In 2018, the French economy slowed down, after strong growth in 2017

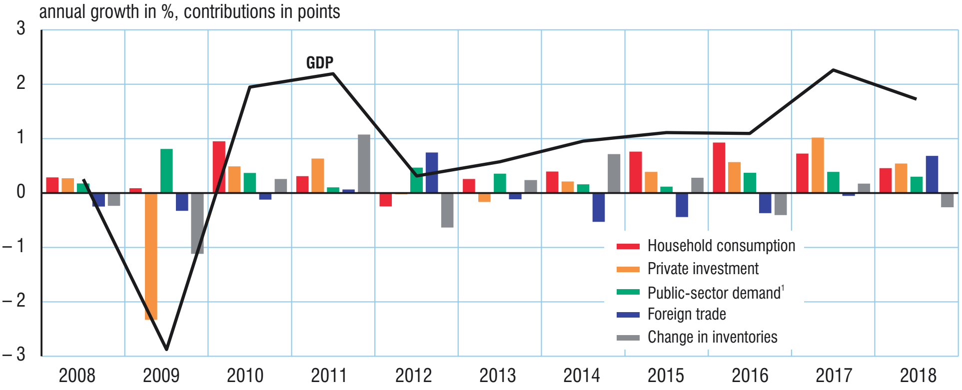
*Victor Barry, Thibault Cruzet, Dominique Demailly, Bruno Patier**

In 2018, the French economy slowed down: gross domestic product grew by 1.7 % in volume, after +2.3% in 2017. Domestic demand excluding inventory slowed down (contribution of +1.3 points to GDP growth in 2018 against +2.1 points in 2017). Household consumption slackened more (+0.9% after +1.4%) than the purchasing power of gross disposable income (+1.2% after +1.4%). On the public demand side, the collective consumption of general government also slowed down (+0.8% after +1.5%). Investment decelerated sharply in 2018 – especially household investment (+2.0% after +6.6%) – while public investment gathered pace (+2.4% after +0.3%).

Changes in inventories made a negative contribution to the growth of activity in 2018 (–0.3 points after +0.2 points in 2017). However, the contribution of foreign trade improved to +0.7 GDP points against –0.1 point in 2017: in fact, exports slowed but to a lesser extent than imports. The margin rate of non-financial corporations fell substantially (–0.5 points) and stood at 31.2% due to the slowdown in productivity gains and the rise in oil prices.

In 2018, the French economy slowed down: gross domestic product grew by 1.7 % in volume, after 2.3% in 2017 *(figure 1)*. Indeed, value added slackened in construction, agriculture and industry, and only increased in services *(figure 2)*.

1. Contribution of the main agregates to GDP growth



1. Including non profit institutions serving households.
Scope: France.
Source: Insee, national accounts, 2014 base.

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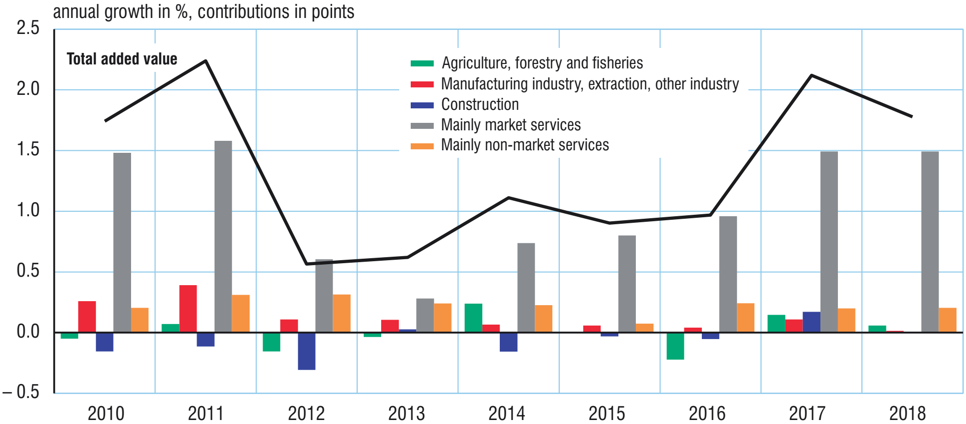
2. Contribution of primary branches to the growth in volume of total value added



Scope: France.

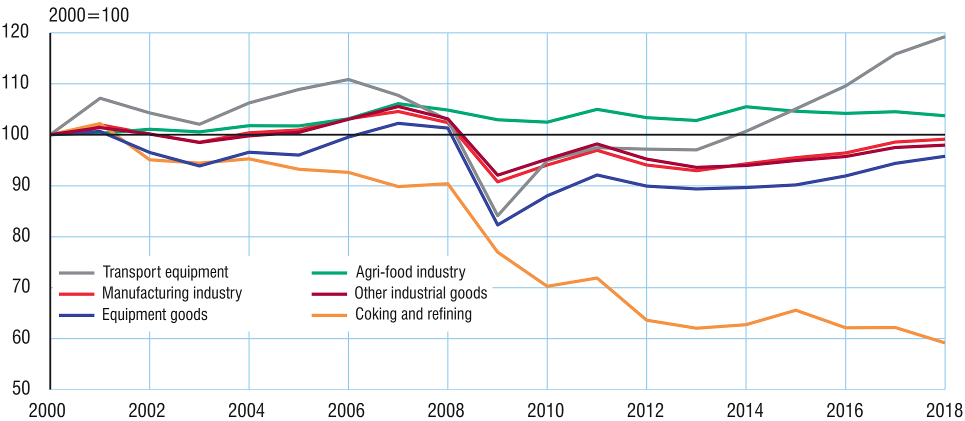
Source: Insee, national accounts, 2014 base.

Manufacturing value added came to a standstill

After a substantial increase in 2017 (+2.2%), manufacturing output decelerated in 2018: +0.5% in volume *(figure 3)*. Intermediate consumption in the sector also slowed down (+0.7% after +2.2% in 2017). All in all, value added in the manufacturing sector came to a standstill (+0.1% after +1.3%.) From an accounting standpoint, it made a neutral contribution to gross domestic product (GDP) growth in 2018.

The slowdown in manufacturing output concerned all sectors: agri-food output slipped back (–0.8% after +0.3%); the coke and refined petroleum sector was affected by the closure of certain refineries for several weeks (–4.9% after +0.1%); transport equipment output slowed down (+3.0% after +5.7%). Output in “other industries” (+0.5% after +1.8%) and in capital goods (+1.5% after +2.7%) also slowed. In addition, energy-water-waste production increased, as in 2017 (+0.3%).

3. Variations in manufacturing output in volume by branch



Scope: France.

Source: Insee, national accounts, 2014 base.

Activity slackened slightly in services

Market services output slackened slightly in 2018 (+3.1% after +3.5% in 2017). As intermediate consumption in the sector slowed down slightly more (+3.6% after +4.6%), the growth of value added in the sector remained constant (+2.6%), contributing +1.3 points to GDP growth in 2018.

The slowdown in market services value added could be observed in the majority of sectors: trade (+1.1% after +2.3% in 2017), services to households (+0.7% after +1.0%) and transport services (+0.8% after +2.1% in 2017), as well as in accommodation and food services (+2.8% after +5.1%) and information-communication (+4.3% after +6.5%). However, financial activities accelerated sharply (+6.2% after –0.4%), as did real estate but to a lesser extent (+1.5% against +0.7%).

Output in non-market services slowed very slightly (+0.9% after +1.1% in 2017), but due to the slowdown in intermediate consumption (+0.7% after +1.8%), value added in this sector remained steady (+0.9%), contributing to GDP growth at the same rate as in 2017 (+0.2 points).

Activity in construction and agricultural activity slowed

After stabilising, output in construction slowed down substantially (+1.8% after +4.8%). Value added in the sector also slackened (+0.1% after +3.1%), and no longer contributed to GDP growth. Lastly, agricultural output slowed in volume, returning to an increase that was more consistent with the trend growth rate (+1.1% after +3.8%), after the reaction in 2017 to historically poor harvests in the summer of 2016. Value added in the agricultural sector slackened even further (+3.4% after +9.1%), but still contributed +0.1 point to GDP growth in 2018.

Foreign trade contributed positively to growth.

World trade in goods slowed somewhat in 2018 after peaking in 2017 (+4.6% after +5.8%). In its wake, world demand for French goods grew more slowly than in the previous year (+3.9% after +5.5% in 2017).

French exports slowed, in line with world demand

In 2018, total exports decelerated slightly (+3.5% after +3.9%), driven in particular by exports of manufactured goods (+3.6% in volume after +4.7%), which represented more than two thirds of sales of goods and services. Sales of refined products came to a standstill (+0.2% after +5.1%). Exports of all other manufactured goods also slowed, with the exception of transport equipment, whose sales accelerated (+5.4% after +4.3%). In addition, energy-water-waste exports slowed after peaking in 2017 (+6.3% after +23.0%). This peak was largely in reaction to the maintenance shutdowns of certain nuclear power plants at the end of 2016. These shutdowns, in 2016 and 2017, had contributed to a temporary increase in the carbon content of production, which resumed a downward trend in 2018 *(box 1)*.

All in all, exports of goods slowed down very slightly (+3.5% after +3.9%), although less markedly than demand for French goods, which enabled France to regain market shares *(figure 4)*. Tourism exports (i.e. purchases by foreign tourists in France) slackened (+3.0% after +7.9%), after the positive reaction in 2017 to the negative impacts of the terrorist attacks of 2015 and 2016 on tourist numbers. Their contribution to total exports was +0.2 points after +0.6 points in 2017. Exports of services excluding tourism recovered

Box 1

Factors underlying variations in CO_2 emissions in the short and medium term

*Alexis Foussard**

As part of the fight against climate change, France has set ambitious targets for reducing greenhouse gas (GHG) emissions: a 40% reduction in 2030 compared with 1990 and a fourfold reduction by 2050 (the current Energy Bill is likely to make the latter target more challenging) [*Journal officiel*, 2015]. In 2017, GHG emissions throughout France amounted to 465 MtCO_2eq. This was 15% less than the 1990 level *(figure 1)* [Citepa, 2019].

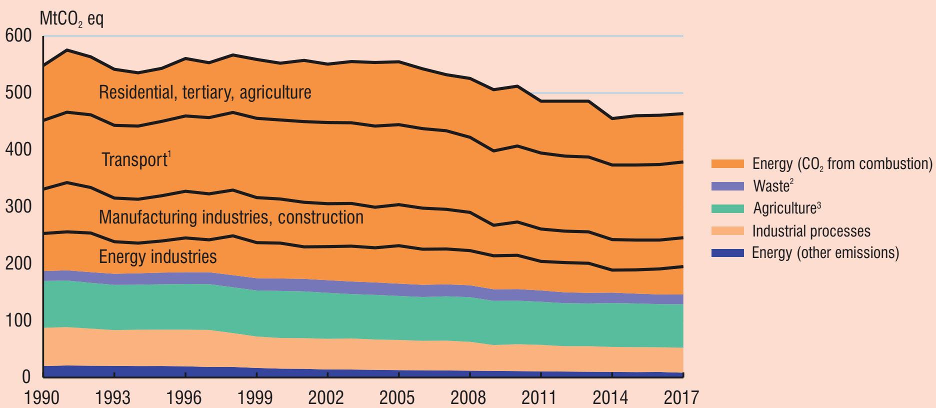
After increasing between 2014 and 2017, emissions resumed their downward trend in 2018

Emissions have varied in a contrasting manner in recent years. In 2018, according to a provisional estimate, CO_2 emissions associated with the combustion of fossil energy sources[1] dropped by 4% compared with 2017. This improvement brought CO_2 emissions close to the minimum level attained in 2014, after increasing by 13 Mt CO_2 in 3 years [SDES, 2019]. These short-term variations were mainly due to variations in winter temperatures and the resulting heating needs. Emissions adjusted for climatic variations (corresponding to emissions that would have been observed with average winter temperatures) appear to have remained stable between 2014 and 2017, with their reduction adjusted to 3% between 2017 and 2018. Other factors underlying emission trends can be analysed using the "Kaya" identity, which expresses CO_2 as the product of population (P), GDP per capita (GDP/P), energy intensity of the economy (E/GDP) and carbon content of primary energy (CO_2 /E):

$$CO_2 = P\ (GDP/P)\ (E/GDP)\ (CO_2\ /E)$$

where CO_2 represents CO_2 emissions, P population and E primary energy consumption.

1. GHG emissions since 1990 on the national territory



1. Excluding international navigation and international aviation. 2. Excluding energy production 3. Excluding energy use.
Note: Emissions are expressed in MtCO_2eq, expressing the effect on climate of each greenhouse gas relative to CO_2.
Scope: greenhouse gas emissions, within the Kyoto perimeter (Metropolitan France, Guadeloupe, Saint-Martin, Martinique, French Guiana, La Réunion, Mayotte). The CO_2 sink associated with land use, land-use change and forestry (LULUCF) is not represented.
Source: Citepa, UNFCCC Inventory.

* Alexis Foussard (ministère de la Transition écologique et solidaire, CGDD, SDES).
1. CO_2 emissions related to fossil fuel combustion (oil, natural gas and coal) accounted for 70% of the total in 2017 (France's other GHG emissions originated mainly from agriculture, waste management and certain industrial processes).

Box 1 (continued)

Excluding climatic variations, the carbon content of energy seems to have been the main fluctuation factor in recent years *(figure 2)*. Indeed, the need to carry out numerous inspections and maintenance operations meant that nuclear production was particularly low in 2016 and 2017, which increased the use of fossil fuels (especially natural gas) for electricity production. This led to a 2% increase in the average carbon content of energy between 2014 and 2017, followed by a reversal of this trend in 2018 (–3%), with the return of a high level of nuclear power generation availability and an increase in hydroelectricity production. In addition, the upturn in economic growth observed in 2017 clearly contributed to the rebound in emissions during that year.

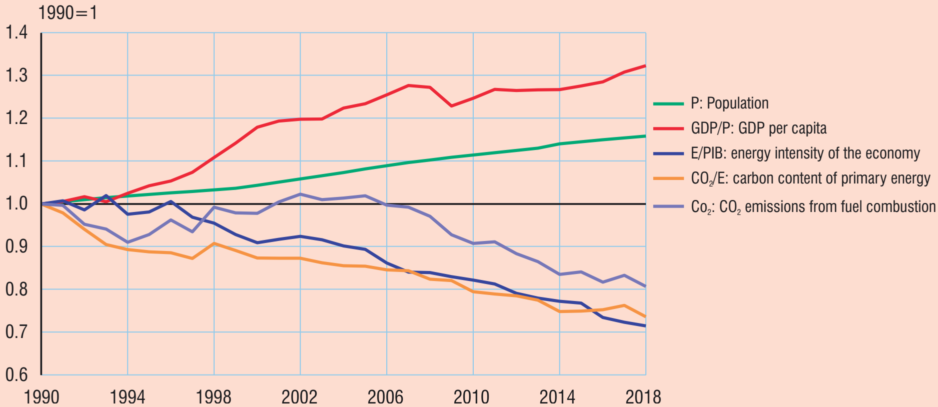
The downward trend since 2005 can be attributed to decreases in carbon content and energy intensity as well as the economic slowdown

Emissions followed a downward trend between 2005 and 2014, after remaining fairly stable between 1990 and 2005. This decline is partly explained by the slowdown in economic growth, which fell from an average of 1.9% per year between 1990 and 2005 to 1.1% between 2005 and 2018. It is also due to the acceleration of the decline in the carbon content of energy and the drop in energy intensity. While it was mainly driven by the commissioning of new nuclear reactors in the 1990s, the reduction in the carbon content of energy since 2005 has been mainly due to the rapid development of renewable energy sources (biofuels, wind power, heat pumps) and the use of natural gas as a replacement for coal (the latter emits more CO_2 for the same amount of energy supplied). The drop in energy intensity reflects energy efficiency improvements in all energy-consuming activities (reduction of unit consumptions of vehicles, energy renovations of buildings, etc.). However, it is also related to the fact that demand associated with direct household emissions (residential floor area for heating, average annual distance travelled for transport) is growing at a slower rate than economic activity. It is finnally du to changes in the structure of the economy: since services have lower levels of emissions than industry, the tertiarisation of the economy has contributed to a 10% reduction in CO_2 emissions from the productive sector (excluding energy production and transport use), which corresponds to 3% of all energy-related CO_2 emissions [SDES, 2018].

Import-related emissions continued to increase

Tertiarisation can in turn be explained by two factors: firstly, a change in the structure of domestic demand, and secondly, the relocation of the production of manufactured goods to foreign countries. This relocation results in a decline in emissions within France, which are now transferred to other countries. All other factors remaining equal [SDES, 2017], it also leads to an increase in global

2. factors driving the evolution of energy-related CO2 emissions

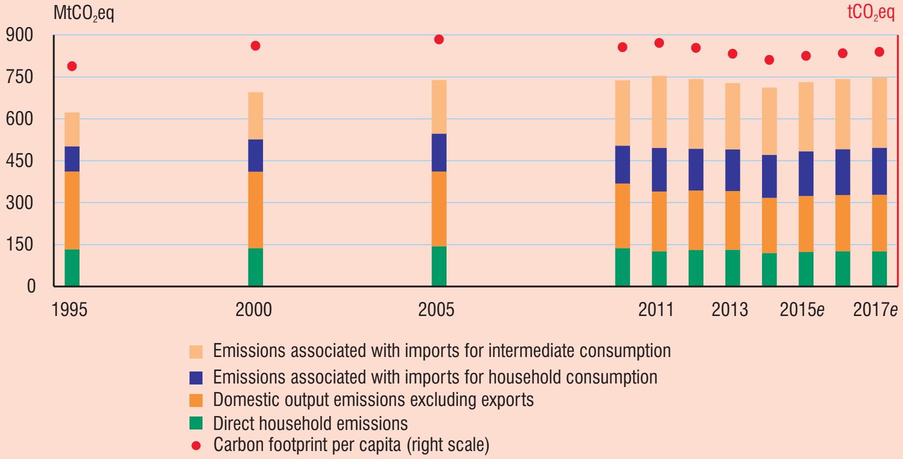


Note: E and CO_2 are adjusted for climatic variations. CO_2 emissions are the product of population (P), GDP per capita (GDP/P), energy intensity of the economy (E/GDP) and carbon content of primary energy (CO_2 /E).
Scope: CO_2 emissions from fuel combustion. Metropolitan France.
Sources: Insee ; SDES.

Box 1 (continued)

GHG emissions insofar as, on average, the goods imported into France are manufactured using more carbon-intensive energy sources and less efficient processes than the same domestically manufactured goods. The carbon footprint, which takes account of the emissions required to produce the goods and services traded with foreign countries, enables the overall impact of French domestic final consumption on emissions to be assessed. For France, it exceeded the country's territorial emissions by 60% in 2017 *(figure 3)*, reflecting the high proportion of emissions related to imports [Report on new wealth indicators, 2018]. Despite remaining stable since 2005, it has increased by 20% compared with 1995. Indeed, the decline in domestic emissions has not been sufficient to offset the doubling of import-related emissions over the period. Per person, the carbon footprint amounted to 11.2 tCO_2eq in 2017 (taking account of all CO_2, CH_4 and N_2O emissions). Taking account of population growth, the increase in the carbon footprint per inhabitant was limited to 6% between 1995 and 2017.

3. Evolution of the carbon footprint



Note: The footprint covers the three main greenhouse gases (CO_2, CH_4, $N2_0$).
Scope: Kyoto perimeter (see *Figure 1*).
Sources: AIE; Citepa; Douanes; Eurostat; FAO; Insee; SDES, 2018.

For Further information

Citepa, *Rapport national d'inventaire pour la France au titre de la Convention cadre des Nations unies sur les changements climatiques et du Protocole de Kyoto*, 2019.

Journal officiel, loi relative à la transition énergétique pour la croissance verte (LTECV), 18 août 2015.

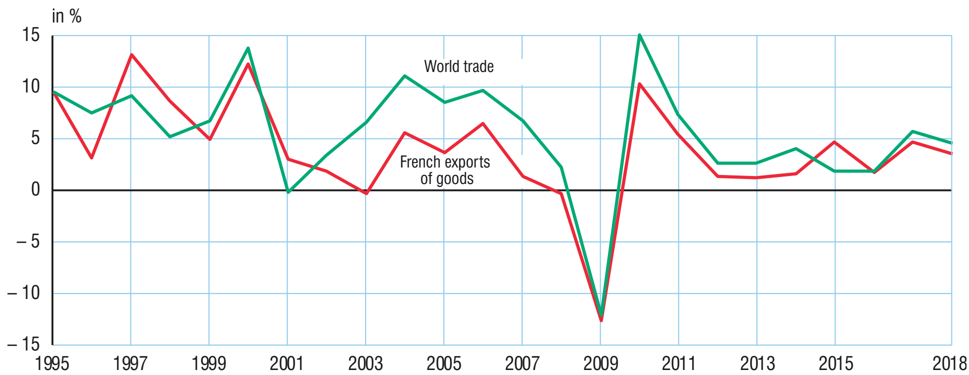
SDES, *Bilan énergétique de la France en 2018*, données provisoires, avril 2019.

SDES, *Les facteurs d'évolution des émissions de CO_2 liées à l'énergie en France entre 1990 et 2016*, août 2018.

SDES, *Émissions de polluants atmosphériques et de gaz à effet de serre « Namea-Air »*, février 2017.

Rapport sur les nouveaux indicateurs de richesse, 2018.

4. Trends in French exports and world trade in goods in volume



Sources: DG Trésor, Insee.

(+3.1% after –0.0%): all products picked up, with the exception of transport services and non-market services, which slowed down (+3.2% after +7.1%). Sales of services contributed +0.7 points to total export growth (after –0.0 point in 2017).

Imports slackened more than exports

In 2018, imports of goods and services (including tourism) also slowed, to an even greater extent than exports (+1.2% in volume after +3.9%). In particular, imports of manufactured goods slowed significantly (+2.5% in volume after +5.2%), in all sectors. This slowdown can be explained in particular by purchases of transport equipment (+3.4% after +8.0%), which contributed +0.7 points to the increase in manufacturing imports, after +1.6 points in the previous year. Purchases of all other manufactured goods also slowed down, especially refined products, which slipped back (–2.8% after –1.2%). Energy-water-waste imports fell back even more sharply (– 4.9% after +6.9%), while imports of agricultural products came to a standstill (+0.5% after +1.6%). All in all, purchases of goods slowed in volume (+1.5% after +3.8%), contributing +1.5 points to the growth of imports overall.

Imports of services excluding tourism fell (–2.1% after +1.1%), particularly in trade (–6.6% after –6.0%) and services to businesses (–5.1% after –1.4%). All in all, purchases of services excluding tourism contributed +0.8 points to the buoyancy of total imports. French households' spending on tourism bounced back (+5.2% after –0.3%).

The energy deficit (including refined products) increased again, with oil prices rising since 2017, and stood at –€42.2 billion in 2018. Excluding energy, the balance of other products and services improved, reaching +€24.0 billion (after –€3.7 billion in 2017). Indeed, the balance in value of trade in services (excluding tourism) improved significantly and became positive for the first time since 2012 (+€3.5 billion after –€4.6 billion). In addition, after the upswing in foreign visitor numbers in 2017, the tourism balance levelled out in 2018, stabilising at €17.1 billion. Lastly, the balance of agricultural products also rose to €10.8 billion after plunging to €6.0 billion in 2017 – its lowest level since 1981. Similarly, the balance of trade in manufactured goods excluding fuel improved to –€16.1 billion after –€18.1 billion in 2017: the balance of transport equipment improved by +€3.5 billion and other industrial products by +€0.9 billion.

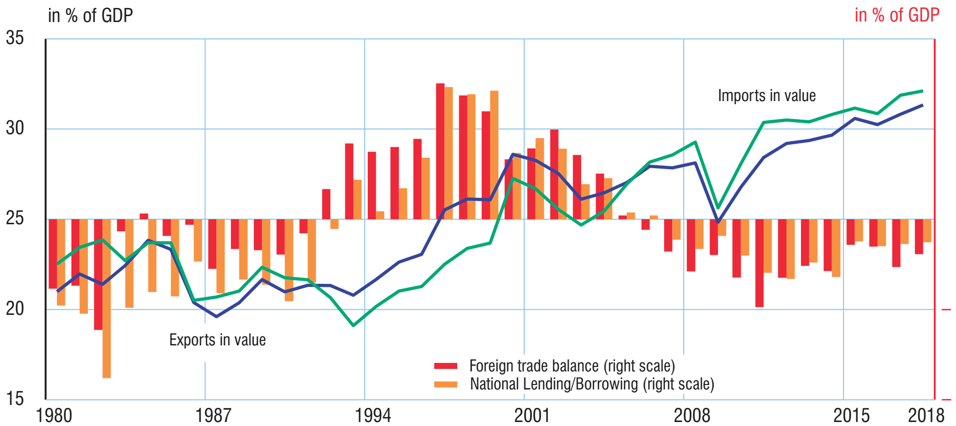
In fact, over 2018 as a whole, and for the first year since 2012, foreign trade made a positive contribution to growth (+0.7 points after –0.1 point): exports slowed slightly less than world demand for French goods, while imports slowed more sharply.

France’s net borrowing decreased very slightly

By value, exports also slowed less (+4.3% after +4.7%) than imports (+3.3% after +6.1%). As a result, the foreign trade balance was reduced by €6.1 billion while remaining largely in deficit: –€18.2 billion.

However, the balance of distributive transactions deteriorated: on the one hand, France's contribution to the European budget picked up – in reaction to the small payments in 2017 – and on the other hand, French banks paid penalties to the American authorities under the terms of a series of agreements on several disputes. In addition, the balance of property income decreased very slightly (+€30.0 billion after +€30.5 billion): income paid to the rest of the world increased by €2.6 billion while income received rose by €1.7 billion. All in all, France’s net borrowing declined by €0.6 billion, and represented 0.5% of GDP in 2018, after 0.6% in 2017 *(figure 5)*.

5. External balance



Scope: France.
Source: Insee, national accounts, 2014 base.

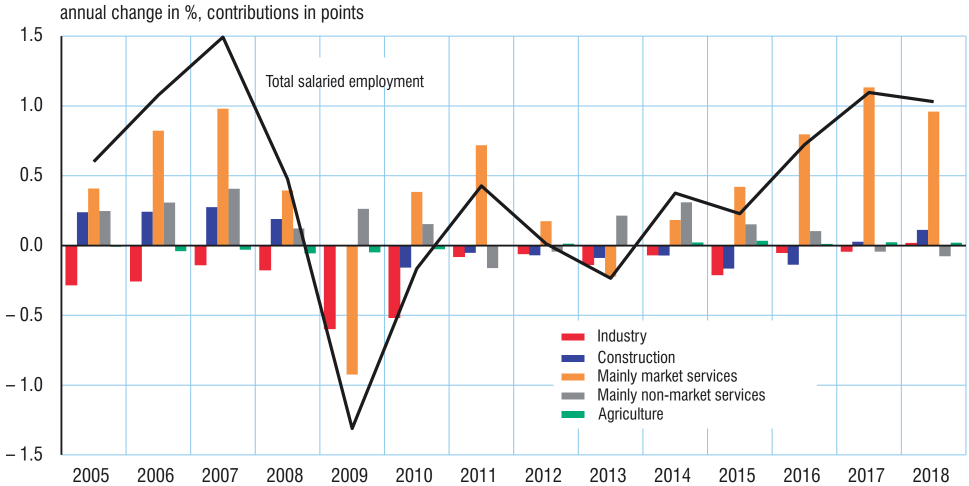
Total employment grew

Market sector payroll employment increased moderately

In 2018, total payroll employment grew by +1.0% as an annual average, after +1.1% *(figure 6)*. In the non-agricultural market sectors, payroll employment increased by 1.6% as an annual average (+257,000 after +271,000 in 2017).[1] In the tertiary mainly market sector, job creations continued at a sustained pace (+1.9% after +2.3%). The most numerous payroll job creations (+131,000) took place in services to businesses (including temporary employment).

1. Employment calculated and published in the context of the national accounts differs from employment estimated directly in the sectors of activity, mainly because of the differences in the periods considered: the former is calculated as a quarterly (or annual) average, while the latter is estimated at the end of the period (end of quarter or end of year).

6. Trend in total salaried employment

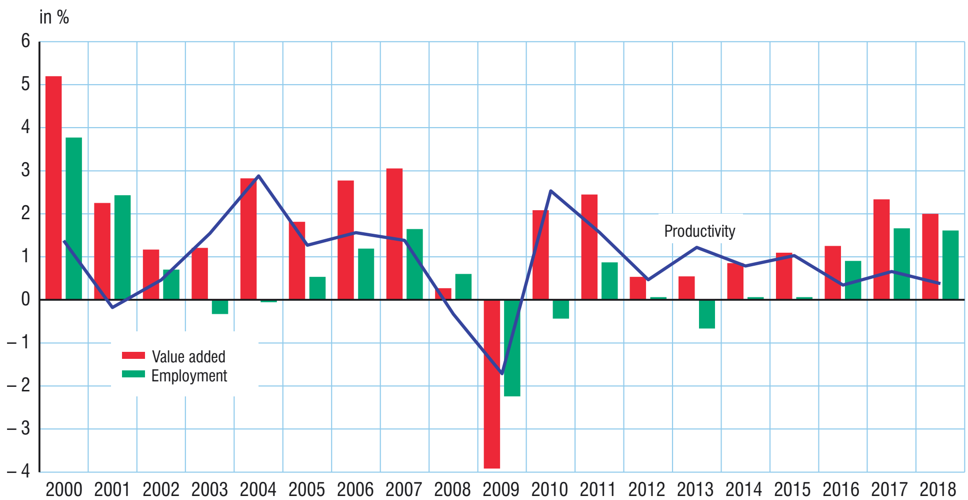


Scope: France.

Source: Insee, national accounts, 2014 base.

For the first year since the financial crisis, industrial employment increased very slightly (+4,000) and job creations in the construction sector reached 28,000 (+2% after +0.5% in 2017). In a context of slowing growth, productivity gains generated by the non-agricultural market sphere declined slightly in 2018 *(figure 7)*. The decrease in the number of beneficiaries of subsidised employment contracts penalised the non-market tertiary sector, which lost jobs (–0.2% after –0.1%). Taking account of agricultural jobs and self-employment, total employment increased by 272,200 as an annual average, after +275,000 in 2017.

7. Growth in productivity, value added and employment in the non-agricultural market branches



Scope: France.

Source: Insee, national accounts, 2014 base.

Slow reduction in employment

On average during Q4 2018, the ILO unemployment rate stood at 8.8% of the French labour force – its lowest level since early 2009. As an annual average, it fell slightly to 9.1% after 9.4 % in 2017. The drop that began in 2016 continued, but more modestly: –0.3 points in 2018, after –0.7 points in 2017. In 2018, the decline in the unemployment rate was more pronounced for young people: –1.5 points for the under-25s, against –0.3 points for the 25-49 year-olds and –0.2 points for people aged 50 or over. As the drop in unemployment that began in 2016 had been more pronounced for men, their unemployment rate fell slightly below the female rate in 2018 (9.0% against 9.1%). This improvement in the male employment rate was mainly due to improved employment in industry and construction, sectors which employ more men.

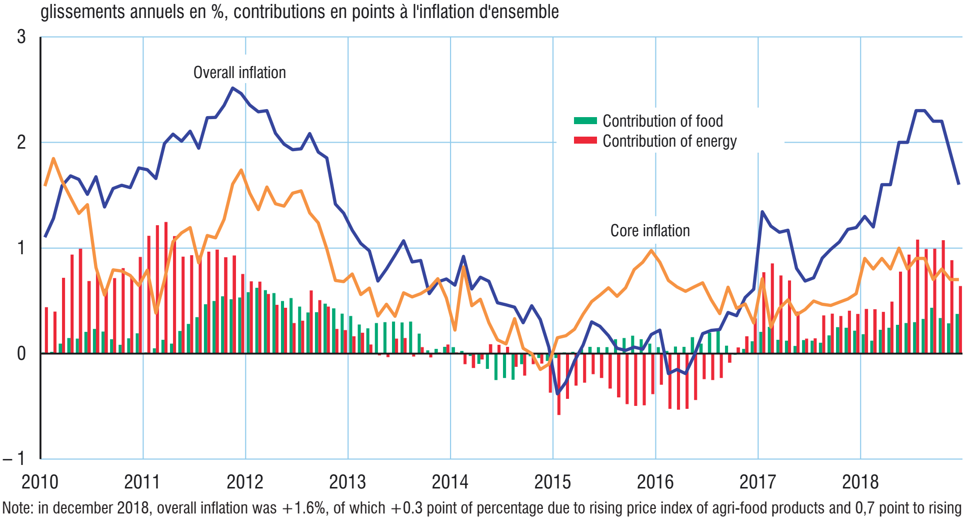
Purchasing power slowed down somewhat

Inflation gathered pace

As an annual average, consumer prices accelerated in 2018 for the third consecutive year *(figure 8)*. Inflation (the consumer price index) reached +1.8%, after +1.0% in 2017, +0.2% in 2016 and 0.0% in 2015. Apart from a sharp rise in tobacco prices, the increase in inflation was due to the acceleration in prices of services, food and energy (+9.7% on average in 2018 after +6.2%) on the one hand, and to a smaller drop in the prices of manufactured goods, on the other. Core inflation, i.e. excluding energy, food and public-sector prices, reached 0.8% in 2018, after +0.5% in 2017.

For the calculation of variations in the average wage per capita and household purchasing power, price trends are measured by the growth rate of the household consumption expenditure deflator, which covers a larger proportion of consumption, including the consumption

8. Overall consumer price index and core inflation



Note: in december 2018, overall inflation was +1.6%, of which +0.3 point of percentage due to rising price index of agri-food products and 0,7 point to rising energetic prices, meanwhile core inflation was +0.7%.
Scope: France.
Source: Insee.

of housing services charged to owner-occupier households, bank intermediation services consumed by households, the consumption of life insurance services, etc. Although similar to the consumer price index, the consumption deflator rose to +1.5% in 2018 after +0.8% in 2017.

Gross wages slowed down

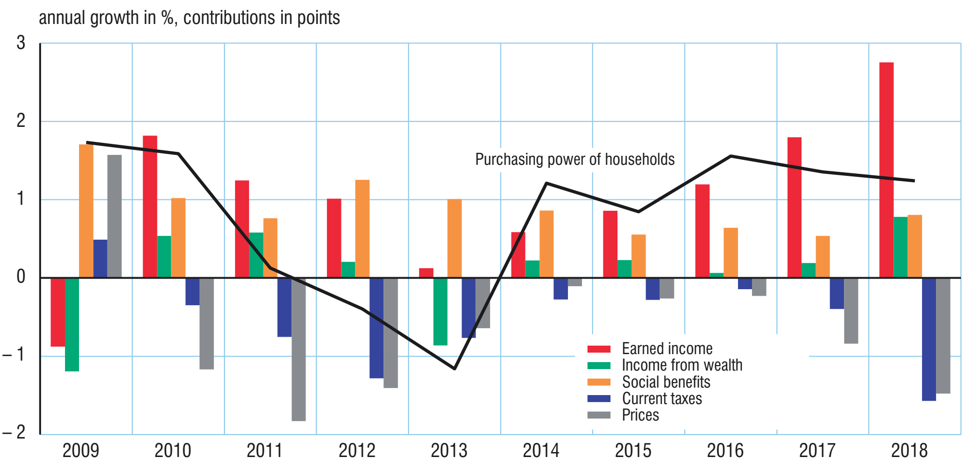
In 2018, the average gross wage per capita in the private sector increased, as in 2017 and 2016. In general government, the growth of the average wage per capita slowed due to the index-point freezes (after the increases of 2016 and 2017) and the postponement of the implementation of the "Professional Career Paths, Careers and Remunerations" (PPCR) protocol. All in all, the average wage received by households slowed significantly in real terms: +0.3% after +1.1% in 2017.

Household gross disposable income picked up

In 2018, households' gross disposable income picked up in nominal terms: +2.7% after +2.2%. Its main component – income net of activity – continued to grow at a sustained pace (+4.4% after +2.8%; *figure 9*): net wages rose sharply (+4.7% after +3.0%), mainly due to the switch between employee contributions and the Generalised Social Contribution (CSG). The net mixed income of sole proprietors slowed down (+1.3%, after +1.7% in 2017). The gross operating surplus of pure households[2] rose, as in 2017 (+2.5%), with borrowing households still benefiting from low interest rates on mortgages.

Net property income rebounded strongly (+8.3% in 2018 after –2.4%): the introduction of the single flat-rate tax (PFU) and the profits generated by the favourable results of 2017 would appear to have encouraged enterprises to significantly increase their distribution of dividends.

9. Contributions to change in households purchasing power of disposable income



Scope: France.
Source: Insee, national accounts, 2014 base.

2. The gross operating surplus of pure households corresponds to the production of housing services, after the deduction of the intermediate consumption required for this production (especially financial services related to loans) and taxes (property tax). Production corresponds to the rents that private owners of housing collect from their tenants or could collect if they made their property available for rental.

Social benefits in cash received by households accelerated in nominal terms (+2.3% after +1.5%), under the effects of social security benefits (+2.2% after +1.4%) and "other benefits" (+2.9% after +1.6%), especially health insurance reimbursements. However, Social Security benefits slowed (+1.0% after +2.1%).

Income and wealth taxes accelerated sharply: +9.6% after +2.4 % in 2017. On 1st January 2018 the rate of the generalised social contribution (CSG) was raised by 1.7 points.

Household purchasing power slowed down somewhat

Taking account of the household consumption expenditure deflator, the purchasing power of gross disposable income slowed slightly compared with 2017: +1.2% after +1.4% *(figure 10)*. When adjusted to the individual level, and taking account of demographic changes, household purchasing power, per consumption unit, slowed down by 0.1 point: +0.7% after +0.8%.

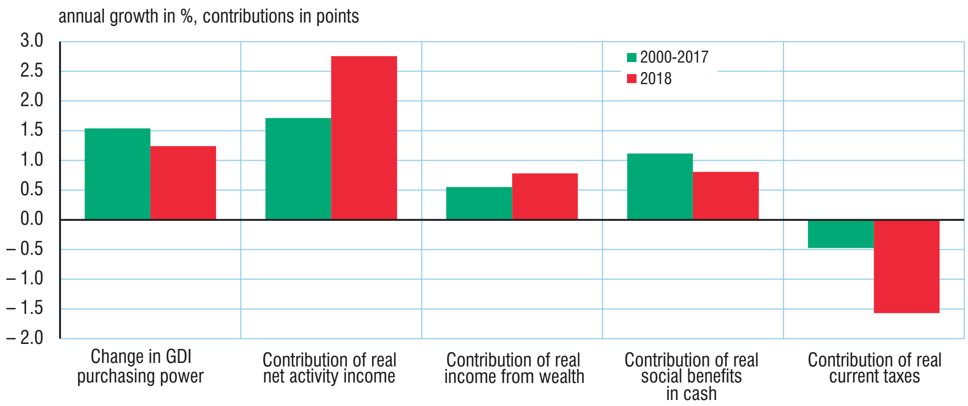
Net activity income (in real terms) contributed to gains in purchasing power in 2018 (+2.8%) – more than 1 point above the average for the last ten years. Income from wealth also made a slightly bigger contribution (+0.8 points against +0.6 points on average over the 2000-2017 period). However, the contribution of current taxes hampered purchasing power more in 2018 than on average between 2000 and 2017 (–1.6 points against 0.5 points). The contribution of social benefits in cash was below the 2000-2017 average (+0.8 points in 2018 against +1.1 points in 2017).

Household consumption decelerated

On average over the year, household consumption increased less strongly than purchasing power: +0.9% in volume after +1.4% in 2017. The household savings ratio increased, from 13.9% of gross disposable income in 2017 to 14.2% in 2018 *(figure 11)*.

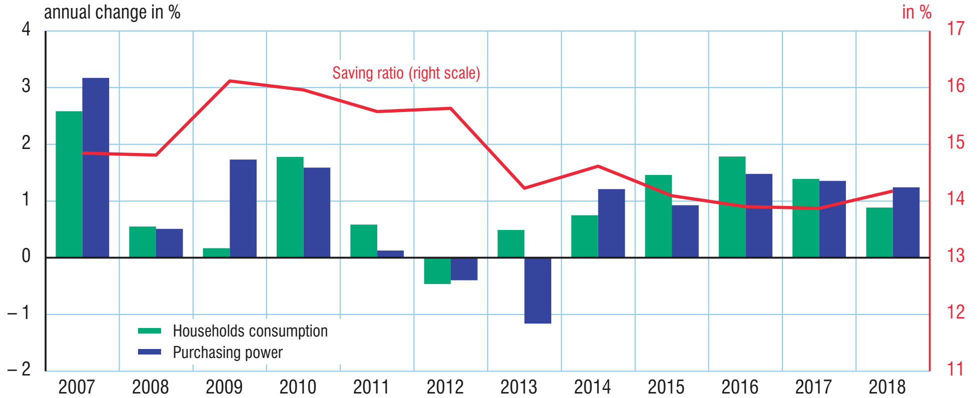
Household spending on manufactured goods stagnated in 2018 (+0.0% after +1.6%). This slowdown was mainly due to less dynamic purchases of transport equipment (+2.2% after

10. Breakdown of GDI change in 2018, compared to the average on 2000-2017 period



Note: purchasing power may be broken down like nominal GDI, when all GDI components are assessed in real terms, i.e. after taking into account consumption price increase. Thus this figure shows, for instance, that the contribution of real social benefits in cashcto the purchasing power growth reached +0.8 point in 2017, whereas it was +1.1 point on average for the period 2000-2017.
Scope: France.
Source: Insee, national accounts, 2014 base.

11. Evolution in households saving ratio, consumption and purchasing power



Scope: France.
Source: Insee, national accounts, 2014 base.

+5.6%) and the decline in purchases of other industrial goods (–0.3% after +1.3%). Spending on food products contracted (–1.3% after +0.2%), as did expenditure on energy and fuel (–0.9% after –1.1%).

Households' consumption of market services also decelerated (+2.1% after +2.7%). This change resulted from the slowdown in spending on accommodation and food services (+4.3% after +5.2%), transport services (+0.8% after +3.0%), administrative services (+3.5% after +4.5%) and expenditure on financial and insurance activities (+0.4% after +4.4%). However, expenditure on real estate activities rose by 2.0% after 1.2% in 2017, in line with the decrease in housing subsidies. This is considered in the national accounts as an increase in the volume of household consumption expenditure on housing and as a contrasting drop in consumption expenditure by general government.

Household investment

After growing strongly in 2017, household investment slowed significantly in 2018 (+2.0% after +6.6%). Affected by the drop in the number of housing starts, and by the stabilisation of transactions for existing homes, household investment in new construction fell (+1.5% after +5.3 %), as it did in services (including "notary fees" in particular): +2.0 % after +6.6 %.

Corporate investment slackened but remained robust

In 2018, corporate investment (including sole proprietors) slackened but remained dynamic (+3.8% in volume after +4.7% in 2017), taking the gross investment rate of companies[3] to 22.5% in 2018 after 22.0%. In the wake of the growth of activity in 2017, the production

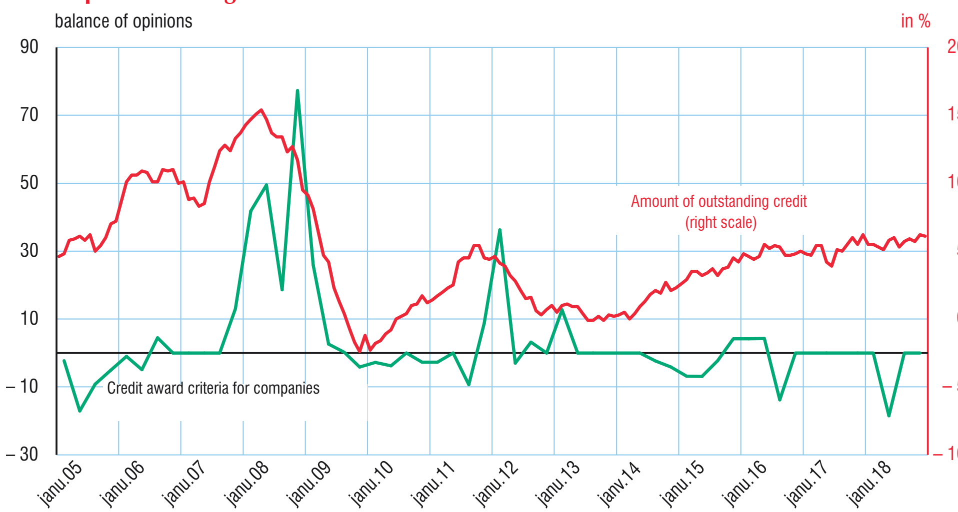
3. The net investment rate, calculated by deducting fixed capital consumption (FCC), which measures the depreciation and the obsolescence of capital, from gross fixed capital formation (GFCF), was much less vigorous than the gross investment rate over recent years, and does not currently stand at its highest level. This weaker trend performance of the net investment rate is explained by the growing share of investments in intangible assets (mainly software and research and development) in GFCF. These types of intangible assets have shorter useful economic lives than tangible assets: the pace of innovation in software and R&D makes them obsolete very quickly. Consequently, when the share of intangible assets increases, non-financial corporations (NFCs) must continually increase their gross investment expenditure simply to keep their fixed capital at a stable level.

capacity utilisation rate in the manufacturing industry reached its highest level in ten years at the beginning of 2018 but edged down slowly thereafter to stand at 85.1% by the end of the year. This buoyant investment was offset by the vigorous recourse to credit. Over 2018 as a whole, outstanding loans to non-financial corporations increased by over €50 billion (+5.7% as an annual average after +5.1% in 2017). This rise was facilitated by the decrease in financing costs *(figure 12)*. The average borrowing rate for non-financial corporations has declined continuously since 2011, reaching 1.5% in 2018 after 1.6% in 2017.

The slowdown in the investment expenditure of non-financial enterprises (NFEs) concerned both goods and services (respectively: 1.9% after 2.6% and 4.8% after 5.8%), as well as their construction expenditure (+3.5% after +4.4%).

In greater detail: investment in market services slackened, notably as a result of spending on information and communication (+7.8% after +10.4%), while investment in scientific and technical activities (especially R&D), administrative and support services picked up somewhat (+2.9% after +2.4%). Corporate investment in manufactured goods also slowed (+2.0% after +2.7%). It was adversely affected by vehicle purchases (+2.1% after +3.8 %) and spending on capital goods (+2.7% after +5.4% in 2016). However, investment in other manufactured goods bounced back (+1.0% after –0.9%).

12. Corporate lending terms



Note: creditaward criteria for companies tighten on average for positive values. On the contrary, easing occurs when the curve goes under the X-axis.
Scope: France.
Source: Banque de France.

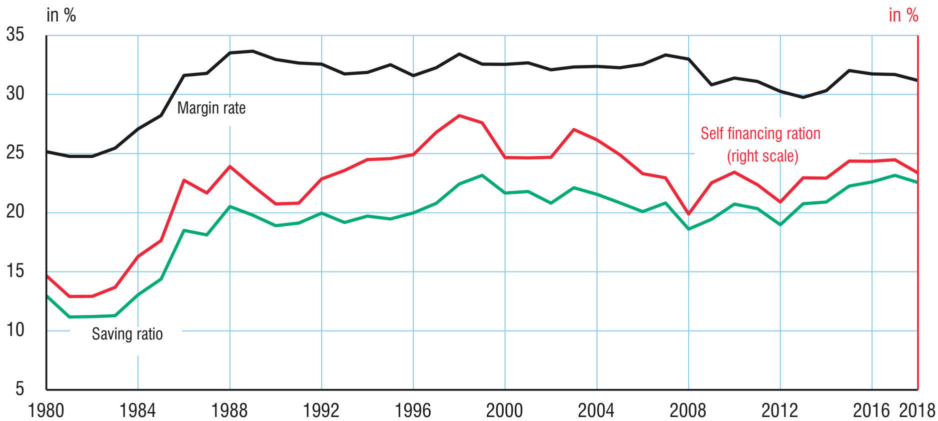
Changes in inventories held back activity

In line with substantial aircraft deliveries, changes in inventories had a negative effect on activity in 2018 (contributing –0.3 points to GDP growth after + 0.1 point in 2017). All in all, through investment expenditure and changes in inventories, corporate demand contributed +0.4 points to GDP growth after contributing 1.2 points in 2017.

The margin rate fell slightly

The gross operating surplus of non-financial corporations slowed down sharply (+1.3% after +3.2% in 2017). Indeed, value added slowed in value terms (+3.0% after +3.3%) while expenditure on employee remuneration remained vigorous (+3.8%). Taxes on production (net of subsidies) also increased. All in all, the margin rate of non-financial corporations (NFCs) fell, standing at 31.2% of their value added after 31.7% in 2016 and 2017 *(figure 13)*.

13. Corporate margin rate, saving ratio, self-financing ratio



Note: margin rate is the ratio of gross operating surplus (GOS) of the year to value added (VA) of the year. Saving ratio is the ratio of saving to VA. Self-financing ratio is the ratio of saving to gross fixed capital formation. Debt ratio is measured by the ratio "average debt of the year / value added of the year".
Scope: France.
Source: Insee, national accounts, 2014 base.

In addition, the balance of income from property of NFCs fell by €7.7 billion in line with the €7.2 billion drop in the dividend balance, with the increase in dividends paid exceeding the rise in dividends received, in a more favourable tax context with the introduction of the single flat-rate tax. However, the balance of interest improved by €1.3 billion in 2018 as interest rates remained low. Finally, income and wealth taxes of NFCs fell by 5.6% after +17.4% in 2017 – the year in which enterprises had to pay the exceptional surcharge introduced to compensate for the State's reimbursement of the 3% contribution on dividends paid. All in all, the NFC savings ratio stood at 22.6% of their value added (–0.6 points) and the self-financing ratio reached 96.3% (–4.4 points).

Financial corporations improved their net borrowing

In 2018, growth in the output of financial intermediaries stood at +1.8%, which was on a par with the rate observed in 2017 (+1.9%). This €2.4 billion rise can be attributed to the €3.0 billion increase in the production of invoiced services measured by commissions, which more than offset the new decline (–€0.8 billion) in the output of Financial Intermediation Services Indirectly Measured (FISIM).

Although FISIM had no impact on the balance of the primary income of financial intermediaries, they did cause the banks to reintegrate the value added of their interest margins, which are considered to be production of services. The limited variation in the output of FISIM in 2018 (following a drop of €6.2 billion in 2017) is explained by the increase in non-financial agents' outstanding loans and deposits being offset by the decrease in the global margin of intermediation as a result of a drop in the refinancing rate.

Given the moderate increase in the intermediate consumption of financial intermediaries (+0.4%), their value added increased by €2.2 billion (+3.5%). Property income paid increased slightly faster than property income received (+€7.5 billion and +€6.4 billion, respectively): the adjusted interest flows of FISIM started rising again; flows of dividends paid continued to rise (+8.9% after +11.9% in 2017), while dividends received increased again (+8.4% after –1.1% in 2017). GFCF contracted (–4.8% after +19.3% in 2017), notably in real estate. Finally, the net borrowing of financial intermediaries improved by €3.1 billion, reaching –€1.6 billion in 2018.

In 2018, the output of insurance companies' services stabilised (dipping slightly by 0.2% after a 2.0% rise in 2017). The increase in non-life insurance output (+2.0%) was more than offset by the drop in life insurance output (–3.5%).

The life insurance situation was quite paradoxical: in a context of historically low interest rates, combined with the sharp drop in share prices, net inflows were again vigorous in 2018 and became positive again for euro funds. They remained on a positive trend for unit-linked products, even though the fall in stock-market prices adversely affected yields (–8.9%). However, the margins on insurers' premiums were negatively impacted by the reconstitution of their mathematical reserves which had been undermined by the low levels of inflows recorded in previous years.

In non-life insurance, property and liability insurance premiums increased at a faster rate than the costs of equivalent benefits (+2.9% and +2.4%, respectively). Health and personal injury insurance premiums and benefits remained on an upward trend (+5.6% and +6.4%).

In 2018, insurance companies' intermediate consumption dropped by 1.0% after rising sharply in 2017 (+6.5%). Consequently, insurance companies' value added bounced back by €0.4 billion after declining by €2 billion in 2017.

Property income received by insurers edged down for the third consecutive year (–€0.9 billion after –€0.5 billion in 2017): this decline was mainly due to interest received (–€1.5 billion), primarily from sovereign bonds. Property income allocated to policyholders fell by a similar amount (–€1.0 billion).

Finally, the insurance sector slightly improved its net borrowing, now standing at –€2.0 billion in 2018 (after –€2.4 billion in 2017).

The government deficit continued to fall, standing at 2.5% of GDP

In 2018, the government deficit was below the threshold of 3% of GDP for the second consecutive year

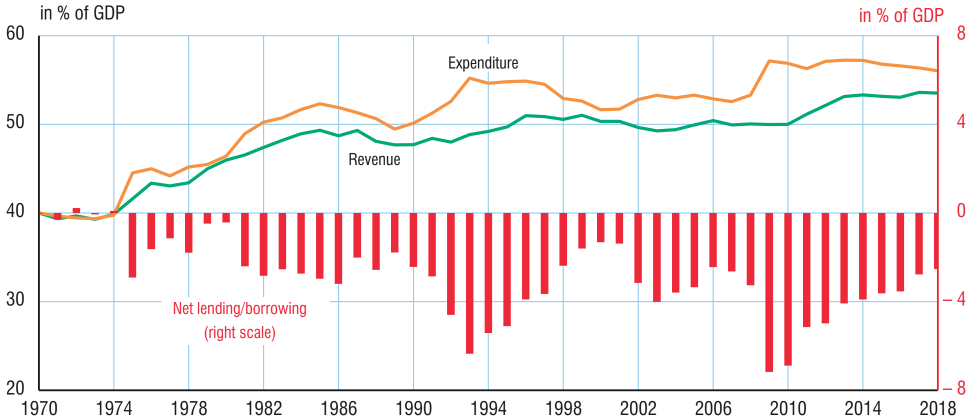
In 2018, the government deficit according to the Maastricht definition stood at 2.5% of GDP, falling again, after 2.8% in 2017 and 3.5% in 2016 *(figure 14)*. It was below the 3% threshold for the second consecutive year. Expenditure slowed to +1.9% (+1.4% excluding tax credits), after +2.3% in 2017. As a result, its share in GDP diminished (56.0%, after 56.4% in 2017). In addition, public revenue rose less markedly in 2018 (+2.3%) than in 2017 (+3.8%).

All in all, the government deficit was reduced by €4.1 billion compared with 2017, under the effect of an improvement in the financing capacity of Social Security funds (+€5.5 billion), other government bodies (+€1.7 billion) and local government authorities (+€0.7 billion). Conversely, the net borrowing of the State deteriorated (–€3.8 billion).

The compulsory levies ratio decreased by 0.2 GDP points in 2018

In 2018, the general government compulsory levies ratio stood at 45.0% of GDP, down 0.2 GDP points compared with 2017. The spontaneous increase in taxes and social contributions would appear to have stood at 3.0%, which was faster than the pace of nominal GDP growth (+2.5%). Indeed, the macroeconomic context remains favourable, with buoyant gross wages and real estate transactions at a sustained level.

14. General government net lending / borrowing



Scope: France.
Source: Insee, national accounts, 2014 base.

However, the new measures contributed –€9.7 billion to the drop in taxes and social contributions *(Box 2)*. The drop in taxation for private individuals resulted concurrently from the replacement of the wealth tax (ISF) by the property tax (IFI), the introduction of the single flat-rate tax, and the first stage of the progressive reductions in housing tax for 80% of households. Concerning professional taxes, the effects of the reduction in the corporate tax (IS) rate and the ramping-up of the tax credit for encouraging competitiveness and jobs (CICE) were accentuated by a backlash effect, in 2018, following the exceptional surcharge on corporation tax in 2017. These decreases were partially offset by the temporary impact of the switch between employee contributions and the Generalised Social Contribution, the raising of energy taxes and the increase in tax on tobacco.

The central general government deficit deteriorated

The net borrowing of central general government, the State and other government bodies (ODACs), deteriorated by €2.1 billion to –€72.6 billion in 2018. While the deficit of ODACs fell by €1.7 billion, the State's deficit deteriorated by €3.8 billion.

Box 2

The main fiscal and social measures and their impact on taxes and social contributions in 2018

*Vincent Blondelot**

In 2018, the effect of fiscal and social measures helped to reduce the level of tax and social contributions significantly across general government (–€9.7 billion). This drop resulted from the implementation of the progressive reduction in housing tax for 80% of households, the abolition of the wealth solidarity tax (ISF) and its replacement by the property tax (IFI), the introduction of the single flat-rate tax (PFU), the reduction of the corporation tax (IS) rate and the ramping-up of the tax credit for encouraging competitiveness and jobs (CICE). In addition, the abolition of the exceptional surcharge on corporation tax also strongly contributed to the reduction of the compulsory levies ratio. However, these measures were partly offset by the two-stage shift between employee contributions and the Generalised Social Contribution, whose full-year effect will only be observable in 2019, and by the increases in taxation on energy and tobacco.

Measures relating to taxes and social contributions in 2018

billion euros

Measures relating to taxes and social contributions	**– 9.7**
Direct corporate taxation1 and employer contributions	**– 12.4**
CICE - ramping up and rate increase from 6% to 7%	– 3.7
Drop in the corporation tax rate from 33% to 25%	– 1.2
Tax credit on payroll tax	– 0.6
Reform of 5th corporation tax instalment	– 0.5
Abolition of the 3% tax on dividends	– 1.7
Exceptional surcharge on corporation tax	– 4.8
Other	0.0
Direct household taxation1, employee and self-employed contributions	**– 4.8**
Housing tax reduction for 80% of households	– 3.2
Creation of the property tax (IFI)	– 3.2
Implementation of the single flat-rate tax (PFU)	– 1.4
Extension of the tax credit for the employment of domestic workers	– 1.0
Prolongation and renewal of the energy transition tax credit (CITE)	– 0.3
Shift concerning CSG contributions	4.4
Other	– 0.1
Indirect taxation	**7.5**
Increase in energy taxation	3.8
Tobacco taxation	2.3
VAT social landlords	0.8
Other types of VAT	0.6

1. The sharing of the effects of the new measures between households and enterprises was partly carried out by convention. On the one hand, this is a “static” distribution because it does not take account of the macroeconomic impact of the taxes and subscriptions in question: certain taxes may indeed by paid by enterprises but ultimately concern households once enterprises pass them on to them by increasing the prices of goods paid by consumers, or via their employees’ salaries, which may take several years. The approach presented herein does not therefore take account of the impact of medium-term measures. On the other hand, this distribution does not take account of the tax burden linked to indirect taxes that may be imposed upon households or enterprises.
Scope: France.
Source: DG Trésor.

* Vincent Blondelot (Directorate General for the Treasury).

Box 2 (continued)

The new measures significantly reduced direct corporate taxation and employer contributions by €12.4 billion in 2018

The ramping up of the tax credit for encouraging competitiveness and jobs (CICE) and the increase in the rate from 6% to 7% for payroll in 2017 contributed to reducing the corporate tax burden by €3.7 billion. This was accompanied by the reduction of the corporation tax (IS) rate from 33% to 28% up to €500,000 of taxable profits, which cut corporate levies by €1.2 billion. The creation of the tax credit on payroll tax reduced corporate levies by €0.6 billion. In addition, the reform of the 5th corporation tax instalment contributed to reducing corporate taxation by €0.5 billion.

Lastly, the abolition of the 3% tax on dividends led to a €1.7 reduction in revenues, and the backlash in response to the exceptional surcharge on corporation tax, introduced by the Amending Finance Law for 2017, caused compulsory levies to fall by €4.8 billion in 2018.

The new measures also reduced direct household taxation and the contributions of employees and the self-employed by €12.4 billion in 2018

In 2018, the first stage of the progressive reductions in housing tax for 80% of households contributed to reducing compulsory levies on households by €3.2 billion, with the replacement of the wealth tax by the property tax contributing €3.2 billion and the introduction of a single flat-rate tax contributing €1.4 billion.

This tax reduction trend was stepped up by the extension of the tax credit for the employment of domestic workers amounting to €1.0 billion, and by the prolongation and renewal of the energy transition tax credit (CITE) totalling €0.3 billion.

In the opposite direction, certain measures such as the temporary increase in revenue due to the two-stage shift between employee contributions and the Generalised Social Contribution (€4.4 billion) contributed to increasing direct household taxation.

The new measures increased indirect taxation by €7.5 billion, mainly by raising energy taxes.

In 2018, the ramping-up of the carbon component, with a view to adjusting the taxation of products according to the associated level of CO2 emissions, raised indirect taxation by €3.8 billion. In addition, the increase in tobacco taxation contributed to raising indirect taxation by €2.3 billion, excluding behavioral effects. Finally, the measurement of the increase in VAT applying to social landlords led to an €0.8 billion rise in indirect taxation.

The revenue of central general government slowed, following strong growth in 2017 (+0.5% in 2018 after +5.2% in 2017). Expenditure also slowed down, but to a lesser extent (+0.8%, after +2.6%).

Regarding revenue, taxes and social contributions collected decelerated sharply (+0.7%, after +5.9% in 2017).

Taxes on products and imports were less buoyant than in 2017 (+€8.9 billion after +€11.2 billion). VAT increased by €5.0 billion, in line with the growth in taxable jobs. Total taxes on energy consumption (fuel, electricity, natural gas) increased by €2.6 billion, driven mainly by the ramping up of the carbon component: the domestic consumption tax on energy products increased by €2.3 billion, the domestic consumption tax on natural gas rose by €0.5 billion and the domestic tax on final electricity consumption decreased by €0.2 billion.

After strong growth in 2017 (+€10.1 billion), income and wealth taxes received by central government fell by €3.7 billion, with major restructuring being carried out. Individual income tax on natural persons increased by €2.6 billion, +€1.7 billion of which was due to the extension to inactive persons of the tax credit for the employment of domestic workers. Corporation tax fell by €3.2 billion; this drop was due to the reduction in the rate of this tax (to 28% for profits below €500,000 and 33.3% above this amount), and to a backlash effect after the exceptional and additional contributions of 2017. In addition, the replacement of the wealth tax by the property tax had a net impact of –€3.2 billion.

Compensation for local authorities increased by €3.0 billion following the 30% reduction in housing tax for 80% of households in 2018.

Other current transfers declined by €1.3 billion. Revenue from fines imposed by the Competition Authority decreased by €0.5 billion. The revenue of the National Agency for Urban Renewal (ANRU), provided by the Union of Enterprises and Employees for Housing (UESL), decreased by €0.5 billion due to the end of the National Urban Renewal Programme.

In 2018, property income slipped back by 4.5%, after rising by 5.9% in 2017). Dividends on EDF securities received by the State declined by €0.6 billion. The Innovation and Industry Fund (FII) received €0.3 billion in EDF and Thales dividends.

Capital taxes were stable in 2018 (+€0.1 billion), after rising by €1.9 billion in 2017. There was little increase in inheritance taxes.

On the expenditure side, intermediate consumption decelerated (+1.7%, after +4.9%), due to the slowdown in purchases by the Ministry for the Armed Forces. Driven by the creation of posts in education and the police and reflecting the introduction of the allowance granted to offset the rise in the General Social Security Contribution (CSG), expenditure on personnel remained dynamic (+1.7% after +2.5%), despite the freezing of the index point in 2018, after the rise on 1st February 2017.

Subsidies accelerated sharply (+€5.0 billion, after +€1.6 billion in 2017). Tax credits were indeed very dynamic: +€3.8 billion for the tax credit for encouraging competitiveness and jobs (CICE), whose rate rose from 6% to 7%, and +€2.7 billion due to the extension to inactive persons of the tax credit for the employment of domestic workers. These increases were only partially offset by the reduction in payments for subsidised employment contracts (–€1.5 billion) and hiring subsidies for small and medium-sized enterprises (–€0.9 billion). Current transfers to other general government departments decreased by €4.2 billion. The reform of resources allocated to the regions reduced their general operating grant by €3.9 billion, which was offset by the transfer of a fraction of the gross VAT revenue of €4.2 billion.

The contribution to the European Union budget increased by €4.3 billion and returned to its 2016 level of €20.6 billion, due to the relaunch of Cohesion Policy programmes.

After several years of decline, interest on the debt burden picked up (+1.4%, after –2.9% in 2017): the increase in inflation in 2018 was reflected by the rise in indexation charges on fungible Treasury bonds.

Social benefits paid by the State remained virtually stable (+€0.4 billion, after +€2.2 billion): the effect of the rise in retirement pensions, the adult disability allowance (AAH) and the activity bonus was offset by the reduction in personalised housing aid (APL).

After a very dynamic 2017 (+€9.3 billion), capital transfers paid declined in 2018 (–€4.9 billion), due to the backlash effect of the recapitalisation of Areva in 2017 (€4.5 billion) and lower back-payments to enterprises of the 3% contribution on dividends (–€1.0 billion).

Local government surpluses grew, despite dynamic investment

In 2018, local government authorities were still in surplus: +€2.3 billion after +€1.6 billion in 2017. Revenues were more dynamic (+2.6%) than spending (+2.4%), despite the latter being driven by vigorous investment.

On the spending side, remunerations slowed substantially (+0.7%, after +2.3%), due to the freezing of the civil service index point, the introduction of a day without paid benefit in 2018, and the postponement of the “Professional Career Paths, Careers and Remunerations” reform in 2019. Intermediate consumption continued to rise (+2.0%, after +2.3%). Benefits paid out by local authorities accelerated (+1.6%, after +0.5%), notably due to the full-year impact of the increase in the earned income supplement (RSA) in September 2017 and of the rise occurring in April 2018.

Local investment was dynamic (+8.6%, after +5.9%), particularly in municipalities in the run-up to the municipal elections and for the Société du Grand Paris.

Tax revenue from local government authorities grew by 5.6%, buoyed up notably by the introduction of a VAT transfer to the regions in return for the abolition of their general operating grant. The acceleration of taxes and social contributions can also be explained by the flat-rate increase in rental assessment bases adopted in the Finance Law for 2018.

Pursuant to the Financial Pact between the State and local authorities, financial support (excluding the VAT compensation fund and the fraction of VAT allocated to the regions) was not reduced in 2018. In addition, the progressive reductions in housing tax were entirely offset by transfers from the State. Excluding new measures, local government taxes and social contributions increased spontaneously by 2.2%.

The social account surplus increased in 2018

In 2018, the net lending of social security funds stood at €10.8 billion, after +€5.3 billion in 2017. The improvement in 2018 stemmed partly from the general social security system, the UNEDIC unemployment insurance scheme and supplementary pension schemes, which remained in deficit. The Social Debt Redemption Fund (CADES), which posted a substantial surplus, as in 2017, also contributed to the surplus in 2018. Therefore, the social accounts were generally in surplus for the second consecutive year, thanks to controlled spending and the buoyancy of revenue.

The revenue of Social Security funds slowed slightly, while remaining vigorous (+2.8%, after +3.3%). Tax revenue grew strongly (+3.2%, after +3.1%), driven by the continued buoyancy of private wages (+3.5%, after +3.6%). More precisely, social contributions decreased by 1.7% (after rising by 3.2% in 2017), mainly due to the abolition of employee unemployment and health contributions as part of the measure to boost the purchasing power of the working population. In return, the Generalised Social Contribution (CSG) was increased by 1.7 points; as a consequence, taxes allocated to social security funds accelerated (+13.9%). Revenue excluding taxes and social contributions fell back by 1.5%; on the one hand, revenue from output was relatively sluggish due to the volume of hospital activity (provision of services, overnight stays, etc.) remaining almost stable and, on the other hand, transfers from other general government entities edged down.

Social expenditure continued to rise (+1.9% after +2.0%), but less sharply than revenue. Social benefits gathered pace in 2018 (+2.2%, after +1.7%) due to old-age benefits (+2.7%, after +1.7%). Family benefits remained stable, in line with previous years. The rise in health insurance spending was kept in check, provisionally in line with the national objective on health insurance spending (ONDAM) that was adopted for 2018. However, it grew a little more strongly than in 2017 (+2.3 % in 2017, after +2.2%). However, expenditure excluding benefits slowed (+1.1% after +2.8%). In 2017, it had increased, due to the transfer of the operating expenses (amounting to €1.5 billion) of vocational rehabilitation centres to Social Security funds. In addition, the wage bill of Social Security funds decelerated sharply (+0.6%, after +2.4%).

Government debt within the meaning of Maastricht remained stable at 98.4% of GDP

Government debt within the meaning of Maastricht stood at €2,315.3 billion at the end of 2018 after €2,258.7 billion one year earlier *(figure 15)*. It reached 98.4% of GDP, as at the end of 2017.

The State's contribution to government debt increased by €73.5 billion to €1,842.4 billion. This variation was higher than its net borrowing (–€69.9 billion), especially due to an increase in liquidity and despite a high amount of issue premiums. This increase stemmed mainly from issues of long-term securities (+€84.7 billion) and, to a lesser extent, Treasury correspondents' deposits (+€2.6 billion). Conversely, net redemptions of short-term securities amounted to €13.6 billion.

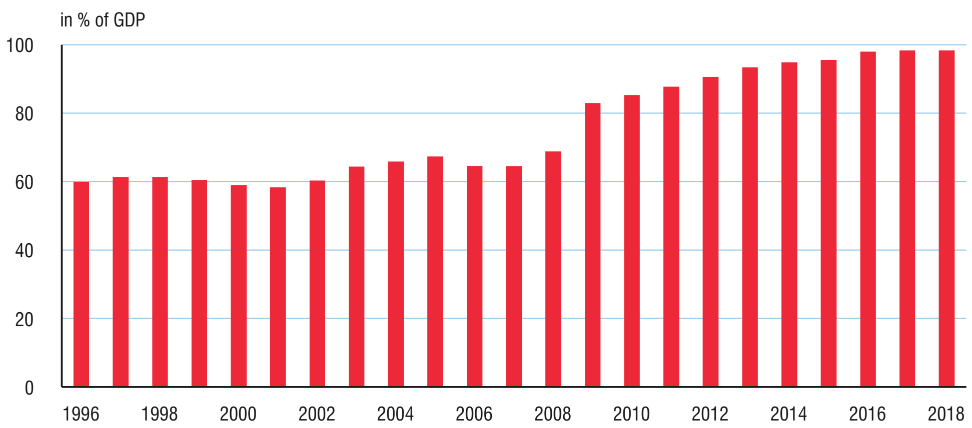
The contribution of other government bodies (ODACs) to the debt increased slightly in 2018 (+€0.3 billion). Rail (SNCF) network debt increased by €2.2 billion. On the other hand, the French Motorways Fund (CNA) reduced its debt by €2.1 billion.

The contribution of local government authorities to the debt stood at €205.6 billion at the end of 2018, up €4.4 billion compared with 2017. The indebtedness of other government bodies increased by €3.3 billion, especially the Société du Grand Paris (+€2.9 billion) and the regions (+0.6 billion), followed by municipalities and local authority syndicates (+€0.5 billion each). However, the indebtedness of French departments decreased by €0.5 billion.

Lastly, the contribution of social security funds to the government debt dropped by €21.6 billion to stand at €204.0 billion. The Social Debt Redemption Fund (CADES) and the Central Agency for Social Security Bodies (ACOSS) decreased their indebtedness by €17.9 billion and €5.3 billion, respectively. On the contrary, the UNEDIC unemployment insurance scheme increased its debt by €1.8 billion.

At the end of 2018, net general government debt amounted to €2,106.5 billion (or 89.5 % of GDP), up €53.0 billion on 2017. At the same time, gross government debt increased by €56.6 billion. The difference between the variations in the gross and net debts primarily reflects the significant increase in the State's cash position (+€8.5 billion), partially offset by the reduction in the assets of ODACs (–€3.3 billion) and Social Security funds (–€2.7 billion). ■

15. Government debt as defined by the Maastricht Treaty



Scope: France.
Source: Insee, national accounts, 2014 base.

Box 3

The French economy is likely to have been performing close to its potential since 2017

*Xavier Guillet, Adrien Lagouge, Bastien Virely**

INSEE's business tendency surveys on activity in industry, services, civil engineering and the construction sector provide information about production capacity utilisation rates, the capacity to increase output, and any factors preventing the development of activity. In this way, enterprises are asked whether, at the time of the survey, they are unable to develop their production as they would like due to problems related to demand (insufficient demand) or supply (inadequate machinery or equipment, lack of labour, financial constraints or other factors[1]).

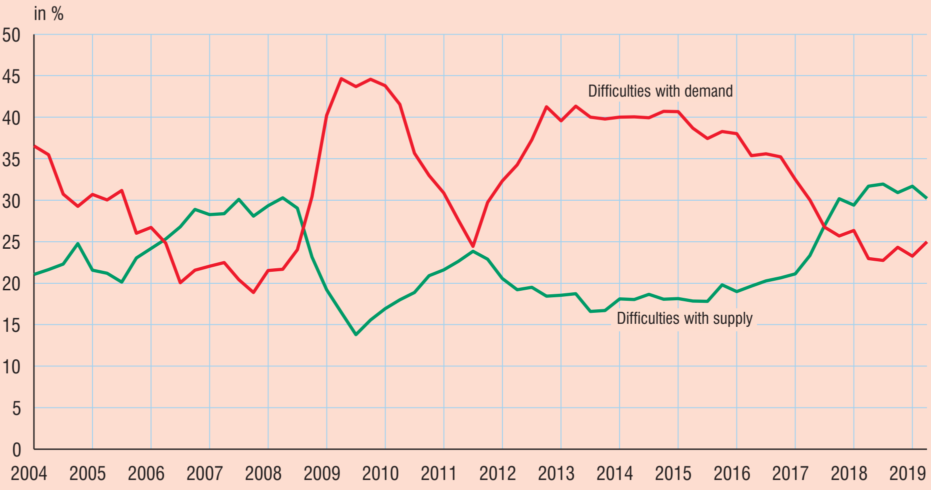
In 2018, a high proportion of enterprises reported that they were limited by their production capacities

After a period of stability between 2012 and 2015, the proportion of enterprises in the manufacturing industry, construction sector and market services that were confronted with pure supply-side problems increased significantly from 2016 to 2018 *(figure 1)*. In industry, at the end of 2017, this proportion reached its highest level since 2001, before stabilising in 2018. In services, it continued to increase in 2018, and in July, it reached its highest point since this question was added to the survey in 2004. Finally, in the construction sector, the proportion of enterprises facing exclusively supply-side problems has also increased significantly since 2016, but without returning to the pre-crisis peak level.

In the manufacturing industry and construction sector, the increase in supply-side tensions goes hand-in-hand with the rise in production capacity utilisation rates: since 2016, enterprises have reported making increasingly intensive use of their production capacities.

In contrast to these supply-side constraints, the proportion of enterprises confronted with purely demand-side problems decreased between 2016 and 2018. In 2018, supply-side problems therefore exceeded demand-side difficulties not only in the manufacturing industry and the construction sector but also in services.[2]

1. Companies facing difficulties only with supply or demand



Scope: Metropolitan France, companies in manufacturing industry (20 employees or more), construction (11 employees or more) and services.
Source: Insee, business tendency surveys.

* Xavier Guillet, Adrien Lagouge, Bastien Virely (Insee).

1. Certain specific items are proposed according to specific sectors. In industry and the construction sector, enterprises can report sourcing difficulties, while in construction surveys, enterprises are asked whether, at the time of the survey, weather conditions are hindering the performance of work.
2. In April 2019, demand-side and supply-side problems had reached almost the same level.

Box 3 (continued)

Recruitment difficulties have been growing since 2016

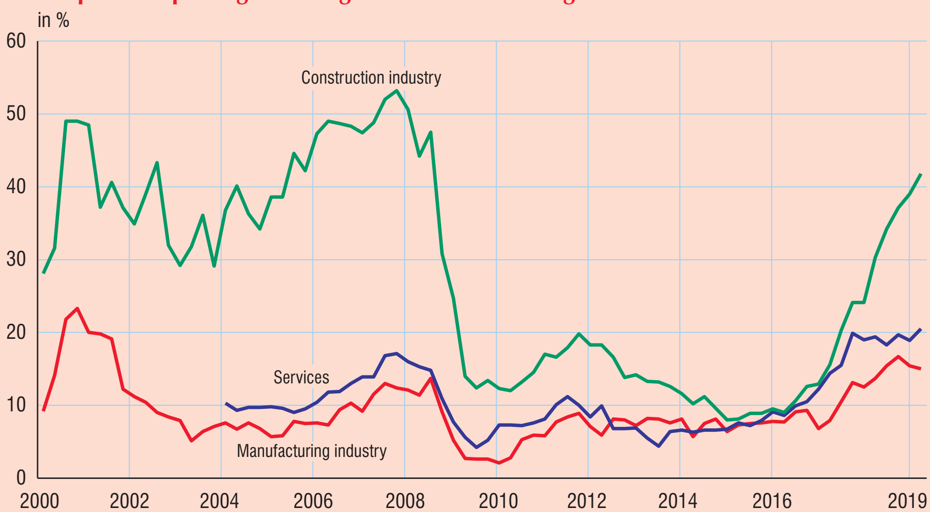
The increase in supply-side constraints reported by enterprises since 2016 was mainly driven by workforce-related constraints. From early 2016 to early 2018, more and more enterprises in industry, construction and services declared that staffing difficulties prevented them from increasing their output as much as they would have liked *(figure 2)*. This problem concerned all sectors of industry (apart from transport equipment), and all sub-sectors of the services surveyed (particularly the road freight transport). During 2018, workforce-related constraints increased again in the manufacturing industry and construction, while they stabilised at a high level in services. In industry specifically, in addition to these workforce-related constraints, the proportion of enterprises reporting that they are limited by inadequate machinery or equipment has increased since the end of 2016. Industrial enterprises have also reported an increase in sourcing difficulties, particularly in the transport equipment manufacturing sector.

The growing supply-side tensions can be seen in light of the cyclical position of the economy

The growing supply-side tensions revealed by the business tendency surveys reflect the difficulties faced by enterprises in meeting the demand for their products, given their production capacities. Under these circumstances, this raises the question of whether such tensions are likely to hold back economic activity – a question that is closely linked to the cyclical position of the economy. The term output gap is commonly used to describe the economic cycle. The output gap measures the difference between actual observed gross domestic product (GDP) and a theoretical level described as potential GDP. Potential GDP is generally defined as the total quantity of goods and services (aggregate supply) that the economy is able to produce in a sustainable manner, i.e. by maintaining inflation at a stable level. It can also be characterised as the level of GDP attainable with the use of production factors, whose quantity is fixed in the short term, in a sustainable manner.

Although these definitions are not totally consistent, they identify potential GDP as a structural variable of the economy, i.e. intrinsically linked to the manner in which the economy as a whole is organised. Conversely, the output gap can be considered as a cyclical variable, describing – for a given economic structure – movements related to one-off events or short-term uncertainties. Nonetheless, in this context, the potential GDP growth rate may vary from one year to another, in addition to the effects of short-term fluctuations alone. Supply-side shocks may at some point affect the production factors available in the economy, or their productivity, and these shocks may take time to spread throughout the economy, leading

2. Companies reporting a shortage of staff as a limiting factor



Scope: Metropolitan France, companies in manufacturing industry (20 employees or more), construction (11 employees or more) and services.

Source: Insee, business tendency surveys.

Box 3 (continued)

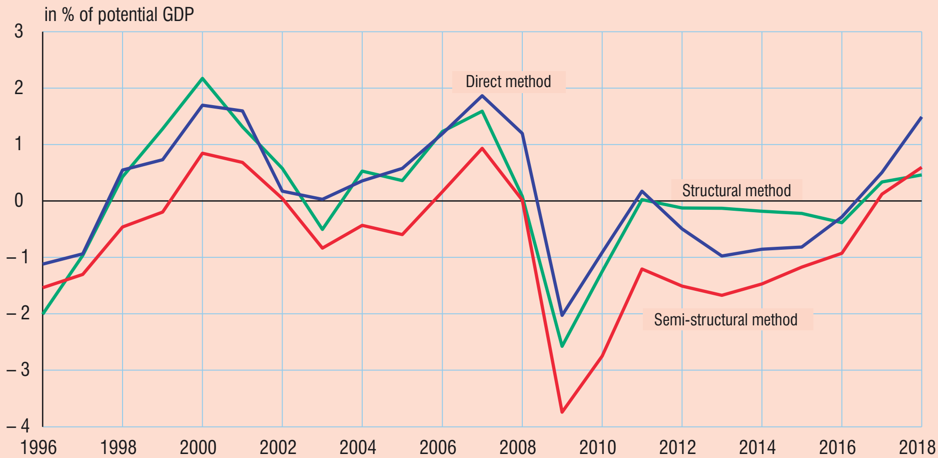
to a gradual adjustment of potential GDP. These continuous changes in potential GDP must also be distinguished from long-term and trend variations, which are more dependent on technical progress and demography.

Given the lack of a clear definition of potential GDP, numerous methods can be used to estimate this unobservable quantity. A distinction is usually made between "statistical" methods designed to extract raw information from time series without seeking to establish theoretical economic links between them, and "structural" methods based on prior theoretical reasoning applied to the data using econometric tools. The former have the advantage of not being based on theoretical assumptions, while the latter enable potential GDP to be broken down into its determinants, which can be used for medium-term forecasting or projections. However, the boundary between the two categories of methods is blurred since "semi-structural" methods also exist, incorporating specific aspects of both categories and therefore being of a hybrid nature. The results presented herein thus relate to three distinct methods of estimation, derived from each category of methods. Comparing the results enables to deliver a more robust diagnosis, taking account of the uncertainty attached to the definition and measurement of potential GDP.

According to these three methods, the French economy is likely to have performed at close to its potential level, or even slightly above it, in 2017 *(figure 3)*. Ten years earlier – in 2007 – the output gap was strongly positive, indicating an economy that was "overheating", before suddenly plummeting in 2008 and becoming negative in 2009, at the time of the great recession. This gap widened again in 2012 during the sovereign debt crisis in the Eurozone, with the extent of this decline differing according to the estimation methods used. Thereafter, the output gap has gradually closed since 2014, although the rate of closure differs according to the methods used . Since 2016, there has been a dynamic catch-up effect, leading to the resorption of the activity deficit in 2017. Consequently, in 2018, the output gap is likely to have stood at between 0.5 and 1.5 potential GDP points, according to the estimation methods used. All three methods are therefore consistent in situating the economy's performance at slightly above its potential level. Nonetheless, the relative easing of tensions reported in the most recent business surveys leads to a more qualified diagnosis of the economy stabilising at around its potential level rather than exceeding it markedly and thus hinting at a possible overheating of the economy.

As an indicator of supply and demand imbalances, the output gap is theoretically consistent with price dynamics. In this case, core inflation, which remained relatively stable at a moderate level over recent months, should be seen as relatively consistent with an economy performing at around its potential level. In addition, the absence of inflationary tensions could reflect changes to the price formation system, from the impact of trade

3. Output gap calculated according to three methods



Note: The direct method used in this box is identical to that presented in Guillet, Lagouge, Rousset and Virely [2018] while the structural and semi-structural methods are slightly different in their specification and in the data used.
Source: Insee, authors' calculations.

Box 3 (continued)

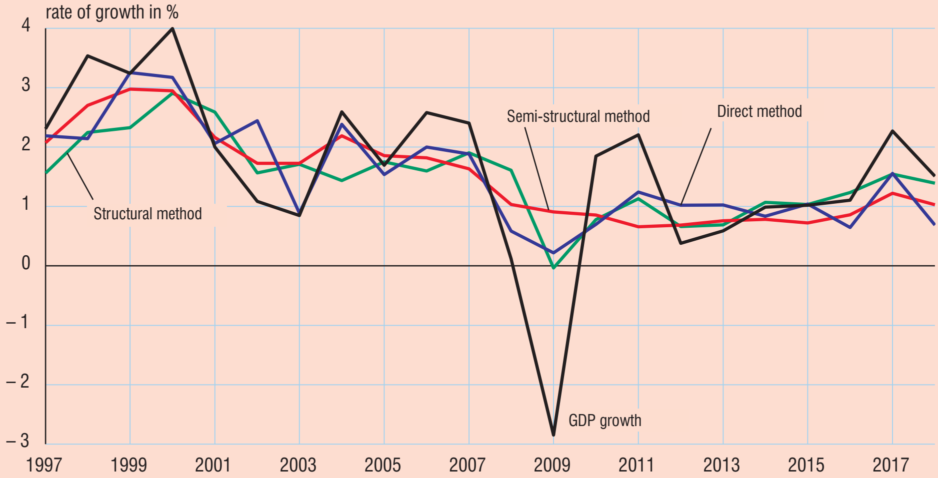
openness, for example, which reduces the market power of national firms, to the development of firmer foundations for inflation expectations. Moreover, in the French case, the unemployment rate can be considered high if the economy is performing at around its potential level: phenomena related to hysteresis and the inadequacy of competencies may help to explain the coexistence of this high unemployment and major recruitment difficulties.

The output gap – whether it positive or negative and its magnitude – gives a static snapshot of the cyclical position of the economy. Its variations over time also shed light on the difference between the observed GDP growth rate and the potential GDP growth rate, which is also known as "potential growth". Observed growth would therefore appear to have been faster than potential growth in 2017, causing the economy to return dynamically to its potential level *(figure 4)*.

Over a longer period, the potential growth trajectory shows that periods of recession, particularly in the early 2000s after the "Internet bubble" burst, and subsequently at the time of the 2008-2009 financial crisis, have each led to sharp drops in potential growth, which does not return to its former rate once the crisis has passed.

These sudden deteriorations in potential growth during periods of crisis form part of a more general context of significant decline in activity growth rates over the past 30 years. The causes of this phenomenon, which can be observed in all advanced economies, are a widely debated research question. Several possible explanations have been put forward, such as demographic ageing, which affects economic behaviours and the macroeconomic balance between savings and investment, or the structural slowdown in corporate productivity [Khder and Monin, 2019], without any clear consensus yet.

4. Potential growth calculated according to three methods



Source: Insee, authors' calculations..

For Further information

Guillet X., Lagouge A., Rousset C., Virely B. (2018), « Supply tensions and position of the economy in the cycle », *Note de conjoncture*, Insee, décembre 2018.

Khder M., Monin R. (2019), « Ralentissement structurel de la productivité des entreprises », *L'Économie française*, Édition 2019.

Box 4

Main revisions made to the National accounts in 2016 and 2017

*Lorraine Aeberhardt**

Main revisions of the 2016 accounts

The resources and uses balance

In the final 2016 accounts, real GDP grew by 1.1%, after 1.2% in the semi-final accounts whilst nominal GDP grew by +1.6% compared to +1.4% in the semi-final accounts. This revision was mainly due to a greater dynamism of the value added (VA) of non-financial corporations (NFCs).

On the demand side, the contribution of domestic demand excluding inventory changes to real GDP growth was revised downwards to 0.2 points and stood at +1.9 points. GFCF growth was +2.7% in the final accounts, slightly lower than in the semi-final accounts, but this relative stability masks movements in opposite directions. The GFCF of NFCs was revised downwards (+2.9% in volume compared to +3.4%) after processing the ÉSANE (Annual Business Statistics System) data on tangible fixed assets. The general government's GFCF was stable while it increased slightly (+0.2%) in the semi-final accounts. The households' GFCF was not revised and grew by +2.8% whilst the GFCF of financial corporations was revised sharply upwards, to + 8.5% in the final accounts compared to + 6.5% in the semi-final accounts. All in all, the contribution of GFCF to real GDP growth was 0.6 points in 2016, in both final and semi-final accounts.

In addition, the household consumption expenditure was revised downwards (+1.8 compared to +2.1%) mainly due to the change in the measure of prices and volumes in financial services, whilst the government final consumption expenditure was not revised (+1.4%).

Growth in exports was up 1.8% compared with 1.5%, while import growth was revised downwards (+2.9% vs. +3.0%), and the contribution of foreign trade to real GDP growth was therefore less negative in the final account (-0.4 points) than in the semi-final account (-0.5 points).

Finally, companies continued to replenish their inventories in 2016 but to a lesser extent than in 2015, so that the contribution of inventories to real GDP growth was negative (–0.4 points in the final and semi-final accounts).

The account of non-financial corporations

The change in the value added of NFCs was not revised in the final accounts and stood at +1.9 % whilst the growth in the wages they paid by such companies is revised up by +0.3 points to +2.4% instead +2.1 %. Although taxes on production net of subsidies were revised downwards (–0.9 points), the Gross operating surplus (GOS) was less vigorous in the final accounts (+1.1% instead of 1.6%). The change in the balance of property income was more favorable. As a result, the change in the NFCs' gross savings increased by +3.5%. Barely changed (–0.1 points), the GFCF increased to +3.6% over 2016. As the upward revision of remuneration was only partially offset by the revision of taxes net of subsidies and given the stability of value added, the margin rate for NFCs fell by -0.3 point (-0.1 point in the semi-final accounts) to 31.7% in 2016. The NFC investment rate was unchanged at 23.2%, whilst the self-financing rate was revised upwards (+3.4 points) in line with the savings review: it stood at 97.4%.

Households account

Compared with the semi-final accounts, the change in gross disposable income (GDI) was slightly revised up to +1.8%: the increase in earned income and wealth was in fact offset by lowered net current transfers received. Given the increase in the final consumption expenditure price index, the change in purchasing power was lower than in the semi-final accounts, +1.6% compared to +1.8% previously. On the other hand, since the increase in nominal household final consumption expenditure, was not revised: +2.0% as in the semi-final accounts, the savings rate was unchanged at 13.9%.

Main revisions of the 2017 accounts

The resources and uses 2alance

Real GDP grew by 2.3% in the semi-final accounts for 2017, compared to +2.2 % in the provisional accounts. Nominal GDP growth was revised downwards: +2.7% compared to +2.8%. The GDP deflator was therefore revised downwards (+0.5% instead of +0.7%).

* Lorraine Aeberhardt (Insee).

Box 4 (continued)

On the demand side, the contribution of domestic demand excluding inventory changes to GDP growth was revised upwards to +2.1 points in the semi-final accounts compared to 1.8 points in the provisional accounts.

The contribution of GFCF was not revised (+1.0 points) because the upward revision of the GFCF of NFCs (+4.7% instead of +4.1%) and the GFCF of households (+6.6% instead of +5.6%) was offset by the downward revision of the GFCF of general government (+0.3% instead of +1.4%) and the GFCF of financial institutions (+12.3% compared with +16.4%).

Real household consumption expenditure increased more than in the provisional accounts (+1.4% compared to +1.0%) as did the general government consumption expenditure (+ 1.5% compared to +1.3 %).

The contribution of foreign trade to real GDP growth was slightly negative, at –0.1 points compared to +0.1 points in the provisional accounts. Imports were revised downwards (+3.9% instead +4.0%) but to a lesser extent than exports (+3.9% compared to +4.5%).

In 2017, companies increased their inventories more than in 2016 so that changes in inventories contributed positively to GPD growth +0.2 points as in the provisional accounts.

The account of non-financial corporations

In 2017, growth in NFCs' VA stood at +3.3% instead of +3.7% in the provisional accounts. Although wages growth was also revised downwards to +3.5% instead of +3.8%, GOS was less dynamic (+3.2%) than it was in the provisional accounts (+3.6%). Likewise, the margin rate was slightly lowered (-0.2 points) and stood at 31.7% in 2017. In line with the revisions for 2016, the balance of property income is more favorable than in the provisional accounts. Furthermore, income taxes paid by NFCs were revised downwards. Overall, gross savings were significantly revised upwards. However, in evolution, it was revised downwards, but remained dynamic: in the semi-final accounts, the gross savings of NFCs increased by +5.8% while it increased by +7.5% in the provisional accounts.

The GFCF was revised upwards (+0.3 points, to +5.3% in 2017) and the investment rate was little revised compared to the provisional and increased slightly (+0.5 point) compared to 2016. In 2017, the self-financing rate was 97.9% compared to 96.3 % in 2016.

Households account

Households' nominal GDI grew by +2.2% in 2017 compared to +2.6% in the provisional accounts. Earned income was more vigorous due to the upward revision of mixed income and, to a lesser extent, wages. On the other hand, income from assets was revised downwards, in particular investment income attributed to insurance policy holders, which had been overestimated in the provisional accounts.

The household consumption deflator was also revised downwards, which means that, in the end, the change in the purchasing power of the GDI was almost not revised: it increased by +1.4% in 2017. Since nominal household consumption expenditure was not revised (+2.2%) in semi-final accounts as in provisional accounts, the savings rate fell by -0.4 points to the same level as in 2016 (13.9%). The financial savings rate was revised downwards to 3.8%.

Box 4 (continued)

Table of main revisions

in %

A. GDP in volume	Old series		New series	
	2016	2017	2016	2017
Gross domestic product	**1.2**	**2.2**	**1.1**	**2.3**
Imports	3.0	4.0	2.9	3.9
Household consumption expenditure	2.1	1.0	1.8	1.4
General government consumption expenditure	1.4	1.3	1.4	1.5
Total gross fixed capital formation (GFCF)	2.8	4.5	2.7	4.7
of which : households	*2.8*	*5.6*	*2.8*	*6.6*
non financial enterprises (NFE)	*3.4*	*4.1*	*2.9*	*4.7*
general government	*0.2*	*1.4*	*0.0*	*0.3*
Exports	1.5	4.5	1.8	3.9
Inventories (contribution to GDP. in points)	– 0.4	0.2	– 0.4	0.2

B. GDP in value. gross data	Old series		New series	
	2016	2017	2016	2017
Gross domestic product	**1.4**	**2.8**	**1.6**	**2.7**
Imports	0.8	6.2	0.6	6.1
Household consumption expenditure	2.0	2.2	2.0	2.2
General government consumption expenditure	1.2	1.3	1.3	2.5
Total gross fixed capital formation (GFCF)	3.2	5.7	3.1	5.9
of which : households	*3.6*	*7.6*	*3.1*	*8.8*
non financial enterprises (NFE)	*3.7*	*4.9*	*3.6*	*5.2*
general government	*0.3*	*3.1*	*0.3*	*2.2*
Exports	– 0.1	5.3	0.5	4.7
Inventories (contribution to GDP. in points)	– 0.4	0.2	– 0.4	0.1

C. Prices of GDP. gross data	Old series		New series	
	2016	2017	2016	2017
Gross domestic product	**0.2**	**0.7**	**0.5**	**0.5**
Imports	– 2.2	2.1	– 2.2	2.1
Household consumption expenditure	– 0.1	1.3	0.2	0.8
General government consumption expenditure	– 0.2	0.7	– 0.1	1.0
Total gross fixed capital formation (GFCF)	0.4	1.2	0.4	1.1
of which : households	*0.8*	*1.9*	*0.3*	*2.1*
non financial enterprises (NFE)	*0.3*	*0.7*	*0.6*	*0.5*
general government	*0.1*	*1.7*	*0.2*	*1.9*
Exports	– 1.6	0.8	– 1.3	0.8
Inventories (contribution to GDP. in points)	0.0	0.0	0.0	– 0.1

D. Items of non financial enterprises account in value	Old series		New series	
	2016	2017	2016	2017
Value added (VA)	**1.9**	**3.7**	**1.9**	**3.3**
Compensation of employees	2.1	3.8	2.4	3.5
Gross operating surplus (GOS)	1.6	3.6	1.0	3.2
Gross saving	0.1	7.5	3.5	5.8
GFCF	3.7	5.0	3.6	5.3
Margin rate (GOS/VA)	31.9	31.9	31.7	31.7
Investment rate (GFCF/VA)	23.2	23.5	23.2	23.7
Self-financing rate (saving/GFCF)	94.0	96.3	97.4	97.9

E. Items of households account in value	Old series		New series	
	2016	2017	2016	2017
Gross disposable income (GDI)	**1.7**	**2.6**	**1.8**	**2.2**
Consumption expenditure	2.0	2.2	2.0	2.2
Purchasing power of GDI	1.8	1.3	1.6	1.4
Saving ratio (saving/GDI)	13.9	14.3	13.9	13.9
Financial saving ratio (lending/GDI)	4.4	4.4	4.5	3.8

Note: old series come from annual national accounts published on May 30. 2018; new series come from annual national accounts published on May 30. 2019.
Scope: France.
Source: Insee. national accounts.