The economic recovery is allowing monetary policy normalisation to be initiated in some of the main advanced economies after nearly 10 years of monetary stimulus. This applies particularly to the United States. In December 2015 the Federal Reserve commenced, with a 0.25 pp increment, a gradual process of official interest rate rises, with another increase in 2016 and three more in 2017, initiating the process of balance sheet reduction in October of that same year. Other central banks have not made so

Chart 1
GDP FORECAST (WITH EXOGENOUS MONETARY POLICY)

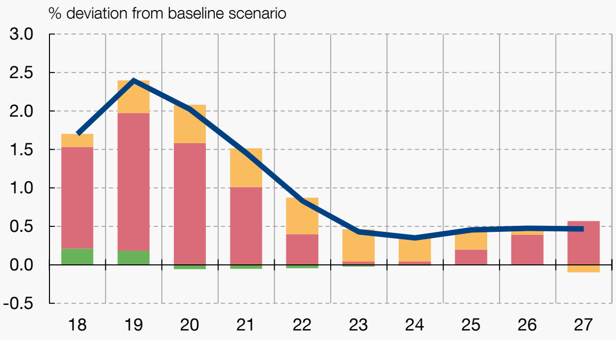
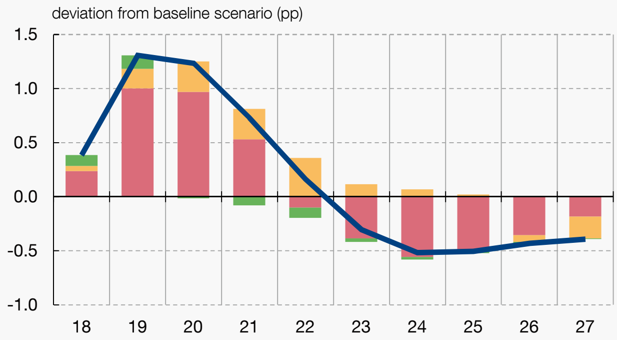
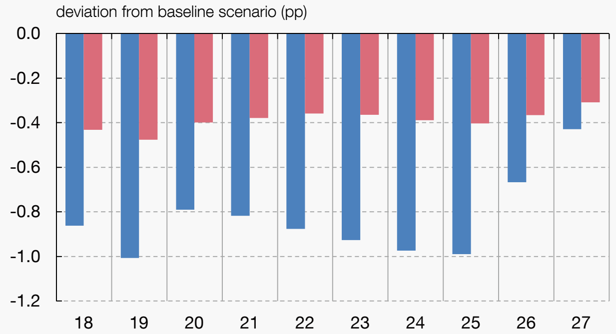


Chart 2
INFLATION FORECAST (WITH EXOGENOUS MONETARY POLICY)



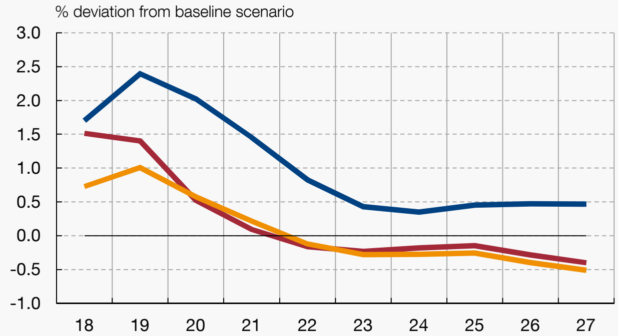
CORPORATE INCOME TAX REFORM HOUSEHOLD INCOME TAX REFORM BUDGETARY AGREEMENT TOTAL EFFECT

Chart 3
TWIN DEFICIT FORECAST (WITH EXOGENOUS MONETARY POLICY)



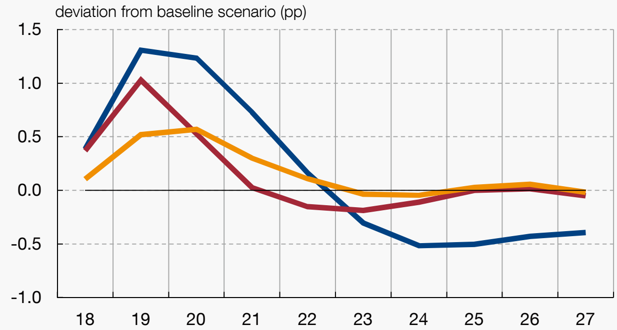
GOVERNMENT DEFICIT CURRENT ACCOUNT BALANCE

Chart 4
GDP FORECAST



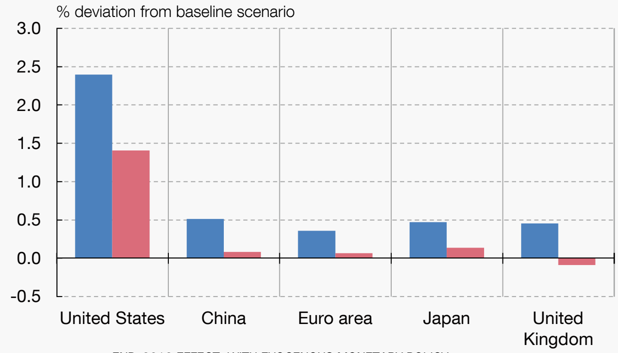
EXOGENOUS MONETARY POLICY
ENDOGENOUS MONETARY POLICY
ENDOGENOUS MONETARY POLICY AND CHANGE IN TERM PREMIUM

Chart 5
INFLATION FORECAST



EXOGENOUS MONETARY POLICY
ENDOGENOUS MONETARY POLICY
ENDOGENOUS MONETARY POLICY AND CHANGE IN TERM PREMIUM

Chart 6
INTERNATIONAL GDP SPILLOVERS



END-2019 EFFECT, WITH EXOGENOUS MONETARY POLICY
END-2019 EFFECT, WITH ENDOGENOUS MONETARY POLICY

SOURCE: Banco de España calculations using the NiGEM model.

much progress in withdrawing monetary stimuli, although the Bank of England raised its reference rate in November, and even the ECB and, to a lesser extent, the Bank of Japan are already beginning to define their exit strategy. In particular, the Federal Reserve faces major dilemmas in this process, since the output gap of the US economy is positive and the degree of slack in its labour market is very small, but the prevailing rate of inflation continues to be very moderate. Furthermore, should there be a greater-than-expected tightening of monetary policy stance, some markets could be exposed to a significant correction, as evidenced by the turmoil in February 2018.

To this should be added a fiscal policy which has adopted a markedly expansionary slant in recent months with the approval of a fiscal reform in late December and a bipartisan agreement in early February which raises the expenditure ceiling by $296 billion in fiscal years 2018 and 2019.[1] The tax reform includes most notably a corporate income tax cut from 35% to 21% and the immediate deduction of 100% of expenses arising from investment — which will be temporary — as well as other measures affecting taxation of multinationals' profits generated abroad. The reform also introduces changes to the direct taxation of households which will reduce their tax burden at all income levels between 2018 and 2025.

In principle, the procyclicality of these tax measures may contribute to an overheating of the economy, leading to inflation above the central bank target which may eventually require interest rates to be raised more rapidly than anticipated. To illustrate this, the results of a NiGEM model simulation of the effect of expansionary fiscal policy (with and without a monetary policy response) are analysed below for the USA and other economies.

In the first simulated scenario, monetary policy does not respond to the effects of the fiscal stimulus, so that the interest rate follows the course currently expected by the Federal Reserve. The impact of the fiscal expansion on the level of GDP exceeds 1.5 pp in the period 2018-2021 and drops to 0.5 pp towards the end of the forecasting horizon, between 2023 and 2027 (see Chart 1). Inflation increases more than expected under the baseline scenario between the years 2018-2022 (see Chart 2). Additionally, it is important to take into account that the expansionary measures will contribute to raising the path of the government deficit by nearly 1 pp of GDP in the next decade, which is all the more significant in a situation of high government debt (see Chart 3). According to the model, aggregate demand and, consequently, imports would increase more rapidly than exports, which would worsen the external deficit by 0.4 pp as a percentage of GDP with respect to the scenario without fiscal stimulus.

Under the second scenario, monetary policy is allowed to respond to the effect that the fiscal stimulus has on the output gap and inflation. And under the third scenario, in addition to this endogenous response of monetary policy, it is assumed that the term premium increases by 75 bp, thus returning to its average historical level. Under these two scenarios, short-term interest rates increase above the trend currently expected by the Federal Open Market Committee (FOMC) to a lesser extent than in the aforementioned case, since the increase in the term premium implies that financial conditions tighten. This response of monetary policy causes both GDP and inflation to increase to a lesser extent than under the initial scenario (see Charts 4 and 5).

Regarding the effects on other areas, under the exogenous monetary policy scenario, the GDP of China, Japan and the United Kingdom would rise by around 0.5 pp at end-2019 with respect to the baseline scenario due to higher demand for their exports by the United States (see Chart 6). In the euro area, the impact would be somewhat less (0.35 pp). Under a scenario with a monetary policy response, the effects would be lower, between 0.1 pp and 0.2 pp in China, the euro area and Japan, and would even be negative in the United Kingdom (-0.1 pp with respect to the baseline scenario). Furthermore, the US term premium may spread to the other countries in view of this economy's central position in the global financial markets, with the attendant contractionary effects on the GDP of the rest of the world. In some countries, this financial channel may outweigh the commercial channel referred to above.

In short, the fiscal expansion will foreseeably contribute to greater dynamism of the US economy in the short term, even if the Federal Reserve responds by stepping up the pace of monetary policy normalisation against a background marked by a positive output gap and growing inflation. However, this baseline scenario of higher short-term growth in activity is accompanied, in a medium-term horizon, by an increase in the risks associated with worsening public finances and with a widening current-account deficit. The international impact of this fiscal expansion will foreseeably be modest and even negative if there is a contagion effect in the financial markets of other countries, particularly if the US authorities decide to introduce protection measures to counteract the worsening US external balance.

1 In addition, in February President Trump unveiled an infrastructure improvement plan for $200 billion in 10 years, which could foreseeably generate total investment of at least $1.5 billion by fostering the investment of state and local governments and of private firms. However, this plan is currently at the initial discussion stage and its approval is expected to be complicated.