THE WORLD ECONOMY

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World Overview

Recent developments and the baseline forecast

Our revised baseline forecast

The strengthening and broadening of the global economic recovery projected in the August 2017 *Review* are on track, and the revisions to our August forecast for the world as a whole are minor. Our central expectation for this year, 2018–19, and the medium term remains world GDP growth of about 3½ per cent a year – a moderate acceleration, into next year, from last year's 3.2 per cent growth, which was the weakest since the 2009 recession. But no further improvement is in prospect: with growth in some of the largest advanced economies increasingly subject to capacity constraints and the slowdown in China expected to resume, global

Table 1. Forecast summary *Percentage change*

	Real GDP(a)												World trade(b)
	World	OECD	China	EU–28	Euro Area	USA	Japan	Germany	France	Italy	UK	Canada	
2014	3.6	2.1	7.3	1.8	1.4	2.6	0.2	1.9	1.0	0.2	3.1	2.6	3.7
2015	3.4	2.5	6.9	2.1	1.9	2.9	1.1	1.5	1.0	0.9	2.3	0.9	2.7
2016	3.2	1.7	6.7	1.9	1.8	1.5	1.0	1.9	1.1	1.1	1.8	1.5	2.4
2017	*3.5*	*2.2*	*6.8*	*2.2*	*2.1*	*2.1*	*1.5*	*2.1*	*1.7*	*1.4*	*1.6*	*3.1*	*4.1*
2018	*3.6*	*2.1*	*6.5*	*2.0*	*1.9*	*2.3*	*1.0*	*1.8*	*1.7*	*1.2*	*1.7*	*2.2*	*5.2*
2019	*3.5*	*2.0*	*6.1*	*1.8*	*1.7*	*2.3*	*0.9*	*1.7*	*1.6*	*1.2*	*1.7*	*2.1*	*4.4*
2008–13	3.3	0.8	9.1	0.0	–0.3	0.8	0.2	0.7	0.3	–1.5	0.3	1.4	3.3
2020–24	*3.4*	*1.9*	*5.5*	*1.4*	*1.4*	*2.3*	*0.8*	*1.3*	*1.4*	*1.1*	*1.6*	*1.5*	*3.8*

	Private consumption deflator								Interest rates(c)			Oil ($ per barrel) (d)
	OECD	Euro Area	USA	Japan	Germany	France	Italy	UK	Canada	USA	Japan	Euro Area	
2014	1.6	0.5	1.5	2.1	0.9	0.1	0.3	1.9	1.9	0.3	0.1	0.2	97.8
2015	0.8	0.2	0.3	0.4	0.6	0.3	0.0	0.6	1.1	0.3	0.1	0.1	51.8
2016	1.1	0.3	1.2	–0.4	0.6	–0.1	–0.1	1.4	1.0	0.5	–0.1	0.0	42.6
2017	*2.1*	*1.5*	*1.6*	*0.0*	*1.7*	*1.0*	*1.4*	*2.5*	*1.2*	*1.1*	*–0.1*	*0.0*	*52.3*
2018	*2.3*	*1.5*	*2.2*	*0.6*	*1.5*	*1.2*	*1.5*	*2.7*	*1.6*	*1.8*	*–0.1*	*0.0*	*53.7*
2019	*2.3*	*1.6*	*2.3*	*0.9*	*1.5*	*1.5*	*2.0*	*2.3*	*1.6*	*2.4*	*–0.1*	*0.1*	*56.4*
2008–13	1.8	1.5	1.7	–0.7	1.3	1.1	1.9	2.5	1.3	0.6	0.2	1.5	93.7
2020–24	*2.3*	*1.7*	*2.3*	*1.4*	*1.5*	*1.6*	*1.8*	*2.2*	*1.9*	*3.3*	*0.3*	*1.5*	*59.9*

Notes: Forecast produced using the NiGEM model. (a) GDP growth at market prices. Regional aggregates are based on PPP shares, 2011 reference year. (b) Trade in goods and services. (c) Central bank intervention rate, period average. (d) Average of Dubai and Brent spot prices.

*All questions and comments related to the forecast and its underlying assumptions should be addressed to Iana Liadze (i.liadze@niesr.ac.uk). We would like to thank Garry Young and Jagjit Chadha for helpful comments and Yanitsa Kazalova for compiling the database underlying the forecast. The forecast was completed on 25 October, 2017. Exchange rate, interest rates and equity price assumptions are based on information available to 11 October 2017. Unless otherwise specified, the source of all data reported in tables and figures is the NiGEM database and NIESR forecast baseline.

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growth this year and next seems likely to be as good as it gets.

The 3½ per cent annual growth rate forecast for the medium term is well below the average rate of 4.2 per cent a year in the decade up to 2008. This weakening of medium-term global growth is due partly to the natural secular deceleration of some emerging market economies – most importantly China, from 10 per cent growth in 1999–2008 to 5½ per cent growth in 2020–24 – and partly to the slower growth of labour forces and productivity in the advanced economies.

Our projections of consumer price inflation in the advanced Euro Area economies in 2017 are broadly unchanged since August and revised down slightly for some non-EU countries, but our projections for 2018 have been revised up slightly in some cases, including the United States and India, partly reflecting recent exchange rate movements as well as increases in energy prices.

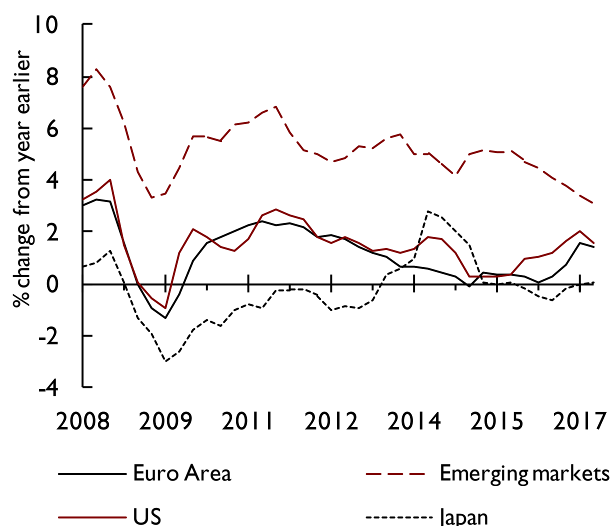
Recent economic developments

Recent months have been characterised by an unusually favourable combination of global economic and financial developments, with generally robust economic growth, improving labour market conditions, subdued inflation – though still below official targets in all major economies – broadly stable financial and foreign exchange markets, and buoyant stock markets.

Among the advanced economies, recent data have generally confirmed a continuation or strengthening, and broadening, of moderate economic growth since 2016, with output and employment gaps narrowing further. The strengthening of growth since 2016 is particularly clear in Canada, the Euro Area, and Japan; it is notably absent from the UK. Unemployment has fallen in recent months to new lows for the current expansion in the US, Japan, and Germany. At the same time, however, joblessness remains high in the Euro Area overall and extremely high in some of its member countries. Inflation has picked up from levels that raised concerns about deflation as recently as early 2016, but remain below central banks' targets even in economies where output and employment gaps seem minimal (figure 1).

Among the major emerging market economies, growth has recently exceeded expectations in China, and recoveries from deep recessions are continuing in Brazil and Russia. India's expansion has slowed somewhat since late last year, largely, it seems because of disruptions related to the demonetisation of banknotes last November and the introduction in July of a new Goods and Services Tax; growth is expected to pick up again in the period ahead. Inflation in Brazil, China, India and Russia has recently in each case been below target.

Figure 1. Consumer price inflation



Source: NiGEM database and NIESR forecast.
Note: 2017 includes forecast. Consumer expenditure deflator is used for the US, Euro Area and Japan, CPI for emerging markets. Emerging markets – weighted average of Brazil, China, India, Indonesia, Mexico, Russia and Turkey.

Monetary policy developments

In the advanced economies, further steps have been taken in recent months in Canada, the Euro Area, and the United States to reduce monetary policy accommodation. The Bank of Japan has kept its monetary stimulus programme unchanged.

On 6 September, the Bank of Canada raised its benchmark interest rate by 25 basis points for the second time since July, to 1.0 per cent, citing stronger than expected data for economic activity; inflation has remained below the Bank's target.

As announced in September, the US Federal Reserve began in October the balance sheet normalisation programme it had set out in June. It also indicated that, as in June, its median expectation was that the target range for the federal funds rate would be raised by a further 25 basis points by the end of 2017, and an additional 75 basis points by the end of 2018. Its median expectation for the federal funds rate was lowered slightly to 2.7 per cent at the end of 2019, and to 2.8 per cent for the longer run.

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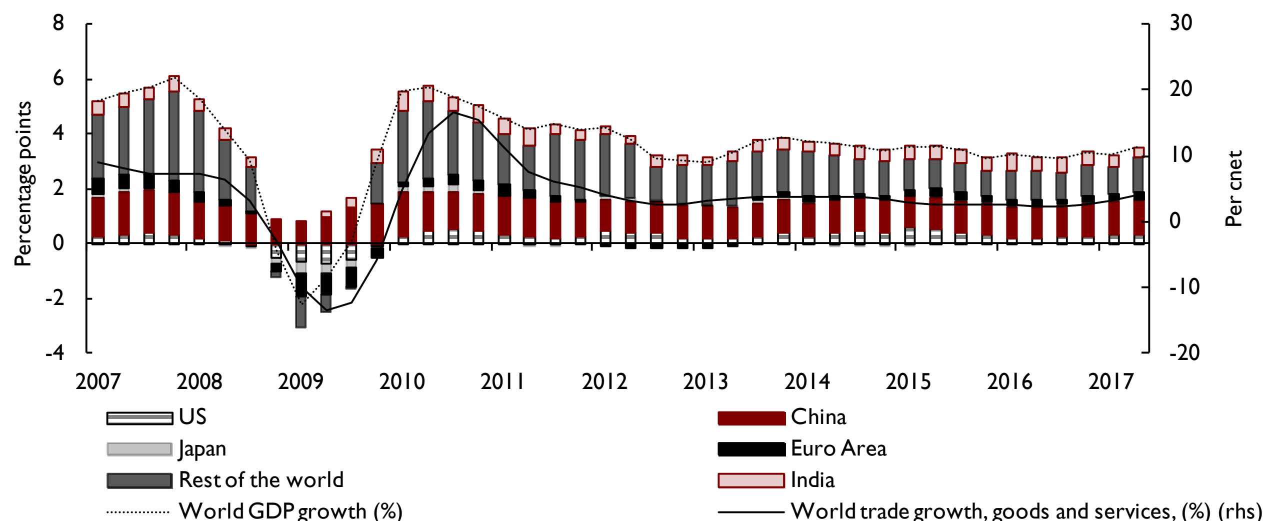
Figure 2. World GDP growth and its contributors, and world trade growth (from four quarters earlier)



Source: NiGEM database and NIESR forecast.
Note: 2017 includes forecast.

Our assumptions for the federal funds rate are consistent with these projections.

In the other major advanced economies, there have been no changes in central banks' benchmark rates since the August *Review*. In late October, the European Central Bank announced a scaling down of its asset purchase programme from January 2018.

Among major emerging market economies, benchmark interest rates have been lowered further since late July in India (by 25 basis points, to 6.0 per cent, in early August), Russia (by 50 basis points, to 8.5 per cent, in mid-August), and Brazil (by 100 basis points, to 8.25 per cent, in early September). In all three cases, consumer price inflation has fallen below central bank targets in recent months. Inflation is below target also in China, but the central bank has continued to tighten monetary conditions and raise market interest rates (but not benchmark rates) slightly, in order to help restrain credit growth.

Financial and foreign exchange markets

Government bond yields in the US declined slightly further between late July and early September, from 2.3 to 2.1 per cent at the ten-year maturity, as prospects of a fiscal boost to growth receded and doubts increased about the likelihood of further increases in the federal funds rate in the near term. Subsequently, however, yields rose back, to marginally above their late July levels in late October, as market expectations of both fiscal and monetary policy reversed following statements by Fed officials and indications of an increased likelihood of the passage of tax cuts by Congress before the end of this year. The yield of about 2.4 per cent on ten-year government bonds in late October was 20 basis points below the peaks reached late last year, in the wake of the November elections, but 100 basis points above the historic lows reached in July 2016.

In late October bond yields were also little changed from late July in Japan, reflecting the Bank of Japan's policy of yield curve control.

In the major countries of the Euro Area, movements were mixed, with declines of 10–15 basis points in Germany and Italy between late July and late October but no significant change in France and Spain. In Canada and the UK, ten-year yields rose by 10–15 basis points in this period, reflecting actual and expected changes in policy rates, respectively.

Among the major emerging market economies, government bond yields have declined since late July in Brazil, broadly in line with the reduction in official short-term rates. In China and India, bond yields have risen by about 20 basis points since late July, reflecting continuing official operations to tighten monetary conditions in China and a pick-up in inflation in India.

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Figure 3. Shiller cyclically adjusted price–earnings ratio for the S&P 500

Source: Datastream.

Exchange rates among the major currencies have been relatively stable in the past three months. The US dollar, broadly in line with the swings in US government bond yields, depreciated further against other major currencies between late July and early September, but subsequently recovered. Thus in late October, the US dollar's trade-weighted value was little changed from late July, 8 per cent below the 14-year peak reached late last year, and broadly unchanged from the levels prevailing in September 2016. In terms of individual currencies, the US dollar's value in late October was unchanged from late July in terms of the Canadian dollar; 1–2 per cent lower against the euro, sterling and renminbi; 4 per cent lower against the rouble; and about 1 per cent higher in terms of the yen and the rupee.

Stock markets have risen in most countries in the past three months, buoyed partly by favourable news about economic growth, subdued inflation, and corporate profits, and in some emerging market countries by downward trends in official interest rates. Between late July and late October, markets rose by 3–7 per cent in local currency terms in the US, Japan, Germany, France, Italy, Canada, China, and Russia. Rises in the period were smaller in the UK, at about 1 per cent, but significantly larger in Brazil, at close to 20 per cent. Markets fell in Spain by about 3 per cent, apparently reflecting the political dispute between the national government and the regional government of Catalonia about Catalonian independence, and also by 1 per cent in India. In the US, the S&P 500 index closed at six consecutive record highs in early October, the longest run of daily record highs in twenty years. Also at this time, the Vix index of market uncertainty fell to an all-time low of 9.2, below half its long-term average. In Japan, the Nikkei index rose in October to its highest levels in more than twenty years.

Commodity markets

Moderate upward pressure on global oil prices has been apparent in recent months from strengthening demand and declining inventories. Thus the Brent benchmark price in late October, at about $57 a barrel, was 10 per cent higher than in late July. The West Texas benchmark rose by somewhat less, partly reflecting the continuing growth of US shale production. In mid-October, the International Energy Agency estimated that crude stockpiles would decline by 0.3 million barrels this year, the first drop in four years.

Other commodity prices, in US dollar terms, have risen slightly overall in recent months, with further significant increases in metals prices partly offset by declines in food prices. The Economist all-items US dollar index in late October was about 2 per cent higher than three months earlier.

Risks to the forecast and implications for policy

Broadly improving economic conditions and buoyant financial markets have been the predominant features of recent global developments. An upside risk to our growth forecast in the short term is that these forces may gather momentum, to an extent that we do not currently anticipate. But downside risks to the economic recovery have hardly diminished, and while for the short term risks may be broadly balanced, for the medium term we judge them to be tilted to the downside.

In fact, downside risks may have been increased by recent market buoyancy, especially since *stock markets* appear in some cases to have become even more richly valued in relation to fundamentals. Thus for the US, Shiller's cyclically adjusted price–earnings ratio (CAPE) for the S&P 500 index has recently risen above 30 (see figure 3). It has been higher only in 1929, when it reached 33, and in the years around 2000, when it reached 44. In both cases, sharp market declines followed these high readings. Such indicators suggest that markets may have become increasingly vulnerable to shocks, and that the likelihood may have increased of market declines that

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could have significant negative repercussions on private consumption and investment.

Markets are vulnerable not only to autonomous changes in sentiment but also to economic policies, including policy failures and missteps. At the present time, risks relating to policies in the US, the Euro Area, and China seem particularly notable.

In the *United States*, risks arise in a number of policy areas. The calibration of *monetary policy* continues to be complicated by uncertainties not only about the causes of the recent persistent under-performance of inflation, in relation to both the Fed's objective and its forecasts, but also about the level of the neutral real interest rate, estimates of which have declined in recent years. The Fed considers that the causes of recent low inflation have been mainly transitory, and that inflation is likely to rise towards the target in the next couple of years even as it reduces accommodation by raising short-term interest rates and reducing the size of its balance sheet. But it is possible that the causes are more persistent, and that to achieve its inflation target the Fed will need to adopt an easier stance over time than it currently envisages. On the other hand, it is also possible that inflation may lift off more sharply than expected. As argued recently by Chair Yellen, these uncertainties, together with the need to build room to ease policy in the case of an economic downturn, while minimising the risk of increasing financial fragility by stimulating leverage and market valuations, point to a need to move rates up gradually, but not too gradually.[1]

In this context, one risk is that US monetary policy may need to be tightened more rapidly than currently assumed, with adverse consequences not only for US economic growth but also more widely, including by imposing strains on economies with dollar pegs and through the effects of dollar appreciation on the debt burdens of emerging market and developing economies with liabilities denominated in the currency. Another risk is that persistently low inflation, by preventing increases in interest rates, could further increase leverage and stretch market valuations, thus exacerbating dangers of financial instability, and also reduce the Fed's capacity to reduce real interest rates in an economic downturn. Further risks arise from the unusually high turnover of governors taking place in the coming months on the Fed's Board, which may lead to a greater inclination to perceive questionable inflationary threats, and thus a tendency towards tighter policy, or to a greater inclination to over-estimate the economy's potential growth rate, and thus a tendency towards easier policy, which could increase the risk of destabilising inflation.

One possible reason the Fed may move to tighten monetary conditions by more than is currently expected could be expansionary *fiscal policy*. With output approaching potential and public debt at a historically high level, it would seem desirable to begin a programme of reducing the structural budget deficit over the medium term while adjusting spending and taxes in ways that promote growth and greater equity. But the plans recently outlined by the administration to reduce corporate and personal income taxes, together with their apparent underlying assumption that the economy will grow at a rate significantly higher than recently experienced, point to a risk of a widening deficit, further increases in public debt, and increasing demand pressures which the Fed might see a need to counter by tightening monetary conditions.

A third area of risk in US economic policies is *financial regulation*. The administration is engaged in a reassessment of the strengthening of regulations implemented following the financial crisis. While there is, no doubt, scope for improvement, including simplification, in some areas, a broad rollback of regulation and oversight could reduce safety buffers and weaken supervisory effectiveness, with negative repercussions for financial stability in the US and globally.

Fourth, there remain significant uncertainties about US *trade policy*. In the early months of the administration, a number of investigations and renegotiations were launched on trade-related issues (see May 2017 *Review*, Box A, F54). These have still not led to significant actions but there has been continuing rhetoric in favour of defensive policies focused on reducing the United States' bilateral trade deficits, and there have recently been reports that the North America Free Trade Agreement (NAFTA), in particular, is under threat. The risk to the US and global economies of US-led protectionism therefore seems to remain.

In the *Euro Area*, the *imbalances* discussed in the August 2017 *Review,* including the wide differences in unemployment rates among member countries, remain, as does the need to strengthen and complete the institutional arrangements of the monetary union. With the ECB having announced a scaling down of its asset purchases in 2018, the time is approaching, assuming continuing progress towards the inflation objective, when the beginning of a rise in short-term interest rates can be contemplated. While this may be welcomed in such

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countries as Germany that are close to full employment, it will pose risks for lagging indebted countries where output gaps remain wide, particularly if they have not undertaken the fiscal adjustment needed to provide space for budgetary action to support demand. Stresses in the monetary union as a result of disparate macroeconomic conditions among member countries may thus become significantly more challenging when the ECB starts raising interest rates.

With regard to prospects for reform of the institutional arrangements of the monetary union, the uncertainties discussed in recent issues of the *Review* remain. The results of Germany's federal elections in September do not appear to have increased the likelihood of significant reform, and elections in Italy due to take place in the coming months may bring further complications. While the leaders of France and Germany have both agreed on the need for reform and expressed support for a Euro Area budget, a European finance minister, and a European Monetary Fund, views clearly differ on what these terms mean.[2] Thus President Macron has called for a budget that would 'provide automatic stabilisation and perform a countercyclical function', while Chancellor Merkel appears to be referring to a small fund that could support structural reforms. With regard to the main reform needed to complete the banking union – the introduction of a European Deposit Insurance Scheme (EDIS) – the latest proposals from the European Commission aimed at reaching agreement by the end of 2017 were rejected by Germany in early October. The German finance minister was quoted as saying at the time that Germany would not engage in further discussion of the EDIS without substantial risk reduction by European banks. Progress towards completion of the banking union and of the monetary union therefore seems to have stalled, and the risks associated with the interdependence of national sovereigns and domestic banks remain.

Finally, with regard to *China*, earlier *Reviews* and the country section below relate how stronger than expected growth in 2017 has been boosted partly by earlier policy easing and credit expansion. A result has been a further rise in public and non-financial private sector debt, which were already at high levels. This could carry a higher risk of a sharp adjustment and economic slowdown in China if there is an adverse shock, such as a faster than expected rise in US interest rates, which could cause a resumption of capital outflows, or an imposition of import restrictions by trading partners, or a funding drought in domestic financial markets. Such an abrupt slowdown in China would be likely to have significant adverse repercussions globally. Since late 2016, the Chinese authorities have taken a number of actions to moderate credit growth and reduce risks in the financial sector, with results evident, for example, in slower growth of interbank lending and slower increases in housing prices. These efforts may need to be strengthened for debt to be lowered to more sustainable levels, even if the consequences for growth are negative in the short term.

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Box A. Bond market effects from unwinding unconventional monetary policy

In recent years, in response to severe deflationary pressures in the aftermath of the Great Recession, central banks in advanced economies have employed a number of unconventional monetary policy measures. Foremost amongst these have been large-scale asset purchases. With an unwinding under way in the US and looming ahead elsewhere, this box reviews how a normalisation of monetary policy is expected to affect bond yields.

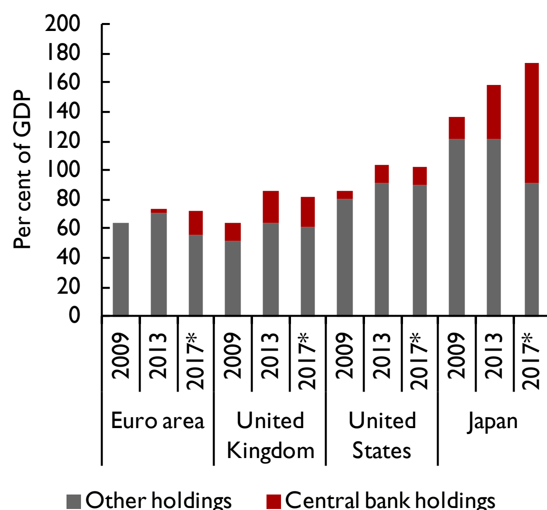
Under their quantitative easing programmes, central banks expanded their balance sheets substantially over the past decade, buying up covered bonds, asset-backed securities, equity and, quantitatively most importantly, government debt. Figure A1 illustrates that by 2017 central banks held substantial shares of all outstanding government debt securities. While the Federal Reserve had purchased around 12 per cent of the USD 19.8 trillion in outstanding Treasury securities, the European Central Bank and the Bank of England held shares of 23 per cent and 25 per cent of their governments' debt, amounting to 16 and 20 per cent of GDP, respectively. The Bank of Japan, whose balance sheet already contained around 11 per cent of outstanding Japanese government bonds in 2009, increased its share to almost half of all debt outstanding, or 82 per cent of GDP.

A tapering of purchases and eventual reduction in debt holdings by central banks will tend to increase the supply of sovereign bonds available to investors. A rebalancing of investment portfolios away from riskier assets will affect longer-term interest rates in the wider economy – a mechanism that is likely to work gradually (see Chadha and Waters, 2014, for portfolio rebalancing effects of purchases). The reduction of monthly asset purchases by the Federal Reserve, a process that started in 2014, and the more recent process of reducing its balance sheet have so far not had adverse effects on government bond markets.

Long-term interest rates can be broken into a risk-free component that captures expectations about future short-term interest rates and a term premium component. Monetary policy measures that change expectations about future short-term rates mainly affect the risk-free component (signalling channel) (cf. Bauer and Rudebusch, 2014). The announcement of asset purchases themselves served as a signal that monetary policy would remain accommodative for an extended period. For the Euro Area we find that the risk-free component of nominal government bond yields declined from already low levels when the ECB announced its Public Sector Purchase Programme (PSPP), i.e. quantitative easing. This effect is relatively symmetric across member states.

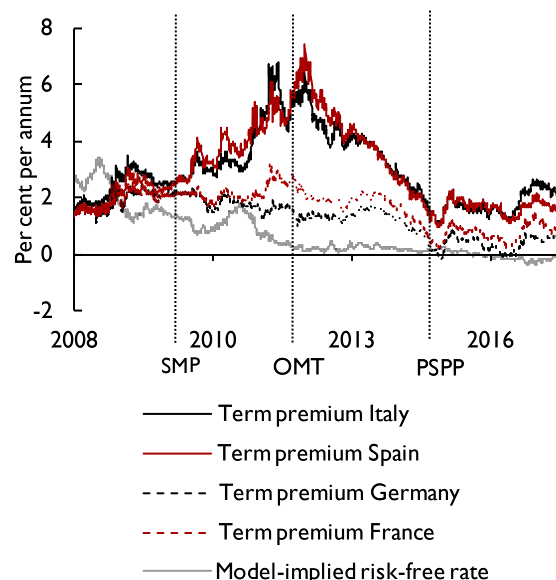
Unconventional monetary policy measures also have an effect on bond markets through premia for the risk of sovereign default, or, in the case of the Euro Area, a break-up of the currency union. Figure A2 shows that during the European sovereign debt

Figure A1. Central bank holdings of outstanding government debt



Sources: European Central Bank, Bank of England, Federal Reserve, US Treasury, Bank of Japan via Datastream.
Notes: Holdings in per cent of GDP at the end of the year and in August 2017 (*).

Figure A2. Euro Area bond yield components



Source: NiGEM term premia database.

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Box A. (continued)

crisis, credit risk premia of those countries that were most severely affected soared, for instance Spain and Italy. After the ECB announced interventions on the sovereign bond market with its Securities Market Programme (SMP) and the Outright Monetary Transactions scheme (OMT, still inactivated), risk premia components of crisis-hit countries fell sharply. Unless there is a considerable return of risk associated with the stability of the Euro Area, for instance if reforms to the institutional framework fail to materialise or the credibility of OMT becomes questionable, we would not expect credit risk premia to diverge substantially as monetary policy normalises.

In summary, the process of unwinding unconventional monetary policy measures and reducing central banks' balance sheets is unlikely to affect international bond markets adversely if conducted gradually, allowing market participants to adjust their expectations.

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