	–0.1	–0.3	0.2	0.8	0.7	–1.5
Foreign trade	0.1	–0.9	0.7	–0.7	–2.9	2.6	1.2	0.0	0.1	–0.5	–0.5	–0.7	1.0

Forecast

Japan	Quarterly change in %										Annual change in %		
	2018				2019				2020		2018	2019	2020 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Supply and use table (in real terms)													
GDP	–0.5	0.5	–0.6	0.3	0.6	0.5	0.4	–0.3	0.2	0.3	0.3	1.2	0.5
Private consumption (56%)	–0.3	0.3	–0.2	0.2	0.2	0.6	0.5	–1.0	0.3	0.4	0.0	0.7	0.3
Investissement (24%)	–0.4	1.9	–2.7	1.9	0.4	1.0	1.6	0.2	0.0	0.4	0.6	2.6	1.6
Public consumption (20%)	0.5	0.1	0.2	0.6	–0.3	1.6	0.7	1.0	0.3	0.3	0.9	2.1	2.0
Exports (16%)	0.8	0.7	–1.8	1.2	–2.1	0.5	–0.6	0.0	0.2	0.2	3.4	–1.9	0.2
Imports (15%)	0.6	0.8	–1.3	3.8	–4.1	2.1	0.3	–0.5	0.7	1.0	3.3	–0.2	1.8
Contributions to GDP growth													
Domestic demand excluding inventorie	–0.2	0.6	–0.7	0.7	0.1	0.9	0.8	–0.3	0.2	0.4	0.3	1.4	0.9
Change in inventories	–0.4	–0.1	0.3	0.0	0.1	–0.1	–0.2	–0.1	0.0	0.1	0.0	0.1	–0.1
Foreign trade	0.1	0.0	–0.1	–0.5	0.4	–0.3	–0.2	0.1	–0.1	–0.1	0.0	–0.3	–0.3

Forecast

How to read it: % in brackets represent the weight in the nominal GDP in 2018
Source: BEA, ONS, Japan Cabinet Office, INSEE forecast