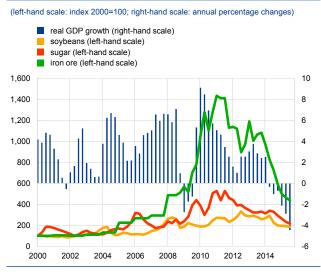
Box 1 What is driving Brazil's economic downturn?

Following rapid economic growth in the years preceding the recent global financial crisis, Brazil was in a strong position to weather the Great Recession.

Both the commodity price cycle and abundant capital inflows played a role in this improved economic performance. The improvement was also the result of the profound changes in macroeconomic policy management introduced a decade previously, with the end of fiscal dominance and hyperinflation in 1994. However, Brazil's economic situation has deteriorated significantly in recent years. The economy entered into recession in 2014 and the situation worsened in 2015, with real GDP likely to have declined by 3%, while inflation has remained close to 10%. This box outlines the main factors underlying the economic slump in Brazil.

Chart AGDP growth and major export commodity prices



Sources: World Bank, CBOT – CME Group and IBGE – Instituto Brasileiro de Geografia e Estatistica.

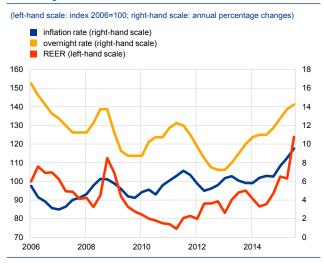
The downturn of the non-energy commodity price cycle revealed the underlying structural weaknesses in the Brazilian economy. In the first decade of the century, Brazil benefitted from strong demand - particularly from China - for some of its key export commodities (e.g. iron ore, soybeans and raw sugar). Supported by positive terms of trade effects, Brazil's annual GDP growth rate averaged 3.1% over this period. Since the fall in commodity prices in 2011 (see Chart A), these terms of trade effects have reversed. As a result, GDP growth has been consistently lower than predicted, while structural weaknesses underlying the economy have resurfaced. These weaknesses include a burdensome tax system, a sizeable informal sector, poor infrastructure, limited competition, the high costs of starting a business and high tariff rates.

Moreover, imbalances rose amid expansionary policies and strong capital inflows. Around the turn

of the decade, Brazil continued to receive strong capital inflows, which amounted annually to around 9% of GDP. While these inflows kept sovereign and corporate spreads low, they fuelled a strong appreciation of the Brazilian real that hurt price competitiveness. Many companies, including large oil companies such as state-owned Petrobras, took advantage of the loose financing conditions to borrow on international markets to finance long-term investments. At the same time, monetary and fiscal policy was expansionary. The official interest rate was cut to a historic low of 7.25% in October 2012 (see Chart B), while subsidised public sector lending, coupled with a rise in tax exemptions to revive business confidence, sharply increased fiscal deficits. Given the lack of structural reforms, however,

these measures led to only a moderate and temporary pick-up in GDP growth in 2012-13, while also contributing to rising inflation and a widening of the current account deficit (see Chart C).

Chart BInflation rate, overnight rate and real effective exchange rate

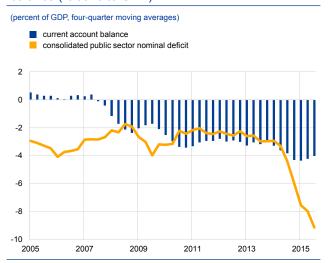


Sources: World Bank, CBOT – CME Group and IBGE – Instituto Brasileiro de Geografia e Estatistica.

Notes: The SELIC rate is the Brazilian Central Bank's overnight rate. REER stands for real effective exchange rate against 13 main trading partners; increasing values reflect a depreciation of the currency.

Chart C

Total public sector balance and current account balance (relative to GDP)



Source: IBGE - Instituto Brasileiro de Geografia e Estatistica

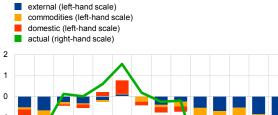
The shift in global financial market sentiment amid the US Federal Reserve's announcement that it would wind down asset purchases (the "taper tantrum") in May 2013 had a significant impact on the Brazilian economy. Global market sentiment suddenly turned against vulnerable emerging market economies with high external and fiscal imbalances, such as Brazil. Despite indications of an impending recession, monetary and fiscal policies were tightened in an attempt to restore macroeconomic credibility. In order to limit capital outflows and support the exchange rate, the Banco Central do Brasil raised its official interest rate to 14.25% in July 2015. On the fiscal front, limits on subsidised lending programs were cut and price subsidies were reduced. At the same time, however, the deterioration in global financial market conditions and the rise in interest rates entailed a surge in interest payments on public borrowing (to around 9% of GDP), which, in turn, raised gross public debt to historical highs (63% of GDP). As the country was unable to generate the fiscal surplus needed to stabilise debt with a sufficiently credible fiscal plan, two rating agencies downgraded Brazil from its investment grade rating for the first time in seven years. Notwithstanding the contraction of Brazilian GDP, inflation surged to over 10% in the last two months of 2015, owing to an adjustment of regulated prices and the sharp depreciation of the currency.

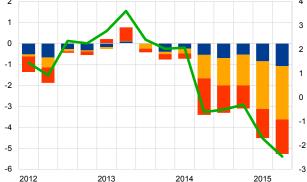
Model estimates suggest that the recent downturn in Brazil is, to a large extent, driven by a combination of domestic factors and lower commodity prices. According to the historical decomposition from a structural Bayesian VAR

Chart D

Historical shock decomposition of annual real GDP

(left-hand scale: median estimates - deviation from long-run mean; right-hand scale: annual percentage changes)





Sources: IBGE - Instituto Brasileiro de Geografia e Estatistica and ECB staff calculations.

Note: Long-run mean refers to the period from the first quarter of 2000 to the second

model¹ (see Chart D), the most significant factors in explaining the decline in Brazilian GDP since mid-2014 have been adverse commodity price developments and shocks to domestic factors, including domestic demand, monetary policy and financing costs. External shocks (defined as global uncertainty shocks and shocks to global financing conditions and foreign demand), on the other hand, have been less significant as a cause of the recent slowdown. In particular, the prices of iron ore and raw sugar - which account for 13% and 5% respectively of total exports – have been falling since 2011, while the price of oil - which accounts for 7% of total exports has fallen since 2014. As Brazil is still a net oil importer, the main channel through which lower oil prices affect GDP is likely to be investment, rather than purely the terms of trade, as is the case for net oil exporting countries. Total investment has declined by 6% on average since early 2014, partly due to developments at Petrobras, the public oil producer, which accounts for 10% of total Brazilian investment and almost 2% of GDP. The company had to cut investment by 33% in both 2014 and 2015 to adjust to lower oil prices

and also in response to a widespread corruption case, triggering confidence effects throughout the economy. The direct and indirect effects of the decline in investment by Petrobras have been estimated by Brazil's Ministry of Finance to have subtracted around 2 percentage points from GDP growth in 2015.

Looking ahead, the risks facing Brazil remain on the downside amid uncertainties on fiscal policy and political difficulties which might further reduce confidence.

The model used is a structural Bayesian vector autoregression using quarterly seasonally adjusted GDP data. The model is estimated from the first quarter of 2000 to the second quarter of 2015 and the variables included relate to external conditions, commodity prices, and domestic conditions. In particular, the VIX, three-month treasury bills, foreign demand (trade-weighted imports), the oil price, non-energy commodity prices, the EMBIG - Brazil, real GDP growth and the SELIC target rate are included. Structural shock identification is done by imposing sign restrictions on impulse response functions.