

Prospects for individual economies

Euro Area

Economic growth has remained moderate overall and uneven among member countries, with no further progress since April in reducing the Area's high unemployment. Consumer price inflation has remained well below the ECB's medium-term objective, with wage growth weakening in the past year. The ECB has kept its benchmark interest rates unchanged since March, and the parameters of its asset purchase programme unchanged since June. In September, it announced that, given the decline in the stock of government bonds eligible for purchase owing to recent falls in market yields, it would evaluate options for redesigning the programme in order to ensure its continued smooth implementation.

In the second quarter of 2016, GDP increased by 0.3 per cent, its smallest quarterly rise in two years, after relatively strong growth of 0.5 per cent in the first quarter. Growth slowed in the second quarter in each of the Area's three largest economies, to zero in France and Italy, but it was maintained in Spain at 0.8 per cent. Growth in the second quarter was driven by household consumption and net exports; fixed investment was flat after a strong first quarter, while inventory investment declined. Moderate economic expansion is projected to continue, supported by highly accommodative monetary conditions and modestly expansionary fiscal policy, and our forecast for GDP growth is 1.6 and 1.5 per cent in 2016 and 2017 respectively – a slight upward revision for both years.

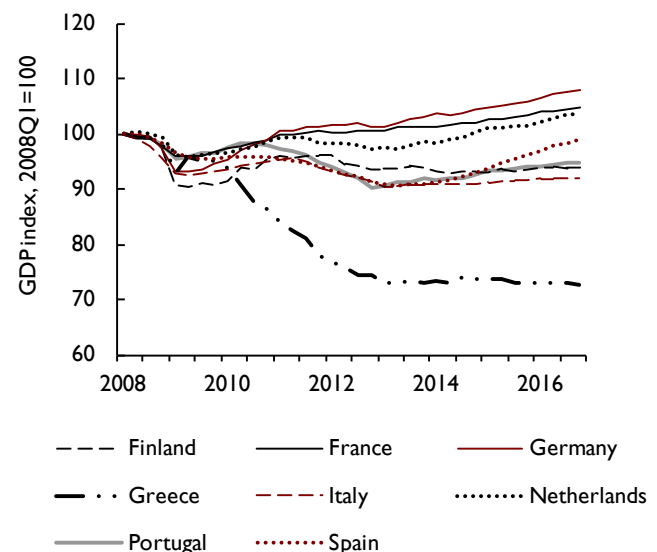
Employment has grown steadily over the past year at rates slightly below the growth rates of output, suggesting only modest gains in labour productivity. Thus in the year to the second quarter of 2016, employment rose by 1.4 per cent, compared to the 1.6 per cent expansion of GDP in the same period. Unemployment, having fallen to 10.1 per cent in April – its lowest level since July 2011 – remained unchanged at this level through August. The unemployment rate has thus remained 2.0 percentage points below the peak reached in April 2013, but 2.9 percentage points above its March 2008 trough: less than half of the rise in unemployment that occurred during the recession has therefore been reversed. Differences in unemployment among member countries remain extremely large, with rates in August ranging from 4.2 per cent in Germany to 10.5 per cent in France, 11.4 per cent in Italy, 19.5 per cent in Spain, and 23.5 per cent in Greece.

Slack in the labour market has been reflected in continued modest growth in wages. In the year to the second quarter of 2016 wages in the Area rose by 0.9 per cent, the smallest four-quarter increase in almost six years. Wage increases seem to have slowed markedly this year even in Germany, despite its low unemployment rate: in the year to the second quarter, German wages rose by 1.1 per cent, only slightly above the Area average.

Consumer price inflation has made limited progress in recent months towards the ECB's medium-term objective of "below, but close to, 2 per cent". In the year to September it was 0.4 per cent, up from a low of -0.2 per cent in April. However, the core rate in the year to September was 0.8 per cent, unchanged from August and within the range of 0.7–1.0 per cent that has held since March.

In September, the ECB marginally lowered its projections of GDP growth in 2017 and 2018, to 1.6 per cent in both years from its June projections of 1.7 per cent, and also its projection of consumer price inflation in 2017, to 0.2 from 0.3 per cent. It did not view this revision to its outlook as large enough to call for any change in its key interest rates or in the parameters of its asset purchase

Figure 4. GDP for selected Euro Area economies



Source: NiGEM database and NIESR forecast.

Box B. Constraints on the European Central Bank's QE programme

The European Central Bank (ECB), under its Asset Purchase Programme (APP), is currently purchasing assets from the private sector at a pace of €80 billion a month. These purchases are funded through the creation of central bank reserves and so involve an expansion of the ECB's balance sheet. A range of assets can be bought under the APP, but around 75 per cent are the sovereign bonds of Euro Area member states, bought under the Public Sector Purchases Programme (PSPP).¹ At the end of September 2016, purchases under the PSPP have totalled €1.06 trillion, and the ECB has communicated that purchases will continue "until the end of March 2017, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its aim of achieving inflation rates below, but close to, 2 per cent over the medium term" (Draghi, 2015).² As discussed in Box A of the November 2015 Review, the PSPP is subject to a number of constraints. First, purchases are to be spread among economies broadly in line with their weighting within the ECB's capital key. Second, there are both issuer and issue constraints which respectively mean that the PSPP can neither hold more than 33 per cent of any particular sovereign's bonds, nor more than 33 per cent of any particular bond issue, on a nominal basis.³ Finally, only bonds that yield a return in excess of the ECB's deposit facility rate (currently -0.4 per cent) are eligible to be purchased.

In February 2016 we highlighted that, were the PSPP to continue to expand at its current pace until March 2017, in a pattern consistent with the ECB's capital key, there was a risk that the issuer and issue limits would bind for a number of EMU sovereigns. This concern was echoed by the ECB itself, with members of the Governing Council discussing "possible future challenges regarding the Eurosystem's ability to source sufficient eligible bonds in the market under the APP".⁴ In September, the ECB announced that it would undertake an evaluation of the options available to ensure smooth implementation of the purchase programme in the environment of interest rates much lower than when the parameters were originally set. In this Box we re-visit the question of constraints on the PSPP in light of recent policy and bond market developments.

For a start, government bond yields have fallen in recent months, most notably in core EMU economies. Taking the German case as an example, around 50 per cent of outstanding nominal government bonds with a maturity of 2–30 years now yield less than -0.4 per cent and so are ineligible. This takes the maximum quantity of German Federal securities available to be purchased under the programme from just over €744 billion to €380 billion. Making the unrealistic assumption that the ECB does not yet hold any of these securities, the issue limit would reduce this total by one third to just €127 billion. To put this in context, the ECB has already bought twice this amount of German securities under the PSPP to date. Based on the current rate of purchases (approximately €17 billion of bunds each month), this would imply that the issue constraint on German bunds would bind by mid-2017. Remember, this is assuming that the ECB currently holds zero per cent of the issue of these eligible bonds. In reality it is likely that they already hold significant quantities of them.

Since last February, a number of changes to the PSPP have already been brought into effect to alleviate some of the constraints. The issue and issuer limits were increased for bonds issued by EU supranational organisations from 33 per cent to 50 per cent, although purchases of bonds from these organisations is restricted to 10 per cent of the total purchases made by any National Central Bank in any given month. What is more, the pool of securities that qualify under the programme was enlarged in December 2015 to include bonds issued by regional and local governments, while in both April and June 2016 the already expanded list of agencies whose bonds qualified was widened further. These measures alleviate the constraints somewhat, in the near term, by introducing more eligible securities to the programme, but they do not address the issue limit on Euro Area sovereign bonds.

As we have discussed, in the case of Germany, it is the issue limit which is most likely to bind. The fact that large quantities of the German bund market are ineligible due to their low yields makes it very unlikely that the issuer limit can be reached, and Germany has the largest weighting in the ECB's capital key. The only clear way to loosen the constraint for purchases in Germany is therefore to increase the range of securities eligible to be purchased. However, for economies such as Italy, the debt market is of sufficient size that neither the issue nor issuer limit are likely to bind in the near term. Rather, purchases of Italian securities are constrained by the capital key system and therefore the potential of the PSPP could be expanded through relaxing the need for purchases to adhere to the capital key and focus more on debt markets, where there is the depth of eligible securities to be purchased, either because rates are higher or the overall size of the market is larger.

Even if the PSPP were not to breach the self-imposed limits, markets themselves may provide a further constraint on a significant expansion of the policy. Recent market movements have been highly suggestive of an excess demand for safe assets and volatility and illiquidity in markets such as that for German government securities. It is conceivable that this is, at least in part, a result of the distortions created by the ECB becoming such a large agent in these markets. If this is the case, then further expansion of the PSPP in this way would only exacerbate the problem. Further monetary policy stimulus by the ECB would then almost certainly need to be through an acceleration of purchases of private sector assets, or else the Governing Council may face an unintended need to taper the asset purchase programme.⁵

Box B (continued)

NOTES

- 1 A further €245 billion of asset purchases are made up of covered bonds, asset backed securities and, from June 2016, corporate bonds.
- 2 The Governing Council have confirmed the open-ended element of asset purchases at each subsequent meeting.
- 3 These limits were widened in September 2015, from their original value of 25 per cent.
- 4 <https://www.ecb.europa.eu/press/accounts/2016/html/mgl61006.en.html>.
- 5 The introductory statement from the press conference after the ECB's October 2016 meeting suggests the bank is exploring the design of the APP (Draghi, 2016) .

REFERENCES

- Draghi, M. (2015), 'Introductory statement to the press conference', 3 December 2015, available at: <https://www.ecb.europa.eu/press/pressconf/2015/html/is151203.en.html>.
- (2016), 'Introductory statement to the press conference', 20 October 2016, available at: <https://www.ecb.europa.eu/press/pressconf/2016/html/is160908.en.html>.

This box was prepared by Simon Kirby and Jack Meaning.

programme. It thus held its key interest rates at the levels set last March, with the deposit rate at –0.4 per cent, and reiterated, as it subsequently also did in October, that “we expect them to remain at present or lower levels for an extended period of time, and well past the horizon of our net asset purchases”. With regard to its asset purchase programme, it confirmed that monthly purchases would continue at €80 billion a month, the level to which it was increased last April, “until March 2017, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation aim”.

The ECB also acknowledged, however, that the constraints that it had placed on its asset purchase programme (see Box B in this *Review*) were threatening to bind, in particular because of recent declines in government bond yields towards, and even below (for some sovereigns and at some maturities), the ECB's deposit rate of –0.4 per cent, which had been set as the floor for the yields on securities eligible for purchase. It thus announced that it would undertake an evaluation of the options available to ensure smooth implementation of the purchase programme in the environment of interest rates much lower than when the parameters were originally set. The conclusions of this evaluation are expected to be announced in December. Possible options are discussed in Box B.

In late July, the European Banking Authority (EBA) published the results of the 2016 EU-wide stress tests of 51 banks accounting for about 70 per cent of banking assets

in the EU. The tests indicated that the banks were generally in a healthier position than when the last exercise was conducted in 2014. Whereas in 2014 the banking sectors of several countries were found, in the most adverse hypothetical scenarios, to end up with negative average capital ratios, implying systemic insolvency, in the latest tests the lowest average capital ratio in the corresponding scenario was Ireland's 5.2 per cent. The tests did, however, point to the precarious solvency positions of a number of individual banks, notably in Italy. In recent months, market concerns have shifted to the profitability of some major European banks, especially the largest German bank, Deutsche, following the announcement by US authorities of the amount it required to settle claims that the bank had mis-sold mortgage-backed securities. Deutsche and several other major European banks have recently announced measures to cut operating costs and shore up capital positions.

Also in late July, the European Commission announced its recommendation (subsequently approved by EU ministers) that fines to be imposed on Portugal and Spain for their failure to take effective action to reduce their budget deficits be cancelled. This decision brought into question the reinforcement in recent years of budget rules under the Stability and Growth Pact.

Germany

In the first half of 2016, GDP growth overtook the Euro Area average, and our forecast for the year as a whole has been revised up marginally since August to 1.8 from

1.7 per cent. This is due to revisions to the quarterly growth path in 2015 and the first half of this year rather than a change to the outlook for the second half.

In the second quarter of this year, GDP growth slowed to 0.4 per cent after an exceptional 0.7 per cent spurt in the first quarter that seems attributable largely to favourable winter weather. Household consumption rose in the second quarter by less than we expected, by 0.2 per cent, and investment spending declined. Net exports were the main driver of growth, more than accounting for it. Given recent trade data, we expect the current account surplus to widen this year to about 9.5 per cent of GDP, and on current policies we expect it to remain unusually large, at about 8 per cent of GDP, in the medium term.

Supporting net exports has been Germany's favourable competitive position, helped by the general depreciation of the euro in 2014–15 and continuing modest wage and price inflation, not much higher than Euro Area averages. Consumer price inflation, on a 12-month basis, has picked up from around zero in the spring, reaching 0.5 per cent in September. We expect this modest acceleration to continue, rising above 1 per cent by the end of 2017, still well below the ECB's target. Wage growth also has remained subdued, weakening recently to 1.1 per cent in the year to the second quarter of 2016, only slightly above the Euro Area average of 0.9 per cent.

Wage increases have remained modest despite low unemployment, which fell to 4.2 per cent in July and August. We expect it to stay close to this level until the end of this year, before beginning to rise in 2017 as the large number of working age migrants who have entered Germany in 2015–16 find their way into the labour force. Expanded government programmes to help migrants prepare for work should help them integrate into the job market. This should limit the rise in unemployment, which is expected to stay below 5 per cent throughout our forecast period.

Financing costs for the government have continued to fall in recent months, with over 80 per cent of bunds now carrying a negative yield. The resulting increase in fiscal space, together with buoyant revenues, is expected to lead to moderate increases in both government consumption and investment. Growth in the former is expected to be stronger this year, as spending on the integration of refugees and related services continues, but next year and beyond investment increases more strongly in our forecast, rising by 5.5 per cent in 2017

and 2.4 per cent in 2018. Even with this additional spending, the budget is projected to remain in surplus, with the debt-to-GDP ratio falling from around 70 per cent in 2015 to 62 per cent in 2018, and below the 60 per cent limit set by the Maastricht Treaty in 2019–20.

France

After a spurt of 0.7 per cent in the first quarter of 2016, which reflected unusually favourable winter weather, GDP was flat in the second quarter, at a level 1.3 per cent higher than a year earlier. Household consumption, usually the dominant driver of growth, was also flat and private fixed investment fell, in both cases following strong increases in the first quarter. Net exports made a positive contribution, accounted for by a large drop in imports; exports fell slightly, with some large aeronautical contracts failing to offset weak underlying export performance.

In the second half of 2016 household consumption growth is expected to strengthen; it is projected to contribute 0.8 percentage point to GDP growth of 1.3 per cent in the year as a whole. We expect net exports to subtract 0.3 percentage point from the year's growth.

Consumer price inflation has picked up steadily from negative rates in the first quarter, partly reflecting the stabilisation of global oil prices. In September, prices were 0.5 per cent higher than a year earlier. Meanwhile wage growth has remained moderate, at about 1½ per cent a year: in the year to the second quarter, it was 1.4 per cent, above the Euro Area average of 0.9 per cent. The inflation outlook remains weak.

The decline in unemployment has reversed in recent months, with a rise from 9.9 per cent in May to 10.5 per cent in August. Youth unemployment in August stood at 24.9 per cent. Employment growth, 0.7 per cent in the year to the second quarter, is expected to slow in the second half of this year as the effects of government policies to create subsidised jobs in the non-market sector wane. Nevertheless, the decline of unemployment is projected to resume at a modest rate in the coming months, and we expect it to average 10.2 per cent this year and 9.9 per cent in 2017.

Despite real wage growth and the gradual reduction in unemployment, real income growth is forecast to be weak. We expect it to be exceeded by consumption growth in our forecast period, with the savings ratio falling from its recent level of about 14 per cent to about 12 per cent.

With the French presidential election due in the first half of 2017, the future path of fiscal policy is particularly uncertain. Based on our macroeconomic projections and currently announced spending and taxation plans, the government budget deficit is expected to fall below the 3 per cent threshold by next year, by a very fine margin.

Italy

Sustained economic growth remains elusive. After five quarters of positive growth and a promising start to 2016, with output growth of 0.3 per cent in the first quarter, the expansion stalled in the second quarter, with zero growth in GDP, which was only 0.8 per cent higher than a year earlier. Unemployment has remained elevated, with only a marginal improvement over the past year. Concerns regarding the banking sector and political uncertainties surrounding an upcoming (4 December) referendum on constitutional change, with the prime minister having put his position at stake depending on the result, are limiting prospects of an improvement in growth performance in the near future. Economic activity in the third quarter is also likely to have been adversely affected by the earthquake in central Italy in August. Leading indicators of economic activity from ISTAT suggest that weakness will persist. Our forecast for GDP growth is 0.7 per cent this year and next, with growth picking up to 1.3 per cent in 2018.

All the main components of domestic demand were weak in the second quarter of 2016. Private consumption rose only slightly, while government consumption and fixed investment each fell by 0.3 per cent. Net trade made a positive contribution to GDP growth, with exports and imports expanding by 1.9 and 1.5 per cent, respectively, but this was offset by a decline in stockbuilding.

Consumer price inflation recently turned marginally positive. After seven months of annual declines, consumer prices increased by 0.1 per cent in the twelve months to September 2016 following a decline of 0.1 per cent in the year to August. Annual core inflation also increased in September, to 0.5 per cent from 0.4 per cent in August.

Labour market conditions remain weak. Unemployment in August was 11.4 per cent, only marginally lower than a year earlier, following the decline from the 13.1 per cent peak reached in late 2014. This is despite several attempts by the Renzi administration to reduce unemployment, including the 2014 Jobs Act, which aimed to reduce the duality of the labour market, and tax deductions on hiring. Wage inflation has remained negative: in the

year to the second quarter wages fell by 0.5 per cent and broader labour costs by 1.1 per cent. This may serve to improve Italy's international cost competitiveness and net exports, but labour market weakness will continue to limit the growth of household spending.

Italy's banking sector remains a cause of concern. The ratio of non-performing loans to total loans remains elevated at around 12¼ per cent, although it has stabilised since the introduction of the Atlante fund last April. (This was augmented in August with the formation of Atlante 2, with banks and insurers pledging at least €1.6 billion in new money to the fund.) The problems of the banking sector will continue weighing on investment, despite the favourable credit conditions derived from the ECB's loose monetary stance, and it continues to pose risks to financial stability.

In late October, the government presented its budget plan for 2017, with a deficit of 2.3 per cent of GDP, above the 1.8 per cent target previously agreed with the European Commission, which had already granted the government additional budget flexibility for 2016. The new budget proposal implies a deterioration in the structural budget balance and a slower decline of the government debt-to-GDP ratio than envisaged in the Stability and Growth Pact. Among other measures, the budget includes a reduction of the corporate tax rate, additional support for early retirement, and €7.5bn of additional spending on reconstruction following the August earthquake and to deal with the migrant crisis. (The Commission's view on the budget plan is awaited.)

Spain

Spain has remained the fastest growing major economy in the Euro Area. Output expanded by 0.8 per cent, for the fourth consecutive quarter, in the second quarter of 2016, and preliminary estimates for the third quarter from the Bank of Spain indicate that growth slowed only marginally, to 0.7 per cent. We expect growth to moderate somewhat in 2017–18 as some of the elements that supported the recent strong performance, especially the decline in global oil prices and the depreciation of the euro in 2014–15, lose influence. We project GDP will grow by 3.1 per cent this year, decelerating to 2½ per cent in 2017 and 2018.

While domestic demand has been the main engine of economic expansion since early 2014, GDP growth in the second quarter of 2016 was accounted for mainly by the 0.6 percentage point contribution of net trade. The 0.2 percentage point contribution of domestic demand

contrasts with its average quarterly contribution of 0.8 percentage point since the beginning of 2014. The slower growth of domestic demand in the second quarter reflected a 1.6 per cent decline in public consumption as well as a moderate slowing of growth of household spending. The growth of fixed investment picked up. We expect this weakness of domestic demand in the second quarter to prove transient, and expect it to remain the main driver of growth in the period ahead.

After two years of predominantly negative readings, consumer price inflation, on a 12-month basis, picked up to 0.2 per cent in September, its highest rate since early 2014, from -0.1 per cent in August. The recent increase reflects the waning influence of the decline in global oil prices in 2014–15. Core inflation has been broadly flat since mid-2015, declining by 0.1 percentage point to 0.8 per cent in September. Meanwhile, wage increases, as measured by Eurostat, have remained subdued at 0.8 per cent, in the year to the second quarter of 2016, slightly below the Euro Area average of 0.9 per cent. Wage growth in Spain has been generally below the Euro Area average since 2010, reflecting relatively high unemployment.

Unemployment has, however, continued to decline, reaching 19.5 per cent in August. This is well below the early 2013 peak of 26.3 per cent, but still far higher than its pre-crisis level of about 8 per cent. Employment growth has remained quite strong, although it slowed

in the second quarter to 0.5 per cent from 0.7–0.8 per cent in the three preceding quarters. Were this slowdown in employment growth to persist, it would weigh on prospects for private consumption growth, especially given the absence of strong wage growth, and lead to a deterioration in the public finances.

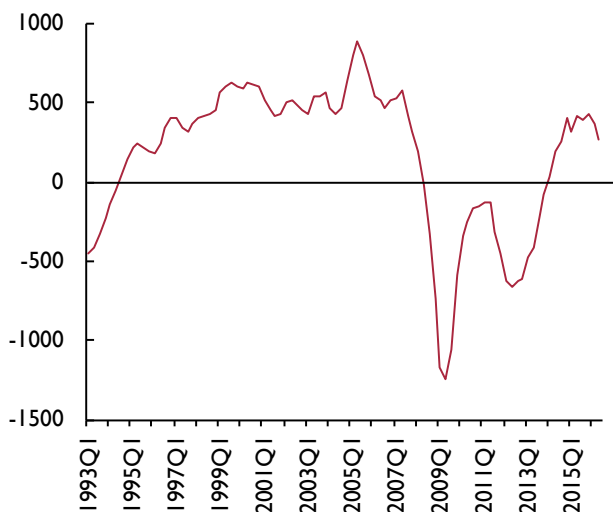
In late July, the European Commission announced that it had decided not to recommend that fines should be levied on Spain and Portugal for failing to take effective action to reduce their budget deficits. Spain is now required to reduce its deficit, 4.6 per cent of GDP in 2016, below 3 per cent by 2018, two years later than required earlier. In October, the economy minister confirmed that he expected the 4.6 per cent target would be met this year, but noted that with the caretaker government, in place since inconclusive elections last December, not having the authority to draft a new budget for 2017, the deficit next year would be likely to exceed the target of 3.1 per cent agreed with the Commission. The subsequent political agreement on the formation of a minority government should help to clarify the situation.

United States

In the third quarter of 2016, GDP growth appears to have strengthened somewhat, after three quarters of weak expansion. Our projection for GDP growth in 2016 as a whole has been revised down, to 1.4 per cent, from 1.9 per cent in the *August Review*. Unemployment has been broadly flat over the past year, in the 4.7–5.0 per cent range, which is the same as the FOMC's current range-estimate of its longer-term (full employment) level. In September it rose to 5.0 per cent from 4.9 per cent in August. Employment growth has been sufficient to allow some increase in labour force participation over the past year while unemployment has held steady. Most measures of inflation remain below the Fed's medium-term objective of 2 per cent, and data for both prices and wages show only mild, if any, acceleration. The Fed has maintained its target range for the federal funds rate at 0.25–0.50 per cent, the level to which it was raised last December. The median projection of the Federal Open Market Committee at its September meeting was that it would be appropriate to raise it by 25 basis points by the end of 2016, presumably in December.

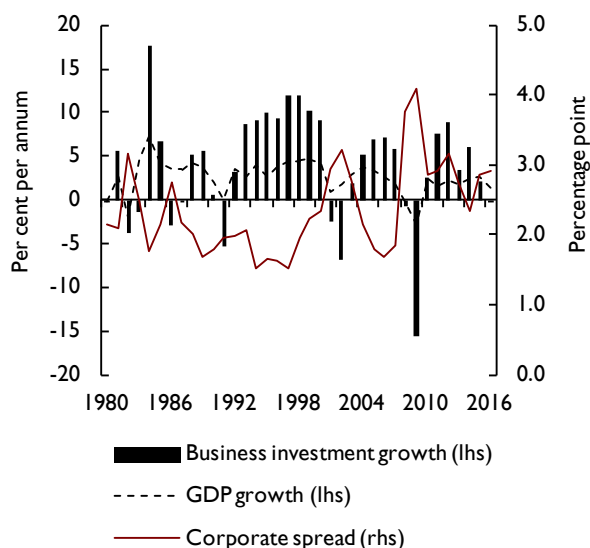
Economic growth slowed significantly late last year and in early 2016. After six quarters of growth at annualised rates of 2.0 per cent or more, GDP expanded at rates slightly below 1 per cent in the final quarter of 2015 and the first quarter of this year. In the second quarter, GDP

Figure 5. Spain: employment yearly growth (thousands)



Source: Eurostat.

Figure 6. US: GDP, business investment and corporate spreads



Source: NiGEM database and NIESR forecast.

rose by 1.4 per cent, still little more than half the growth rate of 2.6 per cent in 2015 as a whole. This slowdown is accounted for mainly by a downturn in investment, in both fixed assets and inventories. An unusually large drop in inventory accumulation in the second quarter – the fifth consecutive quarterly decline in stockbuilding – has been one factor pointing to a rebound in GDP growth in the third quarter. However, recent high-frequency data have been mixed, and several projections of GDP growth in the third quarter have been revised down to about 2.0 per cent.

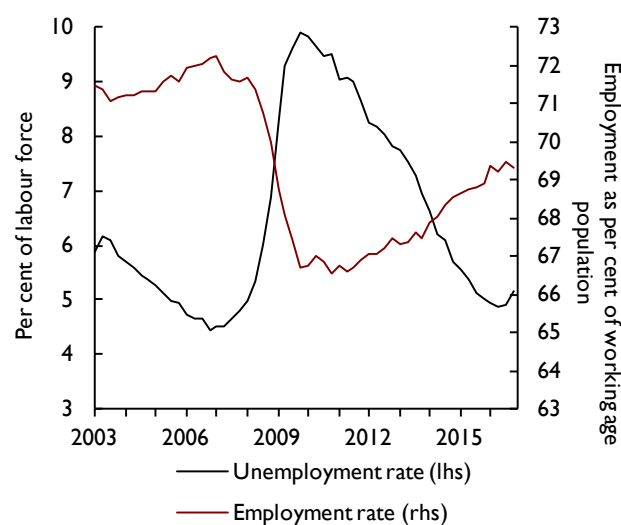
Apart from a slowing in the spring, employment growth has been better sustained since 2015 than output growth. The 12-month increase in non-farm payrolls has recently stabilised at 1.7 per cent. Thus the performance of labour productivity has been weak: output per hour outside agriculture declined in the second quarter for the third consecutive three-month period, by 0.6 per cent at an annual rate. There are no clear indications that employment growth this year has significantly increased the tightness of the labour market. Unemployment rose from 4.9 per cent in August to 5.0 per cent in September, the top of the 4.7–5.0 per cent range in which it has fluctuated over the past year. The labour force participation rate has been broadly stable this year, in the 62.7–63.0 range; it was 62.9 per cent in September, up from the 38-year low of 62.4 per cent reached in September 2015. There remains little sign of a significant acceleration in wages: over the past year, the 12-month increase in hourly earnings has fluctuated between 2.4

and 2.6 per cent; it was 2.6 per cent in September. The more comprehensive employment cost index, which takes into account benefits as well as pay, rose by 2.3 per cent in the year to June.

Consumer price inflation, in terms of the Fed's preferred measure – based on the price index for personal consumption expenditures (PCE) – has remained below its 2 per cent a year objective, with a mild recent upward trend. In August, 12-month PCE inflation was 1.0 per cent, toward the upper end of the 0.8–1.1 per cent range seen in monthly data this year, and virtually unchanged since January. The corresponding core measure in August was 1.7 per cent, the highest since February. The narrower consumer price index has recently shown somewhat higher inflation, reflecting larger shares in this index of rising housing and health costs: the all-items index rose by 1.5 per cent in the year to September – the highest reading in two years – and the core index by 2.2 per cent, unchanged since the beginning of the year. Neither market nor survey measures of inflation expectations have recently shown much increase: the 5-year breakeven inflation rate in late October was about 1.6 per cent, up from the trough below 1 per cent reached early this year before the upturn in oil prices, but within its range of fluctuation over the past two years.

At its September meeting, the Fed kept its target range for the federal funds rate at 0.25–0.50 per cent, the level to which it was raised last December. The Fed lowered slightly from June its projection of GDP growth in the

Figure 7. US: unemployment and employment rates



Source: NiGEM database and NIESR forecast.

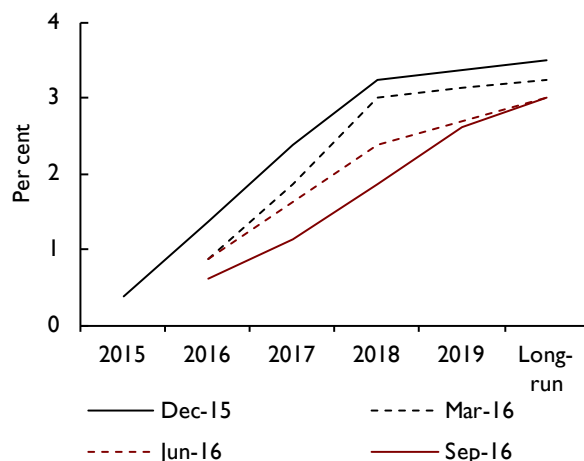
Box C. The outlook for US monetary policy

In December 2015, the Federal Open Market Committee (FOMC) of the Federal Reserve raised the target range for the federal funds by 25 basis points from the near-zero level that had prevailed for the previous seven years. Projections by FOMC members at that time suggested that interest rates would rise several times over the course of 2016. However, at meetings throughout 2016 the FOMC have lowered their interest rate projections as the performance and outlook of the US economy have weakened. Market expectations for the future path of interest rates have flattened even more.

Figure C1 illustrates the expected paths for the Fed’s key policy rate based on the median of the FOMC participants’ last four ‘dot plots’ from the FOMC meetings since last December. In September 2016, the median projections for the Fed funds rate, for the end of 2017 and 2018, were 1.3 and 1.4 percentage points lower compared to expectations in December last year and 0.5 percentage point lower compared to the expectations last June.

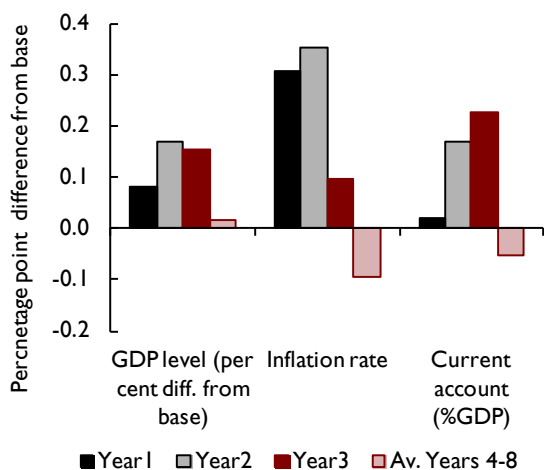
To assess the impact on the US economy from a shift in a yield curve, the interest rate differentials between the September and June 2016 projections may be considered as an interest rate shock, which we introduce into our global econometric model, NiGEM. Thus, we reduce the interest rate over the 2017–20 period by 25, 50, 50 and 6 basis points, respectively, relative to the baseline, but assume they return to baseline values once the shock expires. The reduction in short-term interest rates acts as a stimulus for the economy. It leads to a depreciation of the currency, supporting export growth and substitution of imports by domestically produced goods and services, leading to an improvement in the current account position. It also lowers the yields paid on government bonds. Declines in bond yields also stimulate business investment through the user cost of capital, via a reduction in the benchmark risk-free rate (the long-run government bond yield). While the dollar’s depreciation leads to an increase in the rate of consumer price inflation, the volume of consumer spending actually rises, relative to baseline, via increases in household wealth.

Figure C1. The evolution of FOMC interest rate expectations



Source: FOMC minutes (various editions).
Note: median of dot plots.

Figure C2. Impact from reduction in expected interest rates in the US



Source: NiGEM simulations
Note: Inflation rate and current account balance (share of GDP) are reported as percentage point difference from base; GDP levels are given as per cent difference from base.

Based on our illustrative analysis, figure C2 shows that the reduction of up to 50 basis points in the expected path of short-term interest rates boosts US output (relative to baseline), with an increase in the level of GDP of about 0.2 per cent by the second year of the shock. The positive impact on the economy disappears after three years as price adjustments take place. The opening of a positive output gap (or narrowing of a negative one) generates increased inflationary pressure, alongside the effect of the dollar depreciation, leading to a modest spell with the rate of inflation above baseline.

The FOMC’s statement after their September 2016 meeting reiterates that their policy decision will be data driven and “a wide range of information, including measures of labour market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments” will be taken into account. Figure C2 provides a guide to the possible impact that delaying further interest rate rises could have on the US economy, were the outlook to deteriorate further. However, the continued proximity of the federal funds rate to the zero lower bound highlights the limited ability of conventional monetary policy to respond to any future negative shock.

This box was prepared by Simon Kirby and Iana Liadze.

year to the fourth quarter of 2016, to 1.8 from 2.0 per cent, and also lowered marginally its projection of PCE inflation in the same period, to 1.3 from 1.4 per cent. Its growth and inflation projections for 2017–18 were unchanged, with PCE inflation projected to reach 2.0 per cent in 2018. The Fed viewed the case for a further increase in rates as having strengthened, but “decided for the time being to wait for further evidence of continued progress toward its objectives”. Chair Yellen stated that the Fed’s cautious approach to raising rates was particularly appropriate “given that short rates are still near zero, which means that we can more effectively respond to surprisingly strong inflationary pressures in the future by raising rates than to a weakening labour market and falling prices by cutting rates”.

Most participants in the Fed’s September meeting considered that one further increase, of 25 basis points, would be appropriate by the end of 2016. The Fed’s median projections show a further two increases in 2017 and three in 2018, which would take the federal funds rate to 1.9 per cent at the end of 2018, compared with the 3.3 per cent projected by the Fed last December.

Canada

GDP fell by 0.4 per cent in the second quarter of 2016, the first contraction in four quarters and the largest since 2009. The decline in activity was more than accounted for by a drop in exports largely related to the disruption of oil production resulting from May’s wildfires in Alberta, which caused the evacuation of Fort McMurray, Canada’s oil sands hub. Non-commodity exports also suffered a setback in the quarter, owing partly to weaker investment demand in the US. Domestic demand remained generally robust but could not compensate for the fall in total exports of 4.5 per cent in the quarter. According to Statistics Canada, the economy grew by 0.1 per cent in the quarter if the decline in crude petroleum output is excluded. Business fixed investment contracted for the sixth consecutive quarter, though only marginally: the impact on capital expenditure of the decline in global energy prices in 2014–15 appears to be waning. Government consumption increased by 1.0 per cent, partly reflecting spending related to the wildfires, while household consumption remained buoyant.

The rebuilding and repair of infrastructure in Fort McMurray, together with a broader stabilisation of activity in the energy sector stemming from the partial recovery of oil prices this year, are likely to have boosted GDP in the third quarter. The production-based estimate of GDP in July shows growth of 0.5 per cent from June,

with output in the mining sector up by 3.9 per cent. We expect household consumption to remain strong and government consumption and investment to continue to support growth over the next few years, partly reflecting the shift in fiscal policy announced in the budget last March. Our forecast is for GDP growth of 1.2 per cent this year, and 2.0 per cent in 2017.

Unemployment has stabilised in recent months at about 7 per cent, with the increase that occurred in 2015 and early 2016 having been partially reversed. Unemployment thus remains higher than its pre-recession 2008 trough of below 6 per cent. Recent data indicate some strengthening of job growth and an increase in labour force participation, with more people actively seeking work. However, slack in the labour market seems to remain greater than the unemployment rate suggests, as shown by modest wage growth as well the continuing high number of discouraged workers. We expect unemployment to average 7.0 per cent this year and 6.9 per cent next year.

Partly reflecting slack in the economy, inflation has declined since the beginning of the year. Consumer price inflation, on a 12-month basis, fell to 1.1 per cent in August, the lowest since October 2015 and close to the lower bound of the Bank of Canada’s 1–3 per cent target range. Core inflation was 1.8 per cent in August, down from 2.1 per cent in July and the lowest in more than two years. On 19 October, the Bank of Canada announced, as widely expected, that it would keep its benchmark overnight rate at 0.5 per cent. We are forecasting inflation to pick up slightly in the second half of 2016, averaging 1.3 per cent for the year, before rising to 2.1 per cent next year.

Japan

GDP growth weakened in the second quarter of 2016 to 0.2 per cent from 0.5 per cent in the first quarter. Growth in the second quarter was driven by domestic demand. Household consumption was subdued, with growth of only 0.2 per cent, and non-residential investment fell marginally, but housing investment and public investment grew strongly, by 5.0 and 2.6 per cent, respectively. Unlike in the first quarter, net exports were a drag on growth, with exports contracting by 1.5 per cent and imports flat. Given the appreciation of the yen since mid-2015, by about 20 per cent in trade-weighted terms, we expect the external sector to continue subtracting from growth in the second half of the year, with domestic demand continuing to drive a modest overall expansion. We forecast average GDP growth of 0.5 and 0.4 per cent this year and next, respectively.

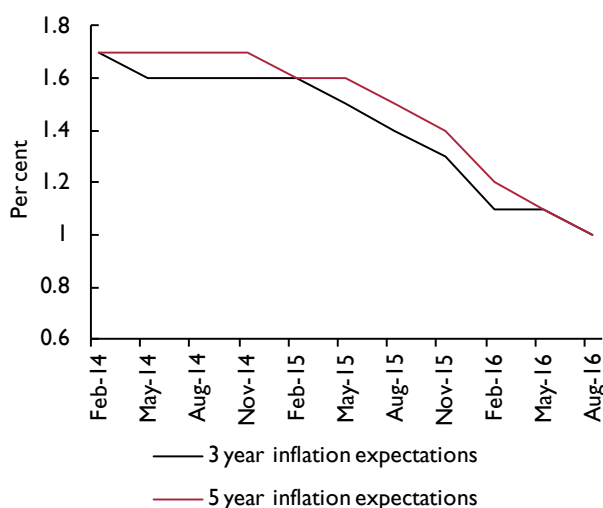
Inflation remains far below the Bank of Japan's target of 2 per cent a year. The 12-month change in the all-items consumer price index has trended downwards since May 2014, turning negative in March this year. In the year to August 2016, this measure of inflation was -0.5 per cent. This decline in inflation can be attributed largely to the fall in global oil prices and the yen's appreciation. Excluding energy and food, the 'core core' inflation rate was 0.2 in the year to August. There have recently been a number of indications of falling inflation expectations, including in the Bank of Japan's Tankan survey for September, which showed that corporations had slightly lowered their inflation forecasts since June at the 1-, 3-, and 5-year horizons to 0.6, 1.0 and 1.0 per cent, respectively (see also figure 8). We forecast that on average prices will decline this year by around 0.6 per cent, rise only marginally, by 0.1 per cent, in 2017, and by only slightly more, 0.3 per cent, in 2018 and the medium term.

Wage growth has remained weak – in the year to August 2016 it was marginally negative – despite the tight labour market. Unemployment reached a 21-year low, of 3.0 per cent, in July, and was only slightly higher in August. The ratio of job offers to applicants in August was the highest since 1991. Some have argued (including IMF staff in the *World Economic Outlook*, October 2016) that the lack of response of wages to labour market conditions may be due to the duality of the labour market. They postulate that labour unions have prioritised lifetime employment

security over wage increases and that this has led to employers having greater power over the wage setting process. This may suggest that the recent decline in inflation expectations could lead to even slower wage growth in the future, indicating a downside risk to our forecasts for inflation and economic activity.

At its September meeting the Bank of Japan left its interest rate on reserves unchanged at -0.1 per cent, the level to which it was lowered last January. However, it announced two changes to its policy framework. First, Governor Kuroda noted that the Bank's move to negative interest rates, together with its asset purchase programme, 'quantitative and qualitative easing' (QQE), by flattening the yield curve, posed risks to bank profitability and the viability of pension funds and thus to financial stability and the economy. The Bank therefore announced that the QQE framework would be supplemented by "yield curve control": the Bank would regulate its asset purchases to target the 10-year government bond yield, initially at zero, so that it would control long-term as well as short-term interest rates. Second, the Bank sought to raise inflation expectations through an adjustment of its forward guidance, by making an "inflation-overshooting commitment": it will continue expanding the monetary base until inflation "exceeds the price stability target of 2 per cent and stays above target in a stable manner". Whether this commitment is successful in raising inflation expectations will depend on how credible it is perceived to be by firms and households.

Figure 8. Japan: inflation expectations



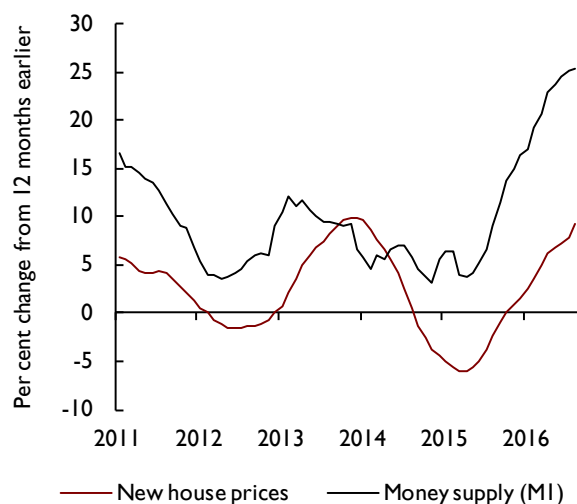
Source: Datastream.

In October, the parliament ratified an extra spending package of ¥4.5 trillion for the current fiscal year (equivalent to 0.9 per cent of GDP), from the second supplementary budget published in August. This should help to support domestic demand growth through the first quarter of 2017 and provide inflationary stimulus too, thus contributing to the nominal GDP growth that Japan needs to reduce its large public debt burden.

China

GDP growth in 2016 has remained closely in line with the government's target range for the year of 6.5-7.0 per cent, helped by stimulus measures introduced earlier in the year and in 2015. In the year to the third quarter of this year, output expanded by 6.7 per cent, equal to the annual growth registered in each of the previous two quarters. However, GDP growth figures continue to mask fragilities in the economy.

Figure 9. China: house price inflation and change in money supply

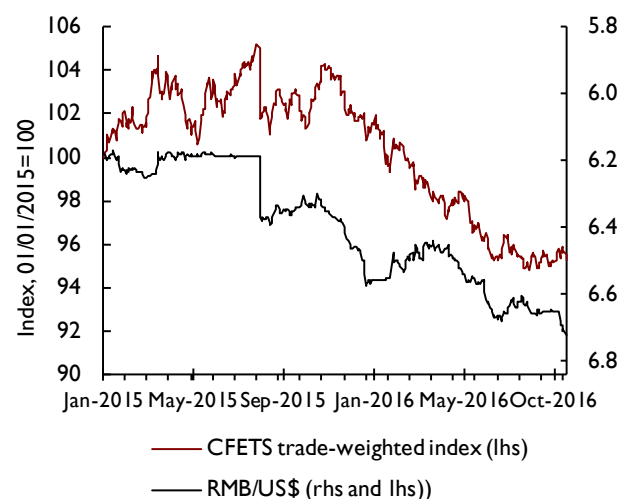


Source: Datastream.

One result of the stimulus measures of 2015–16 has been a fresh boom in housing prices, mainly in the major cities. Property prices have been on an upward trend since late 2015, but the rise has steepened significantly in recent months. The government's survey of 70 large and medium-sized cities shows that annual house price inflation in August was 9.2 and 8.1 per cent, respectively, for new and used houses; for new houses this was marginally below the peak rate of increase reached in late 2013, but for used houses the increase was larger, by about 2 percentage points. Price increases in the major cities have been significantly stronger, exceeding 20 per cent a year in some cases. Reductions in down payments, mortgage rates and stamp duty, as well as the suspension of the development of new land have helped to boost prices, but the key driver has probably been increased credit expansion. Figure 9 plots 12-month price inflation for new houses together with the 3-month moving average of 12-month changes in M1, which we use as a proxy for credit expansion. The correlation between the two series over the period since 2011 is just above 50 per cent, but it rises to 95 per cent in the last two years.

For the second time in two years, the government has thus faced the challenge of controlling an overheating housing market without hurting economic growth. So far, the measures taken have been at the local government level: in September and October, more than 20 urban governments imposed higher down payments

Figure 10. China: trade-weighted and US dollar exchange rate



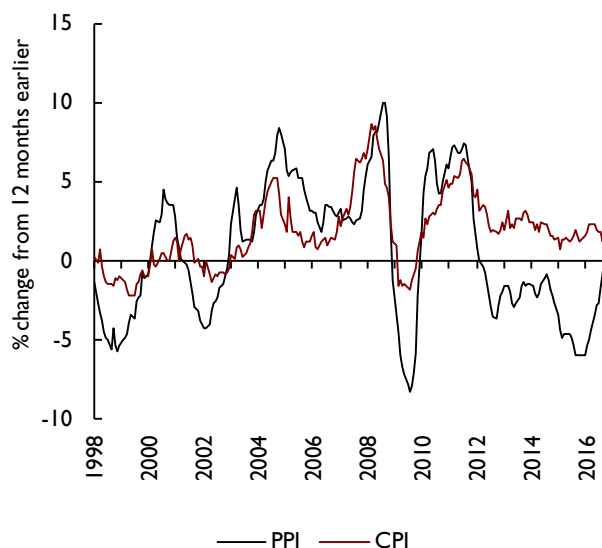
Source: Datastream and NIESR calculations

and other restrictions on real estate purchases. In the past, house price inflation has been reduced by a tightening of monetary policy, but given the economy's financial fragilities, including the high leverage of the corporate and household sectors, as well as subdued inflation in goods markets, this seems unlikely in the near future, so that the authorities are likely to continue relying on macro-prudential measures. There are preliminary indications in price data for September and October that the measures taken have begun to have a moderating effect.

One other by-product of China's increasing reliance on credit growth to support its economic engine is high and rising corporate indebtedness, recently estimated at almost 170 per cent of GDP. Concerns about this have led the government recently to provide greater encouragement for mergers and acquisitions, bankruptcies, debt-to-equity swaps and debt securitisation.

Consumer price inflation has remained somewhat below the PBoC's 3 per cent target, while a long period of declining producer prices has recently ended. In September 2016 the 12-month increase in consumer prices was 1.9 per cent, close to the middle of its range of fluctuation over the past year. Producer price inflation, on a 12-month basis, after being in negative territory for 4½ years, turned positive in September, at 0.3 per cent. Looking ahead, the substantial spare capacity in much of the economy is expected to keep downward

Figure 11. China: inflation



Source: Datastream.

pressure on domestic prices, while the recent slow but steady depreciation of the Renminbi (a reflection of net capital outflows, partly offset by intervention) as well as the recent pickup in oil and other global commodity prices will exert an opposite influence.

India

India became the fastest growing major economy in 2015 and it is likely to remain so for the foreseeable future, despite a recent moderation of growth. The economy expanded by 7.1 per cent in the year to the second quarter of 2016, compared with 7.9 per cent growth in the year to the first quarter. This slowing is accounted for by a weakening of the growth of domestic demand, to 5.0 per cent in the more recent four-quarter period from 7.9 per cent, with slower growth of private consumption and a larger decline in private investment offsetting an acceleration of government spending. The external sector contributed positively to GDP growth in the year to the second quarter, with exports growing by 3.0 per cent and imports contracting by 5.8 per cent. Although industrial production fell in July and August, we expect GDP growth to remain robust, supported by both domestic demand and net exports. Private and government consumption are expected to be the main drivers, partly reflecting, in the short term, the favourable 2016 monsoon season and significant increases in civil service pay and pensions announced in June. We forecast average GDP growth of 7.4 in 2016 and 6.7 per cent in 2017.

Annual consumer price inflation, which picked up earlier this year on account of rising food prices, has fallen back since July towards the middle of the Reserve Bank's target range of 4, plus or minus 2, per cent. Thus in September, the 12-month inflation rate was 4.3 per cent, down from 6.1 per cent in July. The decline, like the earlier rise, is attributable mainly to food prices, which have softened recently as supply pressures have eased because of adequate monsoon rains. In early October, the new Monetary Policy Committee of the Reserve Bank, in its first decision, cut its benchmark interest rate by 25 basis points to 6.25 per cent, noting that the recent decline in inflation had "opened up space for policy action". This is the second rate cut by the RBI this year. The MPC warned of cost-push pressure in the coming months as a result of the increase in civil service pay and pensions, and foresaw inflation moving to around 5 per cent by March 2017. We forecast that inflation will average 6.0 per cent this year, 5.1 per cent in 2017 and 4.2 per cent in 2018.

In early August, the upper house of parliament approved an amendment to the Constitution to permit replacing the patchwork of national, state and local levies with a single general sales tax (GST) based on value-added. The legislative components of the reform are to be presented to parliament between mid-November and mid-December. Should the government be successful in gaining the early assent of parliament for the Integrated GST and Central GST bills, it may be able to achieve its objective of introducing the tax on 1 April 2017. While the rate for the new GST has yet to be decided, it is likely to be generally lower than the current effective indirect tax rate, while improved compliance is expected to boost revenues. Partly by reducing the burden of cascading taxes on locally made products, the reform is expected to bring significant efficiency gains and benefits to growth, estimated by some as an addition of about 1 percentage point or more to annual GDP growth in the medium term. Such gains are an upside risk to our forecast.

Brazil

Brazil remains in recession, with output about 8 per cent lower than at the beginning of the downturn in 2014. But the decline in activity has moderated significantly over the past year, inflation has eased, and in recent months there has been a marked improvement in business and market confidence, related partly to political developments. We expect output to decline

by 3.2 per cent in 2016 as a whole, but to stabilise in 2017, with modest growth of 0.4 per cent for the year, strengthening to 1.9 per cent in 2018.

In the second quarter of 2016, output declined by 0.6 per cent, a somewhat weaker outturn than we estimated for the *August Review*. However, the data for the quarter indicate slight improvements in some areas. The contraction of private consumption was more muted than in the previous five quarters and the prolonged fall in private investment was reversed, with the first increase, albeit of only 0.4 per cent, since the third quarter of 2013. However, net trade made a negative contribution to growth, with exports virtually flat, while imports, which have declined by almost a quarter in volume terms since the third quarter of 2014, increased by 4.5 per cent.

Continuing to weigh down on private consumption has been high and rising unemployment, which increased to 11.8 per cent in August 2016, up from 9.0 per cent at the end of 2015. In just a year and a half, the unemployment rate has increased by almost 6 percentage points.

The new, interim government appointed in May following the suspension of President Rousseff was confirmed in office in August following Rousseff's impeachment. Investors appear to have welcomed the change of government. The real has appreciated against the US dollar by about 30 per cent from its trough last January and the equity market has gained as much as 70 per cent in domestic currency terms in the same period. Indicators of consumer confidence have also improved.

One of the new government's main tasks is to tackle the precarious fiscal situation. The public sector deficit reached 9.6 per cent of GDP in the twelve months to August 2016, with the primary deficit at 2.8 per cent. The new government has announced a primary deficit target of 2 per cent for 2017 and several measures to contain public expenditure, including a constitutional amendment to cap budget spending growth to the inflation rate for 20 years and an overhaul of the pension system. While it appears that the government will be able to pass the cap on budget spending growth through parliament, there is still considerable uncertainty about whether it will succeed in passing the legislation (including a constitutional amendment) necessary to modify the pension system.

Inflation declined to a 16-month low of 8.5 per cent in the twelve months to September 2016, down from a peak of 10.7 per cent last January. At its October

meeting the Central Bank lowered its benchmark Selic rate by 25 basis points from the 14.25 per cent peak reached in July 2015. The prospect of further declines in inflation towards the Central Bank's target range for 2017, of 3–6 per cent, may allow the Central Bank to reduce the rate further in the near future, thus helping to sustain an incipient recovery in investment and reduce upward pressure on the Real.

Russia

The recession that began in late 2014 appears to be easing, and further declines in inflation towards target have allowed the central bank to take another step in lowering interest rates. Nevertheless, growth prospects are poor, given the economy's underlying structural problems. We are forecasting a contraction in GDP of 0.6 per cent in 2016 before growth returns in 2017 at a rate of 0.8 per cent.

The economy shrank by 0.6 per cent in the year to the second quarter of 2016, the smallest of six successive four-quarter declines in GDP. Further evidence of an easing of recession has been provided by a slowing of the pace of decline in wholesale and retail trade and a return to positive growth in manufacturing production in recent months. Also, unemployment has declined from its 6.0 per cent peak reached last March to 5.2 per cent in August.

The partial recovery of global oil prices since last January has been a major factor boosting the economy's performance this year. It has softened the decline in exports and reversed pressure on the exchange value of the rouble – which has appreciated by as much as 30 per cent in terms of the US dollar since late January – thus helping to reduce inflation and supporting households' real incomes and spending.

In September, the EU's economic sanctions targeting Russian imports and access to credit markets were extended by a further six months, to 31 January 2017. Also in September, the Russian government overcame sanctions-related hurdles to raise \$1.25 billion in 10-year Eurobonds, with the entire placement allocated to international investors. This followed the failure of a similar attempt last May, which was Russia's first bid for international funding since sanctions were imposed in 2014.

Consumer price inflation, on a 12-month basis, fell to a 2½-year low of 6.4 per cent in September 2016 – a steep drop from the peak close to 17 per cent reached in March

2015. Nevertheless, it remains above the central bank's 4 per cent target for 2017. In September, the central bank reduced its benchmark interest rate by 50 basis points to 10.0 per cent, and announced that it would remain at this level for the remainder of the year. This was the second reduction of 50 basis points in 2016, following an earlier cut in June. The central bank cited declining inflation expectations and an unstable and patchy revival in economic activity as factors leading to its decision. We expect inflation to continue to ease in the remainder of 2016, averaging 7 per cent for the year, before falling to around 4½ per cent in 2017.

NOTES

- 1 The Vix index, which tracks the implied volatility of the S&P 500 stock market price index in the US, averaged 12.4 in August, the lowest monthly average in the 16 years for which it has been calculated. The trading range for the Dow-Jones Industrials Index between late July and early September, in percentage terms, was the narrowest in a century. Deutsche Bank's FX volatility index, which tracks implied volatility across a range of global currencies, fell to a two-year low in early September.
- 2 Olivier Blanchard, "The State of Advanced Economies and Related Policy Debates: A Fall 2016 Assessment", September 2016: <https://piiie.com/publications/policy-briefs/state-advanced-economies-and-related-policy-debates-fall-2016-assessment>.
- 3 IMF, *Global Financial Stability Report*, October 2016, Fig. 1.7.
- 4 Also indicative of the low cost of government borrowing, in early October the Italian government sold €5bn of 50-year bonds with an annual yield of 2.8 per cent. This first-ever sale of 50-year

bonds by Italy was oversubscribed almost four times. Belgium, France and Spain have also recently issued 50-year bonds, for the first time also in the cases of Belgium and Spain.

- 5 Recent research at the Bank of England has found that "Long-term real interest rates across the world have fallen by about 450 basis points over the past 30 years." (See Rachel and Smith, 2015.)
- 6 Larry Summers, Remarks at IMF Economic Forum: Policy Response to Crises, 8 November, 2013: <http://www.imf.org/external/np/res/seminars/2013/arc/index.htm>.
- 7 Rachel and Smith (2015) attempt to quantify the relative importance of such factors, finding that shifts in saving and investment preferences have been more important than slowing global growth.
- 8 The risk of a flight to cash could, in principle, be removed by the elimination of cash, which would also impede much tax avoidance and crime. This has been advocated – although he would allow small-denomination notes and coin to remain – by Professor Rogoff, who argues that this could solve the problem of the zero lower bound which, he suggests, has "essentially crippled monetary policy across the advanced world for much of the past eight years since the financial crash of 2008". (See Rogoff, 2016, p.4).
- 9 See <http://larrysummers.com/2016/08/18/6937/>.
- 10 See <https://www.federalreserve.gov/newsevents/speech/yellen20160826a.htm>.

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