GLAECONOMICS

London's Economic Outlook: Autumn 2016
The GLA's medium-term planning projections

November 2016

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1. Executive summary

GLA Economics' twenty ninth London forecast[1] suggests that:

London's Gross Value Added (GVA) growth rate is forecast to be 2.8 per cent in 2016 with the growth rate decreasing to 2.0 per cent in 2017 before increasing slightly to 2.3 per cent in 2018.

London is forecast to see rises in employment in 2016, 2017 and 2018.

London household income and spending are both forecast to increase over the next three years.

Table 1.1 summarises this report's forecasts and provides an average of independent forecasts.

Table 1.1: Summary of forecasts

Annual growth rates (per cent)	2015[2]	2016	2017	2018
London GVA[3] (constant 2012, £ billion)	3.0	2.8	2.0	2.3
Consensus (average of independent forecasts)		2.4	1.4	1.9
London civilian workforce jobs	1.8	2.5	1.2	0.3
Consensus (average of independent forecasts)		1.5	0.5	0.8
London household spending (constant 2012, £ billion)	2.8	3.3	1.3	1.3
Consensus (average of independent forecasts)		3.8	1.9	1.8
London household income (constant 2012, £ billion)	2.4	2.2	1.5	1.3
Memo: Projected UK RPI[4] (Inflation rate)	1.0	1.8	3.4	3.1
Projected UK CPI[5] (Inflation rate)	0.0	0.7	2.6	2.5

Sources: GLA Economics' Autumn 2016 forecast and consensus calculated by GLA Economics

Since the publication of the Spring 2016 London's Economic Outlook (LEO), the UK voted in a referendum on 23 June 2016 to leave the European Union (EU). At the time of writing the triggering of the Article 50 process of the Lisbon Treaty to leave the EU has yet to occur. It is currently expected that the UK Government will begin this process sometime in early 2017 with a subsequent period of up to two years under the Treaty to negotiate the exit of the UK from the EU. A special chapter (Section 4) later in this LEO examines some of the possible short and long-term impacts of this vote in more detail.

[1] The forecast is based on an in-house model built by GLA Economics.
[2] Historic data for London GVA and workforce jobs is based on GLA Economics 'now-casting' estimates, while household spending and household income is based on Experian Economics data. It should be noted that the 2015 figures for London GVA, civilian workforce jobs are estimates.
[3] A future publication by GLA Economics, Current Issues Note 50, will outline the methodology used to estimate London's GVA.
[4] RPI = Retail Price Index. Although not part of the GLA Economics forecast for London, for reader information HM Treasury Consensus Forecast, November 2016 of the UK RPI inflation rate are reported.
[5] CPI = Consumer Price Index. Although not part of the GLA Economics forecast for London, for reader information HM Treasury Consensus Forecast, November 2016 of the UK CPI inflation rate are reported. Since December 2003 the Bank of England's symmetrical inflation target has been annual CPI inflation at 2 per cent.

The UK currently remains part of the EU and the evidence for a strong instant impact of the referendum is so far relatively low, beyond the large depreciation of sterling. However the strength in a number of economic indicators is weaker than it was at the start of the year. Thus overall looking at a plethora of economic indicators, the majority show a continuing expansion of London's economy but with signs of some weakening in growth. This is also reflected at the UK level; for example the Bank of England's agents found in the third quarter of 2016 that the "annual rate of activity growth had slowed overall as uncertainty had risen following the EU referendum, although it had remained positive"[6]. Further, although consumer spending had been more resilient "companies' investment and employment intentions had fallen, and were consistent with broadly flat levels of capital spending and employment over the coming six to twelve months"[7]. While in November the Banks' agents found that "employment was expected to be broadly flat over the next six months and pay settlements were concentrated in the 1–3% range. Price pressures were building through supply chains following sterling's depreciation"[8].

In terms of credit conditions the Bank has noted that "the availability of secured credit to households was reported unchanged in the three months to mid-September 2016, and was expected to remain unchanged in Q4". They however also observed that, "lenders reported that demand for secured lending for house purchase fell significantly in 2016 Q3. Within this, both demand for prime and buy-to-let lending decreased significantly, and the latter recorded the largest fall since the Credit Conditions Survey began in 2007 Q2". With them further adding that "lenders reported that overall demand for corporate lending from small, medium and large businesses decreased significantly in the three months to mid-September"[9]. In London, consumer confidence fell sharply in the aftermath of the EU referendum but had recovered to an extent before turning marginally negative once more in November. Amongst companies in London, business activity as measured by the Purchasing Managers Index has resumed growth after a post referendum fall but has weakened slightly compared to what was observed at the beginning of the year[10].

The UK economy continues to grow, with output increasing by 0.5 per cent in Q3 2016, however this was a smaller increase than the 0.7 per cent seen in Q2 2016. Output in Q3 2016 was 2.3 per cent higher than a year earlier and UK GDP now stands 8.2 per cent higher than its pre-Great Recession peak[11]. Inflation, having remained low for the first half of 2016, has begun to generally pick up a notch although it still remains below the Bank of England's central symmetrical inflation target and dropped back slightly in October, with Consumer Prices Index (CPI) inflation standing at 0.9 per cent in October 2016 compared to October 2015, a slight fall from the rate of 1.0 per cent seen in September 2016[12]. Thus although the Bank of England has cut base rates and expanded quantitative easing since the May 2016 LEO to stimulate the economy in light of the 'Brexit' vote, given the marked depreciation of sterling and the inflationary pressures this will cause, it is perhaps less likely than during the summer months that the Bank will relax monetary policy further although it is likely to remain extremely accommodating for some time to come. The Bank of England therefore faces a balancing act between likely higher than previously forecast inflation and weaker than previously forecast

[6] Bank of England, 21 September 2016, 'Agents' Summary of Business Conditions, 2016 Q3'.
[7] Ibid.
[8] Bank of England, 9 November 2016, 'Agents' Summary of Business Conditions, November 2016 Update'.
[9] Bank of England, 14 October 2016, 'Credit Conditions Survey 2016 Q3'.
[10] Ibid.
[11] ONS, 27 October 2016, 'Gross Domestic Product, preliminary estimate: July to Sept 2016'.
[12] ONS, 15 November 2016, 'UK consumer price inflation: Oct 2016'.

demand in the UK. In their November 2016 Inflation Report the Bank observed that the Monetary Policy Committee (MPC) expects inflation to overshoot its target in the coming years and that this "overshoot is the product of a perceived shock to future supply, which has caused the exchange rate to fall, alongside a modest projected shortfall of activity. Inflation expectations have picked up to around their past average levels and domestic costs have remained contained. Given the projected rise in unemployment, together with the risks around activity and inflation, and the potential for further volatility in asset prices, the MPC judges it appropriate to accommodate a period of above-target inflation. That notwithstanding, the MPC is monitoring closely the evolution of inflation expectations"[13]. However, although projected to rise it should be noted that this increase in inflation is low in comparison to some of the levels seen in the past.

Workforce jobs growth has continued in London and at a significant pace; a similar situation is observed in the UK as a whole. Thus in London the number of jobs increased to 5.732 million in Q2 2016, a 137,000 (2.4 per cent) increase from a year earlier[14] and the highest level since the series records began in 1996. The employment rate in London stood at 73.6 per cent in the three months to September 2016, a record level for the series which began back in 1992. Real wages in the UK have also continued to grow although at a modest pace[15]; however with inflation expected to pick up on the back of the large depreciation of sterling it is currently unclear how long this growth in real wages will continue.

Risks to the economy have risen compared to those seen in May 2016 mostly related to 'Brexit'. However, other risks have eased; for instance the 2016 Autumn Statement put forward measures for additional infrastructure spending and thus partially mitigated the previously announced fiscal consolidation mooted for this Parliament. If all this spending occurs it would provide both needed infrastructure investment and less of an economic damper than had been projected at the turn of the year. Still the expected economic uncertainty and drag from the referendum outcome has so far been generally much more modest than had been anticipated by some forecasters/bodies prior to the vote. However, the current uncertainty about the UK's long-run relationship with the EU would appear – according to some business surveys - to have dampened, to an extent, some business investment and other decisions. The loosening of monetary policy in light of the 'Brexit' vote may also exasperate the problem of so called 'zombie firms', ie firms with minimal economic prospects, and thus prolong the misallocation of economic resources if this situation continues. Finally, it should be noted that the longer-term impact of the vote remains hard to model with competing claims by a variety of commentators with the exact long-term growth prospects likely to be highly dependent on what post 'Brexit' economic relationships and policies are followed.

Other risks to the economy remain. As has been highlighted in numerous LEOs, slow growth in Europe, the continuing high levels of sovereign debt and the structural problems facing individual countries, their financial systems and the Eurozone as a whole remain key concerns. Added to this is the risk that contagion from the 'Brexit' vote leads to a disintegration of the EU as a whole. All these are concerns due to the impact they could have on the UK and London's trade and therefore growth. Still, despite these ongoing risks, continuing low inflation in the Eurozone and the shock of the 'Brexit' vote there is evidence of some embedding of the growth prospects of the Eurozone although growth still remains relatively low. Whilst the risks of a

[13] Bank of England, 3 November 2016, 'Inflation Report: November 2016'.
[14] ONS, 14 September 2016, 'Regional labour market statistics in the UK: Sep 2016'.
[15] ONS, 19 October 2016, 'UK Labour Market: October 2016'.

marked global slowdown have abated somewhat compared to those seen at the start of the year, the high levels of debt seen in China have become an increasing concern for the economic stability of that country and the concurrent impact this would have on the global economy. Moreover, the disruptive effects on the world economy of an intensification of the current regional conflicts cannot be discounted.

Despite having risen slightly recently, relatively low oil and commodity prices are continuing to act as a drag on some emerging market economies whilst providing support to a number of developed economies. However this support is likely to lessen for the UK economy as the impact of sterling's depreciation against the dollar on oil when priced in pounds begins to be felt. Any rapid rebound in oil prices, due to a reduction in global supply as higher costs producers are driven out of the market, may act as a damper on global economic growth and thus depress economic activity within the capital. The beginning of the normalisation of monetary policy in some developed economies, and in particular the United States, may also have negative effects on emerging market economies and knock on effects on the global economy. However, although the tightening in US monetary policy began in December 2015 and is expected to continue, it may progress more slowly than was initially expected when the process first began.

In summary the outlook for the London economy remains generally positive for the next couple of years although the economic environment is significantly more uncertain at the end of 2016 post the EU membership referendum than it was at the start of the year. A moderate pick-up in inflation over the coming year seems highly probable given the inflationary impact of the depreciation of sterling and should remove the risk of persistently low inflation or deflation. Given this the improvements in real income seen in 2015 and the beginning of 2016 may be less strong in the coming couple of years and put a slight restraint on household spending. However, UK monetary policy, which had been expected to gradually tighten, may now remain loose by historical standards for longer than expected continuing to support the economy. Sterling has weakened considerably and businesses and consumers, having displayed jitters in the aftermath of the referendum, remain generally confident about the short-term future economic outlook. The scale and speed of the Government's fiscal consolidation also appears likely to turn out to be slower than was expected at the turn of the year. Of the sectors of the UK economy the service sector appears currently to remain the most robust which, given its size in London, should benefit London's economy. Taking account of all these factors both output and employment should see continued growth in the next few years although at a rate reduced to that which was expected at the turn of the year.

2. Introduction

The autumn 2016 edition of *London's Economic Outlook* (LEO) is GLA Economics' twenty ninth London forecast. The forecasts are issued every six months to assist those preparing planning projections for London in the medium term. The report contains the following:

- An overview of recent economic conditions in London, the UK and the world economies with analysis of important events, trends and risks to short and medium-term growth (Section 3).
- A one-off overview of the short and possible long-run impact of the UK's vote to leave the European Union (Section 4).
- The 'consensus forecast' – a review of independent forecasts indicating the range of views about London's economy and the possible upside and downside risk (Section 5). In this document, 'consensus forecast' refers to the average of the independent forecasters listed under Section 2.1.
- The GLA Economics forecast for output, employment, household expenditure and household income in London (Section 6).

2.1 Note on the forecast

Any economic forecast is what the forecaster views as the economy's most likely future path and as such is inherently uncertain. Both model and data uncertainty as well as unpredictable events contribute to the potential for forecast error. Since the Spring 2016 LEO GLA Economics' forecast is based on an in-house model built by GLA Economics[16], previously forecasts were based on an in-house model built by Volterra Consulting Limited. GLA Economics' review of independent forecasts provides an overview of the range of alternative opinions. Independent forecasts are supplied to the GLA for the main macroeconomic variables by the following organisations:

- Cambridge Econometrics (CE)
- The Centre for Economic and Business Research (CEBR)[17]
- Experian Economics (EE)
- Oxford Economics (OE)

Only the most likely outcomes, which the different forecasting organisations provide, are recorded. Each forecaster may also prepare scenarios they consider less likely but these are not shown here. The low and high forecasts combine the lowest and highest forecasts respectively taken from each year separately and which, may therefore, come from different forecasters. High and low estimates therefore may not represent the view of any one forecaster over the whole of the forecast period.

Economic forecasting is not a precise science. These projections provide an indication of what is, in GLA Economics' view, most *likely* to happen, not what will *definitely* happen.

[16] Current Issues Note 49 describes the production of the new forecast model in more detail.
[17] CEBR does not provide a forecast for employment in the sectors of the London economy or for household expenditure in London.

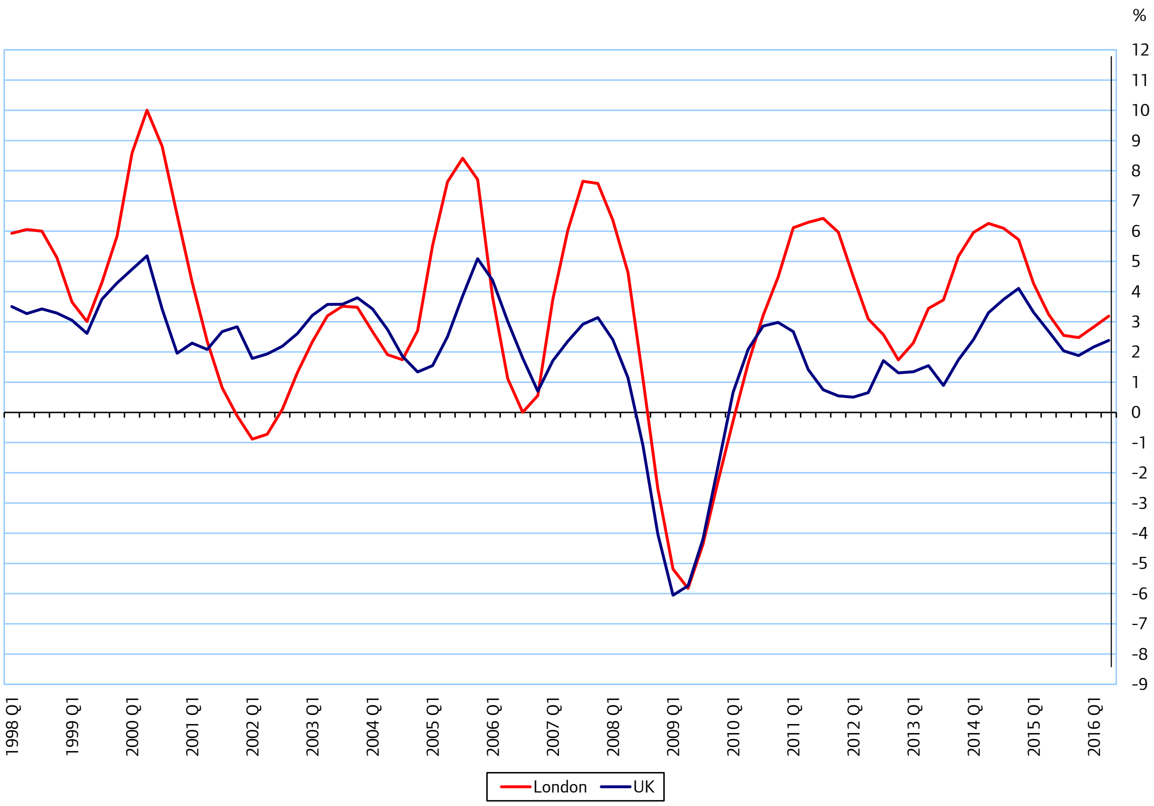
3. Economic background: Despite some uncertainty caused by 'Brexit' the London and UK economies continue to expand

This section provides an overview of recent developments in the London, UK and world economies.

3.1 The London economy

London's annual growth in output stood at 3.2 per cent in the second quarter of 2016 compared to 2.4 per cent in the UK (see Figure 3.1). London's economic expansion continues with other economic indicators continuing to suggest that the London economy has grown more strongly than the UK throughout the first half of 2016.

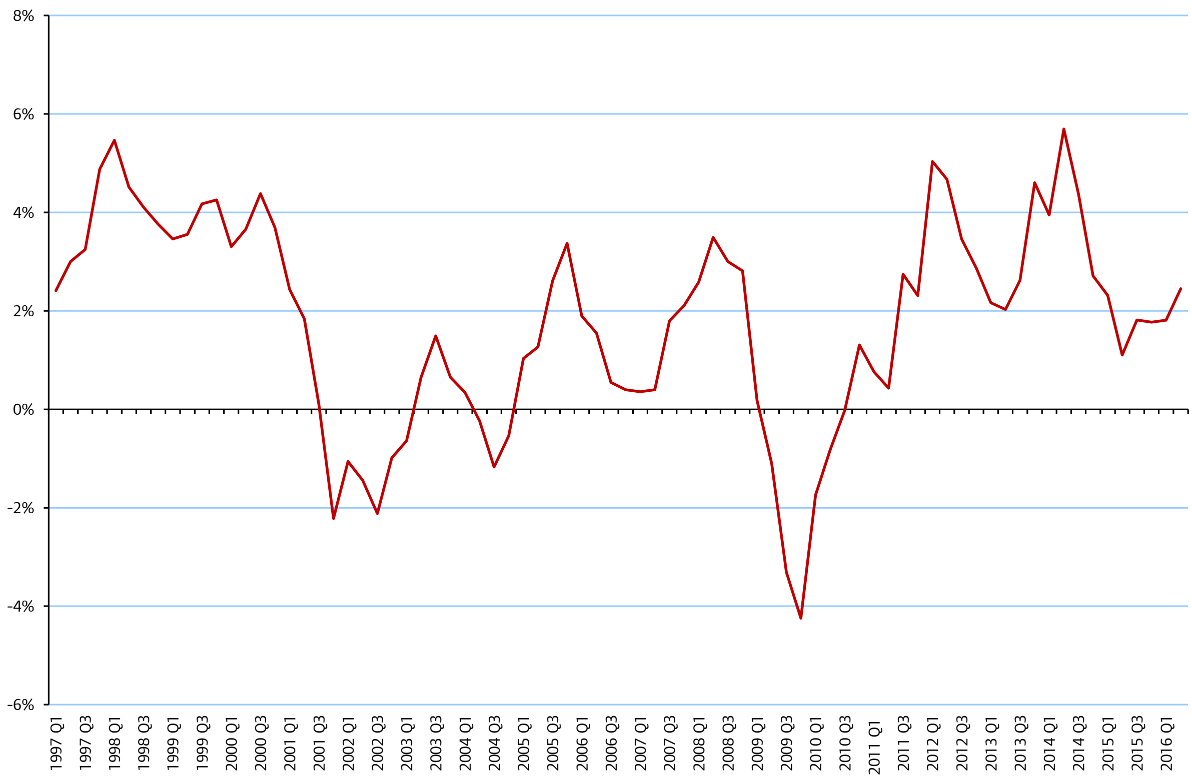
Figure 3.1: Output growth – London and UK
Real GVA, annual % change, last data point is Q2 2016



Source: GLA Economics calculations for London and ONS for the UK

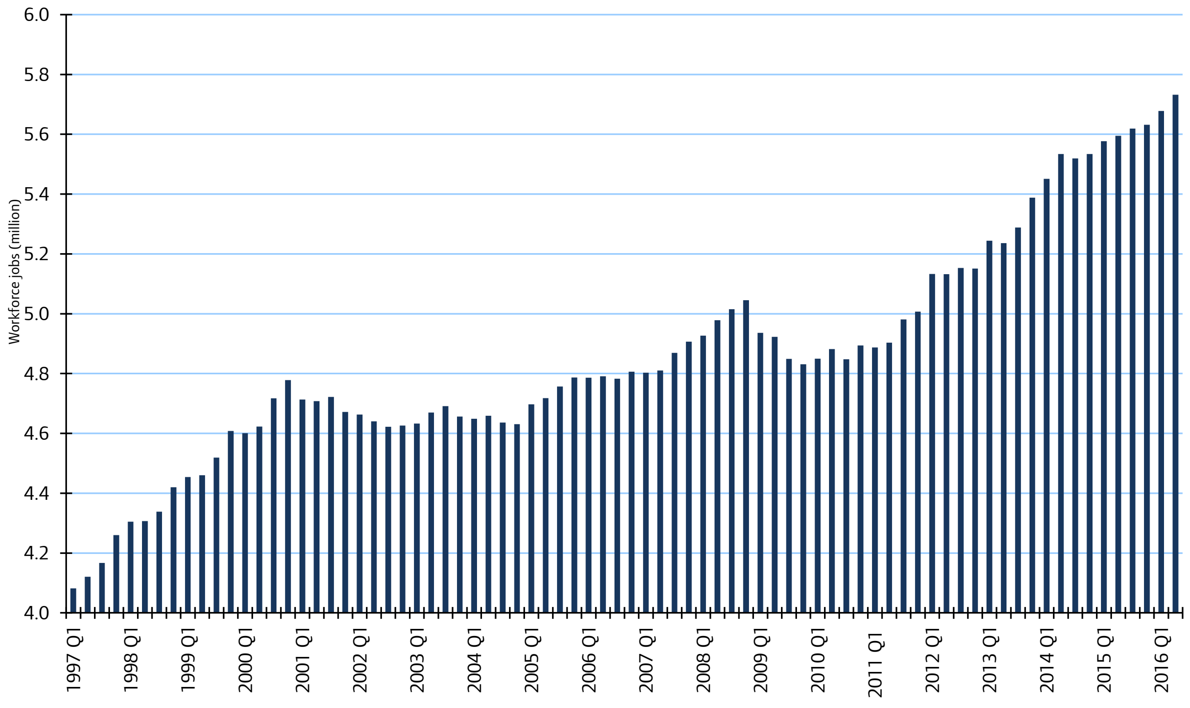
In the year to Q2 2016, there has been a 2.4 per cent increase in the number of workforce jobs in London (see Figure 3.2), with the total number of workforce jobs in the capital standing at 5.732 million, a record high (see Figure 3.3). London's employment rate (ie, the proportion of London's resident working age population in employment) also stands at a record level compared with any time since the series began in 1992. In the period July – September 2016, London's employment rate stood at 73.6 per cent, up by 1.1 percentage points on the year; for the UK the rate stood at 74.5 per cent, an increase of 0.7 percentage points on the year. London's ILO unemployment rate is down 0.7 percentage points on the year, standing at 5.6 per cent in the three months to September – its lowest rate since this measure began in 1992; this compares to an ILO unemployment rate for the UK as a whole of 4.8 per cent, down 0.5 percentage points on the year.

Figure 3.2: London civilian workforce jobs (annual percentage change)
Last data point is Q2 2016



Source: Office for National Statistics

Figure 3.3: London civilian workforce jobs (level)
Last data point is Q2 2016

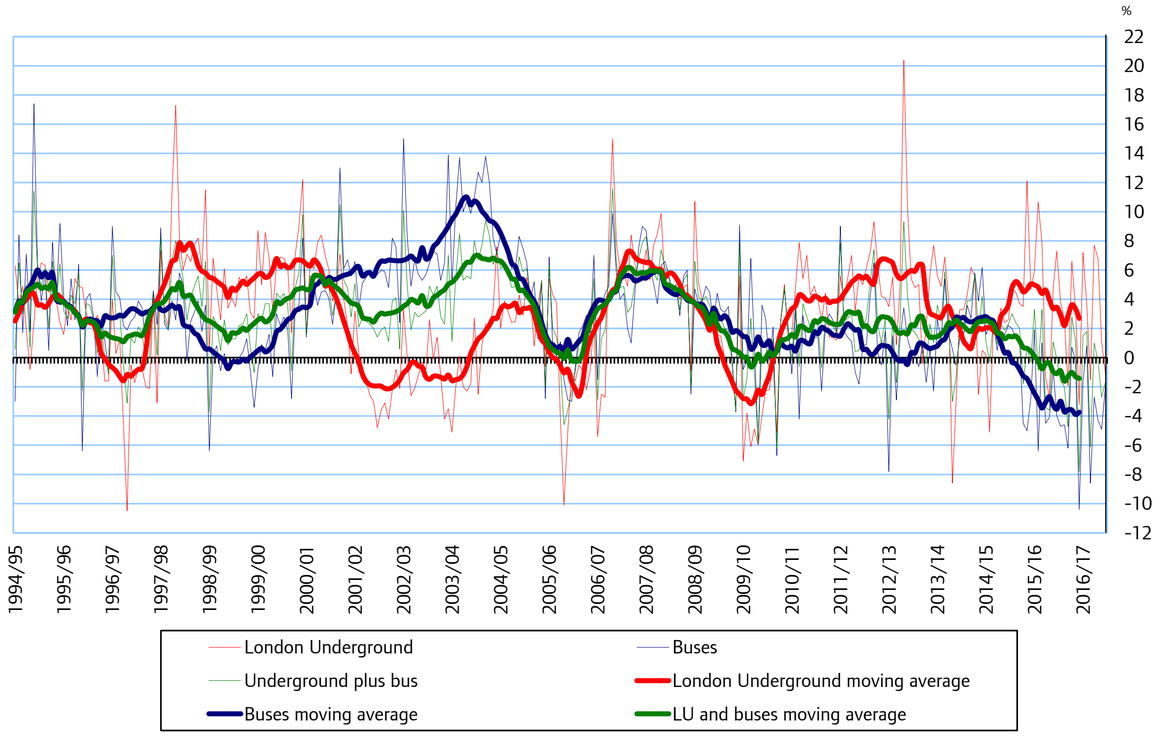


Source: Office for National Statistics

Public transport usage is a useful and timely indicator of economic activity in London. Figure 3.4 shows that there is positive and relatively strong annual growth in the moving average of underground usage but that the moving average of bus usage remains negative (this may reflect the impact of increased congestion on London's roads making certain bus journeys inefficient to take).

Figure 3.4: London public transport usage

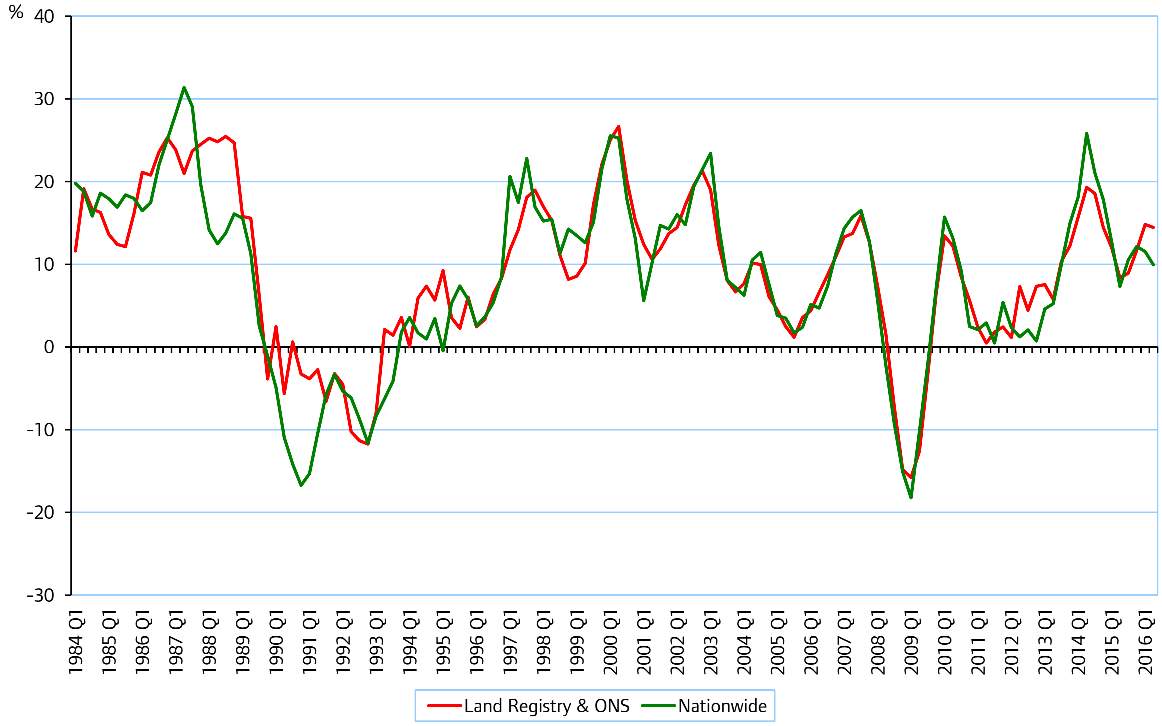
Annual % change in passengers using London Underground and buses (adjusted for odd days). Last data point is the 28-day period ending 15/10/2016



Source: Transport for London

Most evidence points to a continued moderation in the housing market in London in the first half of 2016 compared with that seen in previous years, as measured by the Land Registry & ONS and Nationwide (see Figure 3.5). More timely data from the Royal Institution of Chartered Surveyors (RICS) Residential Market Survey showed that after rising for most of 2015, for most of 2016 so far both the current measure of house prices and the expectation of future prices were negative, with a net balance of surveyors in London as a whole reporting both falling house prices and expecting house prices to continue to fall in September 2016. As of Q2 2016, annual house price inflation in London remains higher than in the UK with it estimated as standing between 14.5 and 9.9 per cent across the two measures for London; while estimates for the UK stand between 9.7 and 5.1 per cent.

Figure 3.5: House price inflation in London
Annual % change, last data point is Q2 2016



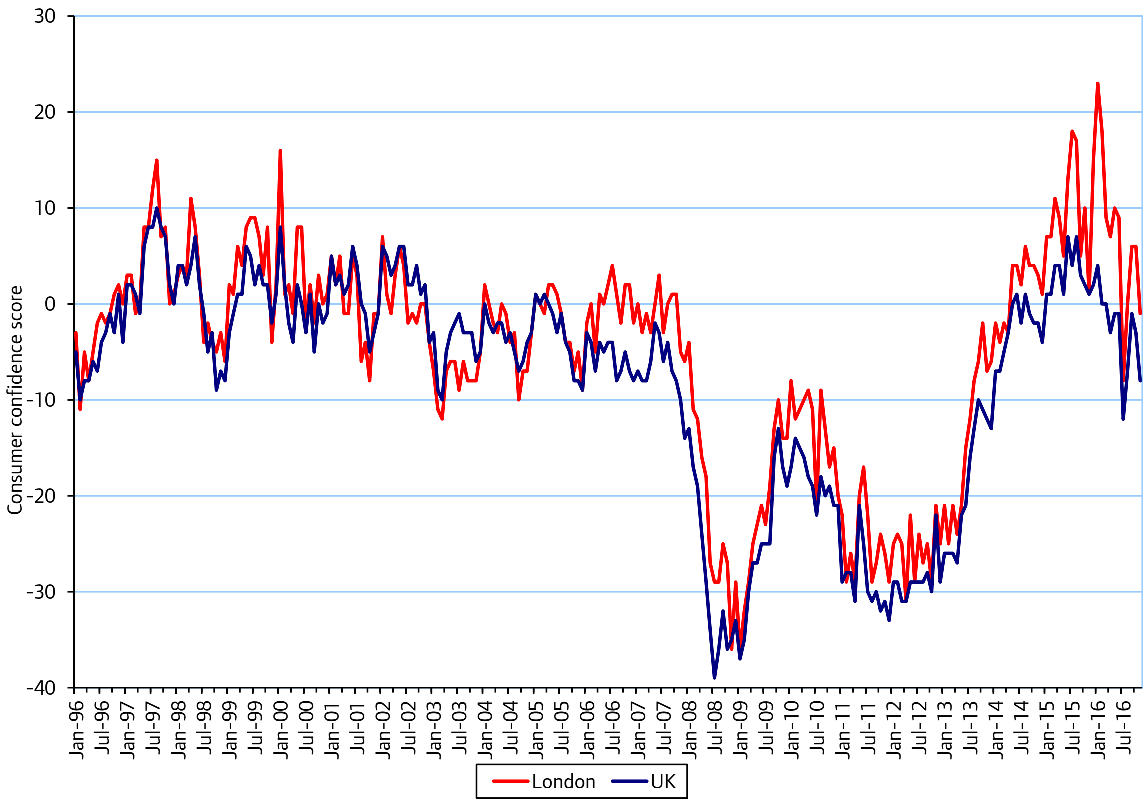
Sources: Land Registry and ONS, Nationwide

Knight Frank's Q3 2016 'Central London Quarterly' for commercial property found that following the 'Brexit' vote "both investment and leasing demand have held up reasonably well …; but are down on long-term average levels. Outside the West End Core, prime rents have held up, albeit due to landlords offering better incentives. If vacancy rates continue to creep up, we could see rents softening elsewhere, although a weak development pipeline will soon act as a brake on supply". In the **West End** the "take-up rose significantly in the third quarter of 2016 to 1.4 m sq ft, a rise of 36% on the previous quarter, and 18% above the long-term quarterly average. This rise was predominantly due to Apple's pre-let at Battersea Power Station, SW8 totalling 500,000 sq ft, so while demand for certain stock remained strong, overall performance was similar to the previous quarter". While "availability across the West End has risen for the third consecutive quarter to 6.5 m sq ft. Levels of supply are now the highest in more than five years and 22% above the long-term average of 5.3 m sq ft", and "investment turnover in the third quarter totalled £1.1 bn, down 17% on the previous quarter, and down 10% on the long-term average". In the **City** "quarter-on-quarter, take-up remained stable during Q3 at 1.2 m sq ft. However, levels were 36% lower than the same quarter last year and 29% below the long-term average of 1.74 m sq ft", while "supply increased for the second consecutive quarter, albeit marginally from 7.3 m sq ft to 7.6 m sq ft. However, levels are still nearly 20% below the long-term average of 9.4 m sq ft. The current vacancy rate in the City is now 6.6%, rising to 7.0% in the Core", and "investment turnover was relatively subdued during the third quarter of 2016, totalling £1.2 bn, down from £1.9 bn in Q3 2015 and 36% below the long-term average of £1.8 bn. The prime City yield remained at 4.25% in Q3. Overseas purchasers dominated the market, accounting for 86% of all sales by value and were responsible for all of the top ten deals by price". In relation to **Docklands** they observed that "quarterly take-up totalled 118,000 sq ft during Q3, a fall of 20% quarter-on-quarter and just under half the long-term average of

245,000 sq ft", while supply levels "fell from 4.8% in Q2 to 4.6% in Q3. Availability stood at just over 900,000 sq ft, well below the long-term average of 1.5 m sq ft. For the last 12 months"[18].

Data from the UK Consumer Confidence Barometer, produced by GfK-NOP (Figure 3.6) was positive in London prior to the 23 June referendum on the UK's membership of the EU although weaker in the UK as a whole. Since then consumer confidence in both London and the UK fell sharply in July before rebounding somewhat in August. For London this continued into September and October although then fell back into negative territory in November. In November consumer confidence was negative in London standing at -1 and also negative in the UK as a whole standing at -8. The index reflects people's views on their financial position and the general economic situation over the past year and their expectations for the next 12 months.

Figure 3.6: UK Consumer Confidence Barometer
Consumer confidence score, last data point is November 2016

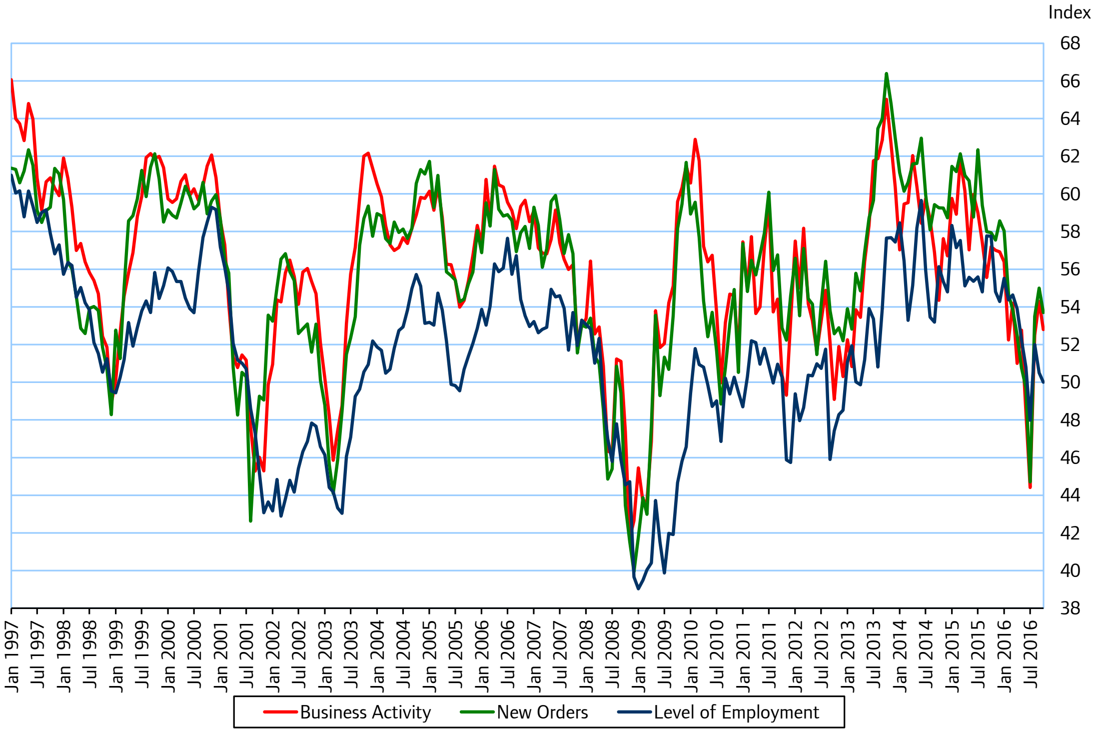


Sources: GfK NOP on behalf of the European Commission

The Purchasing Manager's Index (PMI) business survey experienced volatility in light of the 'Brexit' referendum result with it indicating a contraction in both business activity and new orders in June and July 2016 before showing them increasing again in following months. Employment in London firms followed a somewhat similar pattern although with marginal growth indicated in June 2016 and the decline shown in July 2016 being less marked than for the other 2 indicators, while since then this indicator although rebounding has been weaker (see Figure 3.7).

[18] Knight Frank, October 2016, 'Central London Quarterly – Offices Q3 2016'.

Figure 3.7: Recent survey evidence on London's economic climate
Purchasing Manager's Index (PMI) survey, last data point October 2016
Seasonally adjusted index (above 50 indicates increase, below 50 indicates decrease)



Sources: Markit Economics

3.2 The UK economy

Since the publication of the Spring 2016 LEO the UK has voted in a referendum to leave the EU, Section 4 of this LEO examines the short-run impact of this vote on the economy and also delves into what may be the long-run impact of 'Brexit' as well.

The Office for National Statistics (ONS) estimated that the UK economy continued to grow in the third quarter of 2016, but at a slower rate than in the previous quarter. Having grown by 0.7 per cent in Q2 2016, output rose by 0.5 per cent in Q3 2016, which is the fifteenth consecutive quarter of rising UK output. UK output was 2.3 per cent higher in Q3 2016 than in Q3 2015. GDP is now 8.2 per cent above its peak of Q1 2008[19]. The International Monetary Fund (IMF) now forecasts that the UK economy will grow by 1.8 per cent in 2016 (a 0.1 per cent upgrade on their July forecast) and by 1.1 per cent in 2017 (a 0.2 per cent downgrade on their July forecast)[20]. Table 3.1 shows a summary of forecasts for the UK economy.

[19] ONS, 27 October 2016, 'Gross Domestic Product, preliminary estimate: July to Sept 2016'.
[20] IMF, October 2016, 'World Economic Outlook: Subdued Demand - Symptoms and Remedies'.

Table 3.1: Office for Budget Responsibility and HM Treasury consensus forecasts for the UK economy
Annual % change, unless otherwise indicated

	Average of Independent Forecasters		Autumn Statement 2016	
	2016	2017	2016	2017
GDP growth (per cent)	2.0	1.1	2.1	1.4
Claimant unemployment (mn)	0.8	0.8	0.76	0.82
Current account (£bn)	-106.8	-80.9	-111.0	-99.3
PSNB (2016-17; 2017-18: £bn)	70.4	69.2	68.2	59.0

Note: mn = million, bn = billion
Sources: HM Treasury Comparison of Independent Forecasts, November 2016.
Office for Budget Responsibility, Economic and fiscal outlook, November 2016.

As can be seen in Table 3.2 annual growth was positive in Q3 2016 in most sectors except Agriculture, forestry, and fishing; and Electricity gas and water supply. Strong growth is observed in most service sectors, specifically Distribution, hotels and catering; and Transport, storage and communication. Business services and finance (a sector of importance for London) showed 2.3 per cent annual growth in Q3 2016 in keeping with the moderation in growth seen through most of 2015 and the first half of 2016. Most forecasts for the UK economy however expect a slowdown in growth in 2017 across a number of sectors.

Table 3.2: Recent growth in broad industrial sectors of the UK economy
Annual % change

	2015				2016		
Industrial sectors	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**
Agriculture, forestry, and fishing	3.4%	2.7%	0.8%	-1.4%	1.4%	-0.7%	-1.4%
Mining & quarrying inc oil & gas extraction	1.7%	9.4%	13.5%	9.3%	6.1%	1.0%	3.5%
Manufacturing	1.2%	0.1%	-0.6%	-0.8%	-1.2%	1.0%	0.5%
Electricity gas and water supply	3.8%	0.6%	-1.2%	-1.4%	-2.6%	4.4%	-1.4%
Construction	7.5%	6.3%	2.8%	3.1%	1.2%	0.4%	0.1%
Distribution hotels and catering	5.3%	4.6%	4.4%	4.3%	4.8%	5.0%	5.2%
Transport, storage and communication	5.1%	3.9%	3.1%	3.0%	2.7%	2.5%	4.1%
Business services and finance	4.0%	2.9%	2.1%	1.4%	2.1%	2.5%	2.3%
Government and other services	0.6%	0.4%	0.2%	1.0%	2.0%	1.6%	1.9%

Source: Office for National Statistics (as of 25 November 2016)

Table 3.3 shows that household annual spending growth was positive and strong throughout most of the sample period, with all other measures also being positive in Q3 2016. Investment, however, moderated to an extent in 2016 so far. Looking forward, most commentators expect investment to remain relatively subdued.

Table 3.3: UK domestic expenditure growth
Annual % change

	2015				2016		
Expenditure	**Q1**	**Q2**	**Q4**	**Q3**	**Q1**	**Q2**	**Q3**
Households	2.5%	2.7%	2.3%	2.9%	2.7%	3.0%	2.6%
Non-profit institutions	2.1%	0.8%	-0.5%	0.7%	1.4%	2.3%	3.8%
General Government	0.6%	1.5%	1.9%	2.1%	2.1%	1.1%	0.8%
Gross fixed capital formation	2.2%	4.8%	4.3%	2.2%	0.3%	1.0%	1.2%

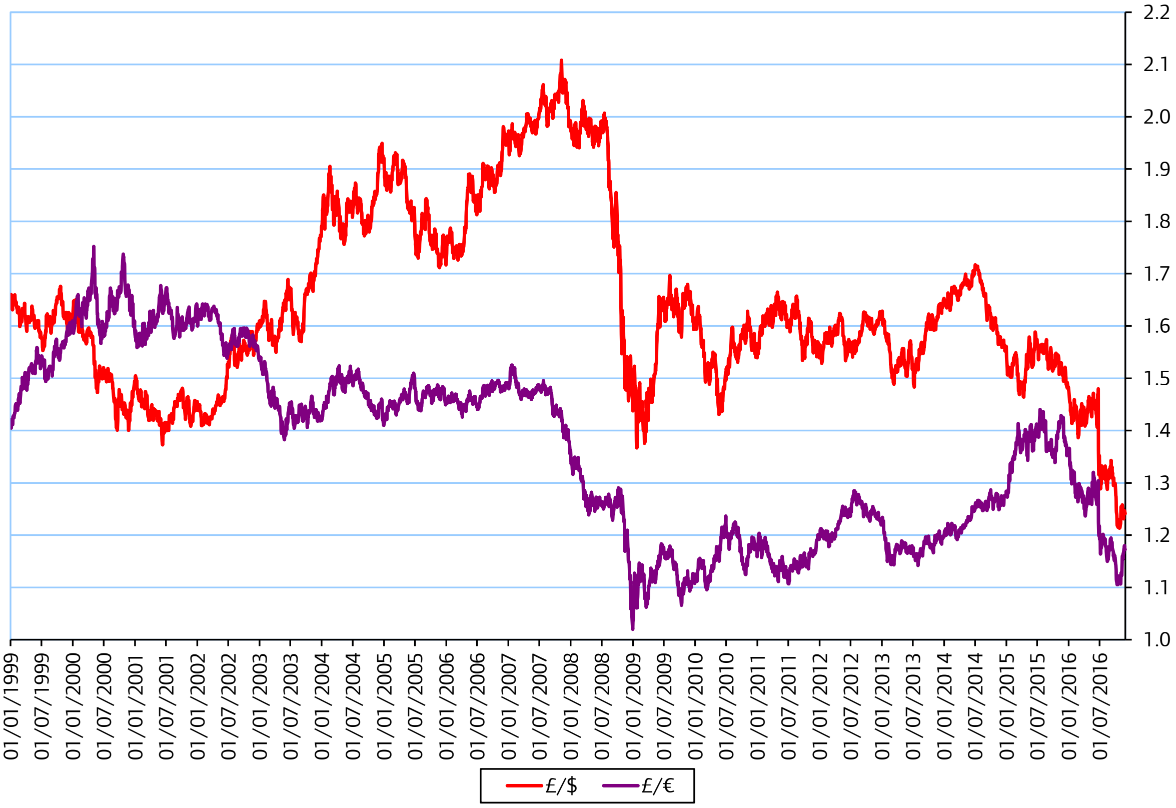
Source: Office for National Statistics (as of 25 November 2016)

Inflation has remained below the Bank of England's central symmetrical target for all of 2016 so far, after remaining low in 2015 but has begun to rise with annual Consumer Price Index (CPI) inflation standing at 1 per cent in September 2016 "the highest 12-month rate since November 2014"[21], before dropping back to 0.9 per cent in October[22]. The ONS observed that "although the rate was slightly lower than in September 2016, it remained higher than the rates otherwise seen since late 2014. The main downward contributors to the change in the rate were prices for clothing and university tuition fees, which rose by less than they did a year ago, along with falling prices for certain games and toys, overnight hotel stays and non-alcoholic beverages. These downward pressures were offset by rising prices for motor fuels, and by prices for furniture and furnishings, which fell by less than they did a year ago"[23]. The Bank of England in their November 2016 Inflation Report observed that the Bank's MPC believes that "largely as a result of the depreciation of sterling, CPI inflation is expected to be higher throughout the three-year forecast period than in the Committee's August projections. In the central projection, inflation rises from its current level of 1% to around 2¾% in 2018, before falling back gradually over 2019 to reach 2½% in three years' time. Inflation is judged likely to return to close to the target over the following year"[24]. With them adding that "the MPC's Remit requires that monetary policy should balance the speed with which inflation is returned to the target with the support for real activity. Developments since August, in particular the direct impact of the further depreciation of sterling on CPI inflation, have adversely affected that trade-off. This impact will ultimately prove temporary, and attempting to offset it fully with tighter monetary policy would be excessively costly in terms of foregone output and employment growth. However, there are limits to the extent to which above-target inflation can be tolerated"[25]. Box 3.1 examines monetary policy and the courses open to the Bank of England in more detail.

In the first half of 2016 sterling's exchange rate slightly depreciated following on from a trend seen in 2015; however following the results of the EU referendum on 23 June sterling has seen a marked and to an extent ongoing depreciation against both the dollar and euro (see Figure 3.8). This depreciation is also seen against a number of other currencies as is shown by the sterling effective exchange rate index (EERI) (see Figure 3.9). This depreciation of sterling, if it were to remain for some time, may help exporters, make imports more expensive (potentially boosting some domestic competitors), make the UK a more attractive tourist location, and may thus help address the UK's large current account deficit whilst providing a boost to the overall economy.

[21] ONS, 18 October 2016, 'UK consumer price inflation: Sept 2016'.
[22] ONS, 15 November 2016, 'UK consumer price inflation: Oct 2016'.
[23] Ibid.
[24] Bank of England, 3 November 2016, 'Inflation Report: November 2016'.
[25] Ibid.

Figure 3.8: £ to $ and £ to euro exchange rates
Last data point is 28/11/2016



Source: Bank of England

Figure 3.9: Sterling EERI rate
Last data point is 28/11/2016

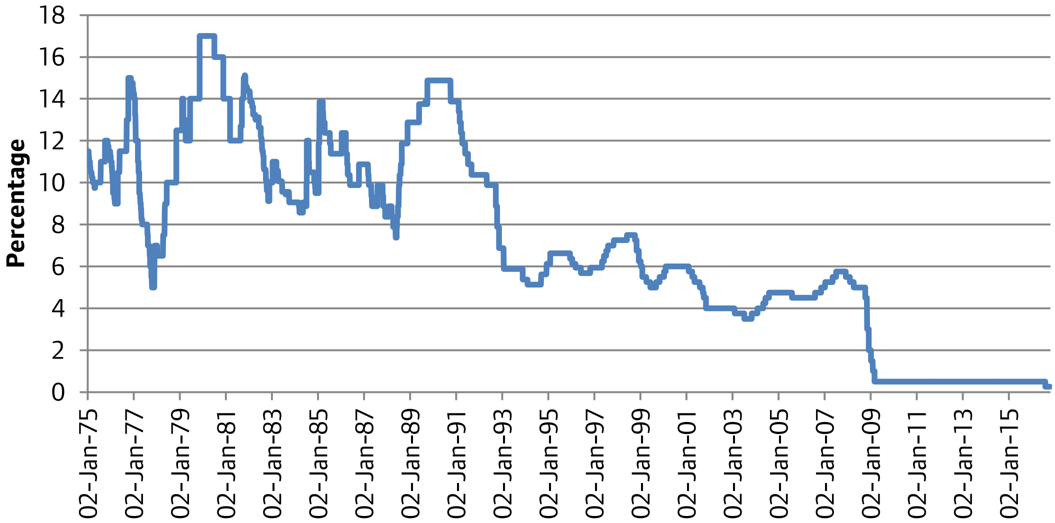
Source: Bank of England

Box 3.1 Monetary policy

This box provides a brief discussion of the recent developments in UK monetary policy as well as the growing global trend towards negative interest rates.

The Monetary Policy Committee (MPC) sets monetary policy to meet the Bank of England's 2 per cent central symmetrical inflation target to ensure stable prices and confidence in the currency. Having indicated in September that a second post-referendum cut in the Bank Rate (possibly to 0.1 per cent) might be possible if economic conditions did not improve, the Bank has subsequently decided to hold the Rate at 0.25 per cent[26]. However with interest rates at unprecedented lows (as shown in Figure 3.10), and growth expected to slow into 2017 and 2018 and beyond[27], there is some concern that the MPC has reduced scope to impact on the economy through monetary policy.

Figure 3.10: Official Bank Rate, 1975 – 2016
Last Data Point: Oct 2016



Source: Bank of England

Monetary policy in the UK has traditionally operated through the price at which money is lent (the interest rate), but since March 2009, the MPC has been using additional policy levers, for instance injecting money directly into the economy by purchasing financial assets in a quantitative easing (QE) process. In its meeting ending 2 November 2016, the MPC voted unanimously to continue with the programme of sterling non-financial investment-grade corporate bond purchases totalling up to £10 billion and the programme of £60 billion of UK government bond purchases (to take the total stock of these purchases to £435 billion), all financed by the issuance of central bank reserves[28].

The Bank first started to engage in this partially new form of QE in September 2016, with it purchasing debt of companies in sectors such as energy, transport, and finance, with the aim of lowering borrowing costs for companies in order to spur spending and investment, as well as

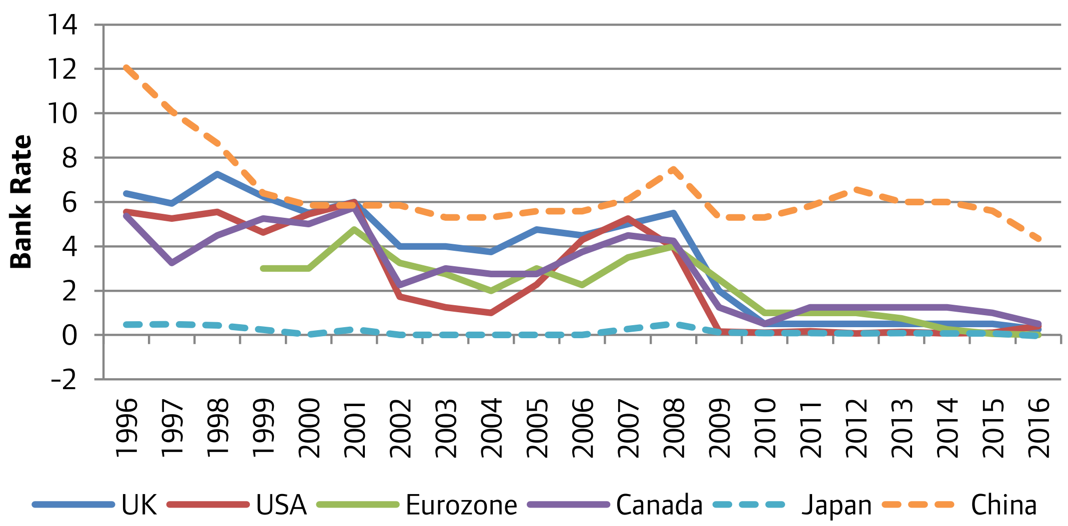
[26] The Week, 3 November 2016, 'Bank of England ditches second interest rate cut'.
[27] The Bank central forecast is for growth of 2.2 per cent in 2016, 1.4 per cent in 2017, and 1.5 per cent in 2018.
[28] Bank of England, 3 November 2016, 'Inflation Report: November 2016'.

boosting bond issuance[29]. The Bank had bought corporate bonds prior to this, but with the goal of improving liquidity, rather than stimulating the economy.

Many policy makers have been critical of the Bank's QE policy, labelling it as a mechanism through which those with assets get richer, while those without them suffer, as mortgages become cheaper, but savings are valued less[30]. Still, the Adam Smith Institute (ASI), among others, has defended current policy, arguing that QE money trickles down, helping the poor over time, as GDP starts to grow again, and rather than just helping the rich, simply avoids a needless destruction of wealth. They argue that expanding the money supply (if the natural interest rate is currently below zero) is the best way to avoid a deflationary recession as while over-loose monetary policy cannot create growth, over-tight policy can destroy growth[31].

Many other countries have adopted less generous levels of QE, choosing instead to manage their economies through the implementation of negative interest rates. For over two decades, interest rates have been declining across all major advanced economies with this picking up significantly since the 2008 financial crisis, as Figure 3.11 shows. For most of this period, many have believed that the Bank Rate could not drop below zero[32] without triggering a run by consumers and business as they start converting their deposits to cash to avoid devaluation. Put more simply, if a central bank cut its rate below zero, commercial banks might start charging their customers for deposits, resulting in companies and households withdrawing cash to store under their 'proverbial mattresses'[33].

Figure 3.11: Interest rates from a selection of advanced economies



Source: Various Central Banks. Note: Interest rates are taken from 1 January each year.

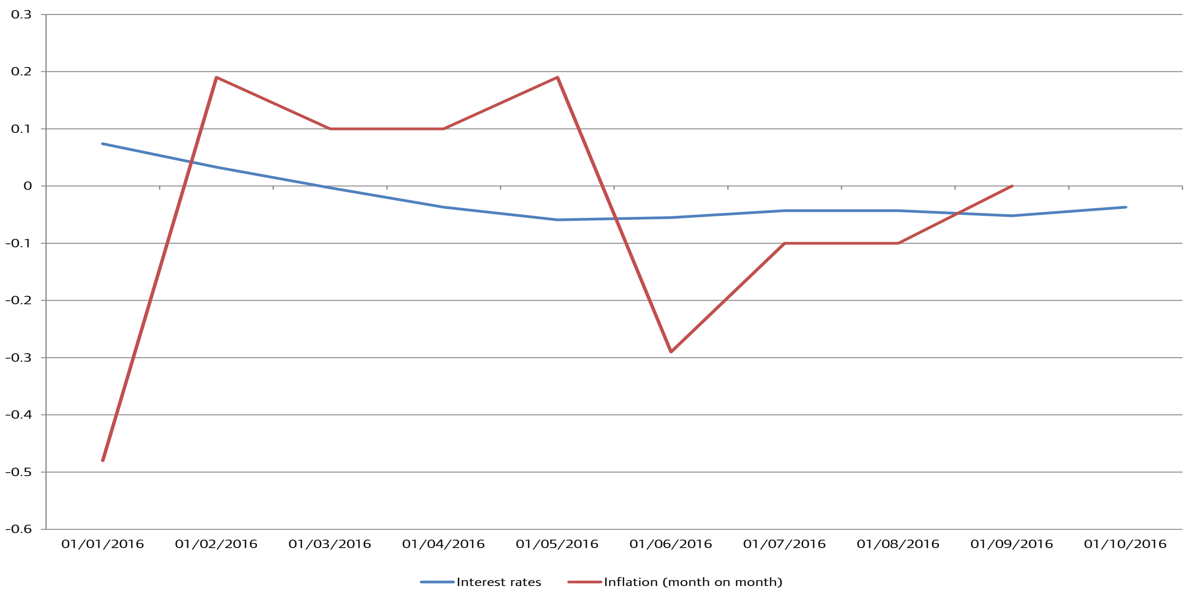
Today, some central banks consider that the introduction of negative interest rates can, theoretically at least, have positive effects on the economy. Through this mechanism, central

[29] The Wall Street Journal, 27 September 2016, 'Bank of England Re-Enters the Corporate Debt Market'.
[30] The Independent, 5 October 2016, 'Theresa May makes bid for centre ground with shift away from QE – as critics accuse Tories of veering to right'.
[31] Bowman, S., 21 October 2016, 'In defence of Mark Carney'. Adam Smith Institute.
[32] Black, F., December 1995, 'Interest Rates as Options'. The Journal of Finance, Vol. 50, No. 5 pp. 1371-1376.
[33] Bech, M. & Malkhozov, A., March 2016, 'How have central banks implemented negative policy rates?' BIS Quarterly Review.

banks hope that banks are encouraged to lend more into the real economy, improving financial conditions, and, therefore, short-term demand, across the economy[34].

In June 2014, Negative Interest Rate Policy (NIRP) was adopted by the European Central Bank (ECB) to try and achieve its price stability objective, with mixed success[35]. Outside the Eurozone, NIRP has already been used in Denmark, Sweden, Switzerland, and Japan. Japan's move to negative interest rates came in January 2016, alongside significant QE, and was in response to years of economic stagnation and persistent deflation. So far, this seems to have had little effect on inflation, as shown in Figure 3.12, and continues to squeeze commercial bank profits, potentially damaging not only public, but international confidence in Japan's banking sector.

Figure 3.12: Interest rates and inflation in Japan



Source: Bank of Japan

In the UK, Mark Carney has gone on record to say that he does not believe negative interest rates work, precisely because they punish banks, making them weaker, which can add costs to consumers, in turn weakening the economy[36]. While Carney has said that he would take whatever action is needed to support the economy, he also 'cannot see any scenario where [he] would consider negative interest rates'[37]. He has 'no intention and no interest' in implementing negative rates and will continue to utilise the range of the Bank's other powers to deal with any economic downturn[38].

Another downside of negative interest rates, as well as affecting the profitability of banks, is that NIRP can cause exchange rate depreciation by providing incentives for moving capital to higher-yield markets. However, higher inflation in other countries could counter this to some

[34] Ibid.
[35] Jobst, A., & Lin, H., August 2010, 'The ECB's Negative Rate Policy Has Been Effective but Faces Limits'. IMF Direct.
[36] BBC, 26 July 2016, 'The weird world of negative interest rates'.
[37] The Financial Times, 4 August 2016, 'Carney stresses opposition to negative rates. Repeatedly'.
[38] The Guardian, 23 February 2016, 'Carney: Bank of England could cut interest rates to zero, but not below'.

extent, as could any stimulative effect of the NIRP if the economic improvements it created led to rising asset prices.

Following the UK's decision to leave the EU (see Section 4) sterling has fallen significantly against other currencies. This has reduced the immediate need for any further monetary policy loosening, reducing the likelihood of negative interest rates being used in the UK for the short term at least.

3.3 The world economy

In October, the IMF released their latest World Economic Outlook[39], in which they forecast that the world economy will grow by 3.1 per cent for 2016, and 3.4 per cent for 2017 (both figures unrevised on their July forecast). Advanced economies are forecast to grow by 1.6 per cent in 2016 and 1.8 per cent in 2017 (a downgrade of 0.2 for 2016 and unchanged for 2017), with the US forecast to grow by 1.6 per cent this year and 2.2 per cent next year (downgrades of 0.6 and 0.3 per cent respectively), while the Eurozone is forecast to grow by 1.7 per cent in 2016 and 1.5 per cent in 2017 (upgrades of 0.1 per cent in both years).

In relation to their forecast the IMF noted that "the forces shaping the global outlook—both those operating over the short term and those operating over the long term—point to subdued growth for 2016 and a gradual recovery thereafter, as well as to downside risks. These forces include new shocks, such as Brexit—the June 23, 2016, U.K. referendum result in favor of leaving the European Union; ongoing realignments, such as rebalancing in China and the adjustment of commodity exporters to a protracted decline in the terms of trade; and slow-moving trends, such as demographics and the evolution of productivity growth; as well as noneconomic factors, such as geopolitical and political uncertainty. The subdued recovery also plays a role in explaining the weakness in global trade … and persistently low inflation"[40]. Still they further observe that "beyond a sharp depreciation of the pound, broader market reaction to the Brexit vote has generally been contained, with equity valuations and risk appetite recovering after an initial drop... Bank stocks, however, remain under pressure, especially in countries with more fragile banking systems. Based on preliminary readings, business and consumer sentiment were generally resilient in July, immediately following the referendum, except in the United Kingdom. Sentiment has improved regarding emerging market and developing economies, reflecting reduced concerns about China's near-term prospects following policy support for growth, mildly favorable macroeconomic news from other emerging market economies in the past few months, some recovery in commodity prices, and expectations of lower interest rates in advanced economies. But with very limited post-Brexit macroeconomic data so far, uncertainty about the impact of Brexit on macroeconomic outcomes remains, especially in Europe"[41]. They further noted that "growth is projected to pick up from 2017 onward, almost entirely on account of developments in emerging market and developing economies. This reflects primarily two factors: the gradual normalization of macroeconomic conditions in several countries experiencing deep recessions and the increasing weight of fast-growing countries in this group in the world economy"[42].

The IMF has also published their latest Global Financial Stability Report in October, which observed that "short-term risks to global financial stability have abated since the April 2016

[39] IMF, October 2016, 'World Economic Outlook: Subdued Demand - Symptoms and Remedies'.
[40] Ibid.
[41] Ibid.
[42] Ibid.

Global Financial Stability Report (GFSR). Commodity prices have risen from their lows earlier in the year, and ongoing adjustments in emerging markets have supported a recovery in capital flows. Immediate concerns over a slowdown in China have eased on the back of policy measures to shore up growth"[43]. They added that "in advanced economies, weaker growth was mitigated by the prospect of further monetary accommodation, which supported asset prices and spurred some recovery in risk appetites. The shock of Brexit—the June 2016 U.K. referendum result in favour of leaving the European Union—initially roiled markets. Markets have subsequently adjusted smoothly to concerns about downside risks to the U.K. economy and potential spillovers"[44]. They however warn that "despite lower short-term risks, medium-term risks are building. The continued slowdown in global growth has prompted financial markets to expect an extended period of low inflation and low interest rates and an even longer delay in normalizing monetary policy"[45].

While in their latest Fiscal Monitor the IMF has observed that "at 225 percent of world GDP, the global debt of the nonfinancial sector—comprising the general government, households, and nonfinancial firms—is currently at an all-time high. Two-thirds, amounting to about $100 trillion, consists of liabilities of the private sector which, as documented in an extensive literature, can carry great risks when they reach excessive levels. However, there is considerable heterogeneity, as not all countries are in the same phase of the debt cycle, nor do they face the same risks. Nevertheless, there are concerns that the sheer size of debt could set the stage for an unprecedented private deleveraging process that could thwart the fragile economic recovery. Resolving this 'private debt overhang' problem is, however, not easy in the current global environment of low nominal output growth"[46].

The **US** economy continues to grow and at the fastest pace since 2014 in the latest quarter with output increasing by an annualized rate of 3.2 per cent in Q3 2016, after increasing by an annualised rate of 1.4 per cent in Q2 2016[47]. US consumer confidence rebounded in November after dropping in the previous month[48]; and jobs growth in the US has continued at a pace with it adding 161,000 jobs in October, with unemployment standing at 4.9 per cent[49]. Interest rates in the US, having been raised in December 2015 by 0.25 per cent to between 0.25 to 0.5 per cent, have held steady although there is an expectation of further rises to come. The evidence thus continues to point towards an ongoing expansion of the US economy, and at a better pace than at the beginning of the year. This is shown by the October 2016 Beige Book from the Federal Reserve which stated that "reports from the twelve Federal Reserve Districts suggest national economic activity continued to expand during the reporting period from late August to early October. Most Districts indicated a modest or moderate pace of expansion; however, the New York District reported no change in overall activity. Compared with the previous report, the pace of growth improved in the St. Louis, Kansas City, and Dallas Districts. Outlooks were mostly positive, with growth expected to continue at a slight to moderate pace in several

[43] IMF, October 2016, 'Global Financial Stability Report: Fostering Stability in a Low-Growth, Low-Rate Era'.
[44] Ibid.
[45] Ibid.
[46] IMF, October 2016, 'Fiscal Monitor: Debt – Use it Wisely'.
[47] Bureau of Economic Analysis, 29 November 2016, 'National Income and Product Accounts: Gross Domestic Product: Third Quarter 2016 (Second Estimate)'.
[48] The Conference Board, 29 November 2016, 'The Conference Board Consumer Confidence Index Rebounds Strongly in November'.
[49] Bureau of Labor Statistics, 4 November 2016, 'News Release: The Employment Situation – October 2016'.

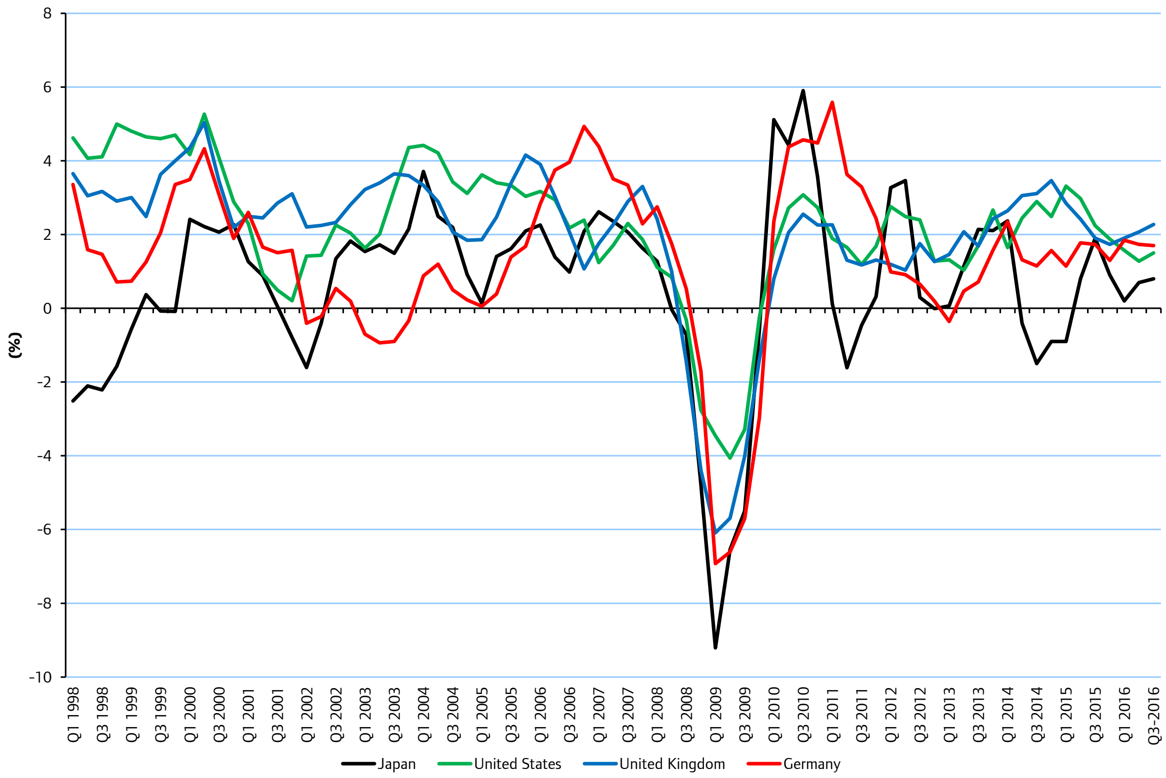
Districts"[50]. Still, although the US economy continues to grow at a pace, there is some uncertainty as to the exact path for future US economic policy following the outcome of the US election. It may be that this increased uncertainty stays the hand of the Federal Reserve for slightly longer than would have been the case otherwise

Despite its economy expanding in the first half of 2016 structural weaknesses in the **Eurozone** remain as a downside risk to the UK economy[51]. Still, at an aggregate level growth in the Eurozone continues, with output growth standing at 0.3 per cent in Q3 2016 compared to also 0.3 per cent in Q2 2016[52]. Inflation, although still low, has picked up a notch with it standing at 0.5 per cent in October 2016, up slightly from 0.4 per cent in September[53]. However, although falling and standing at its lowest level since June 2011 unemployment remains a concern with it standing at 10.0 per cent in September 2016. Unemployment has now fallen below 20 per cent in Spain although it remains at above 20 per cent in Greece[54].

Japan's economy, after declining at the end of 2015, has grown in every quarter of 2016 so far, with quarter on quarter growth of 0.5 per cent in Q3 2016 a rate above analyst expectations. The Tankan survey of business conditions in the third quarter showed that business conditions at Japan's large companies remained steady, although this was from a weak position at the beginning of the year. Inflation also however remains very low despite the introduction of negative interest rates by the Bank of Japan. Still, the IMF's latest forecast for GDP growth has been upwardly revised to 0.5 per cent growth in 2016 and 0.6 per cent growth in 2017 (upgrades of 0.2 and 0.5 per cent respectively on their July forecast)[55].

[50] The Federal Reserve Board, 19 October 2016, 'The Beige Book: Summary of Commentary on Current Economic Conditions by Federal Reserve District'.
[51] These weaknesses have been outlined in numerous previous editions of LEO such as: GLA Economics, May 2016, 'London's Economic Outlook: Spring 2016'.
[52] Eurostat, 31 October 2016, 'Preliminary flash estimate for the third quarter of 2016: GDP up by 0.3% in the euro area and by 0.4% in the EU28'.
[53] Eurostat, 31 October 2016, 'Flash estimate - October 2016: Euro area annual inflation up to 0.5%'.
[54] Eurostat, 3 November 2016, 'Euro area unemployment at 10.0%: EU28 at 8.5%'.
[55] IMF, October 2016, 'World Economic Outlook: Subdued Demand - Symptoms and Remedies'.

Figure 3.13: GDP growth in selected industrialised countries
Real GDP, growth rate compared to same quarter of previous year, last data point is Q3 2016



Source: OECD

3.4 Emerging market economies

Emerging market economies showed a mixed picture on growth in the first half of 2016 with the IMF observing that "the growth rates of emerging market and developing economies have been even more varied than those of advanced economies, and prospects remain diverse across countries and regions. Indeed, while fast growth in countries such as China and India has sustained global growth, deep recessions in a handful of emerging market and developing economies have implied a particularly strong drag on global activity over 2015 and 2016. Factors that have shaped the growth rates of this country group include the generalized slowdown in advanced economies…; rebalancing in China; the adjustment to lower commodity prices; an uncertain external environment, with sizable changes in risk sentiment over time; and geopolitical tension and strife in several countries and regions. Longer-term issues include an important demographic transition, especially in emerging market economies, as well as prospects for export diversification and convergence"[56]. The IMF now forecasts that emerging market and developing economies will grow by 4.2 per cent in 2016 and 4.6 per cent in 2017 (an upgrade of 0.1 per cent for 2016 and unchanged for 2017 on their July forecast).

Of the major emerging markets **China's** economy continues to expand with it growing at an annualised rate of 6.7 per cent in the third quarter of 2016. The Asian Development Bank (ADB) has observed that the rate of growth is such that it will not "threaten the government's growth target for 2016 of at least 6.5%. Inflation will rise but remain low in 2016 and 2017 even with

[56] IMF, October 2016, 'World Economic Outlook: Subdued Demand - Symptoms and Remedies'.

the likely end of half a decade of producer price deflation. The authorities need to contain financial risks posed by high credit growth and recurring instability in the real estate market, while intensifying structural reform to unlock growth potential"[57]. The IMF forecasts that China will grow by 6.6 per cent in 2016 and 6.2 per cent in 2017 (both years unchanged on their previous forecast)[58], while the ADB forecasts growth of 6.6 per cent in 2016 and 6.4 per cent in 2017 (both upgrades of 0.1 per cent on their previous forecast)[59].

India's economy continued to grow at a respectable pace in the first half of 2016. And the Reserve Bank of India (India's central bank) has continued with its policy of supportive interest rate cuts so far into 2016 with a surprise cut of 25 basis points to 6.25 per cent in October. While in terms of India's growth prospects the ADB has observed that "the enactment of legislation to allow a national value-added tax was a milestone reform that will create a much more integrated and productive economy. Ongoing efforts to restructure bank balance sheets to revive lending and reduce excessive leverage at large corporations is setting the stage for a recovery in investment spending likely to drive growth higher in FY2017"[60]. The IMF forecasts that Indian growth will be 7.6 per cent in both 2016 and 2017 (upgrades of 0.2 per cent in both years on their previous forecast)[61], while the ADB forecasts growth of 7.4 per cent in 2016 and 7.8 per cent in 2017 (both unchanged on their previous forecast)[62].

Russia's economy contracted in 2015 and into the first half of 2016 due to falling commodity prices, the continued impact of international sanctions and structural weakness. However, the IMF now notes that "Russia's economy shows signs of stabilization as it is adjusting to the dual shock from oil prices and sanctions, and financial conditions eased after bank capital buffers were replenished with public funds"[63]. The IMF thus forecasts growth of -0.8 per cent in 2016 and 1.1 per cent in 2017 (upgrades of 0.4 and 0.1 per cent respectively on their previous forecast)[64].

3.5 Risks to the economy

The most obvious risk to the UK and London's economy is domestic and comes from the increased economic uncertainty due to the EU referendum result and the doubts this has raised about the long-term trading environment which the capital will face. There is survey evidence that this has dampened business investment and this could act as a drag on London's economy until this uncertainty is resolved. Still the long-term impact of the vote to leave the EU on the UK and London's economies remains debatable with, as shown in Section 4 of this LEO, various factors likely to influence the country's economic prospects post 'Brexit'.

Some other risks are related and include the likely pick up in UK inflation in the coming year due to the large depreciation of sterling. This will likely result in the erosion of household spending power if nominal wages do not rise in compensation. Although remote, the continuing

[57] Asian Development Bank, September 2016, 'Asian Development Outlook 2016 Update: Meeting the low-carbon growth challenge'.
[58] IMF, October 2016, 'World Economic Outlook: Subdued Demand - Symptoms and Remedies'.
[59] Asian Development Bank, September 2016, 'Asian Development Outlook 2016 Update: Meeting the low-carbon growth challenge'.
[60] Ibid.
[61] IMF, October 2016, 'World Economic Outlook: Subdued Demand - Symptoms and Remedies'.
[62] Asian Development Bank, September 2016, 'Asian Development Outlook 2016 Update: Meeting the low-carbon growth challenge'.
[63] IMF, October 2016, 'World Economic Outlook: Subdued Demand - Symptoms and Remedies'.
[64] Ibid.

depreciation of sterling leads to risks that the willingness of foreign investors to hold UK Government debt may be eroded and combined with this the continued large current account deficit could lead to further falls in sterling. Elsewhere the outcome of the 'Brexit' vote has led to a small possibility of an existential risk to the EU itself and thus trade within Europe if this leads to exit movements in other countries. Any reputational damage to London due to a perceived erosion of London's position as a welcoming place in which to do business could dampen both FDI into the capital and collaboration on international projects with foreign partners.

Outside these risks for London and the UK, the strength of the Chinese economy has become a concern to an extent in the later part of 2016 with worries about the size of the Chinese debt burden being highlighted by a number of analysts. Any significant slowdown or financial ructions in China is likely to have knock-on effects on some of its key trading partners. The direct impact on the UK and London of a Chinese economic slowdown might be muted, however the indirect effect of this slowdown on economies with which the UK and London heavily trades could lead to a dampening in London's economic growth rate. Further, any financial instability (due to the aforementioned high Chinese debt levels) that problems in China cause could have detrimental direct impacts on the City. While over the longer term this risk could increase if in order to postpone any economic slowdown further high levels of borrowing are pursued in China in order to support the economy.

Over a longer-time period another major downside risk to the economy continues to remain the sovereign debt problems of a number of countries in the Eurozone as has been highlighted by GLA Economics for a number of years. Still, these risks (apart from the existential risk to the EU highlighted above) are generally more subdued than seen in recent years. However, the fundamental structural problems in the Eurozone that the various crises have highlighted remain to be adequately dealt with, while other problems such as issues around certain countries financial institutions, have yet to be fully addressed with these concerns having picked up during the course of this year.

Still UK monetary policy is likely to remain very accommodating for longer than was expected at the turn of 2016. Expectations of a prolonged period of low interest rates in the UK may thus act to support business and consumer confidence. However, outside the UK and for advanced economies as a whole, the era of extremely accommodative monetary policy in at least some economies is likely to begin to end over the coming few years or so. This tightening, especially in US monetary policy, may have further detrimental effects on emerging market economies. Geopolitical risks such as the continuing conflicts in Ukraine and the Middle East could also negatively impact on the global economy. And although prices have begun to rise, the dangers to some emerging market economies through low commodity prices continue as a risk to the global economy as a whole.

Upside risks to the forecast have improved since the May 2016 LEO and continue to include the possibility that global growth, especially moving into 2017, turns out stronger than some of the more subdued forecasts expect. Despite continuing slight improvements in prices there should as well remain a consumption impact due to cheap oil and commodity prices across many advanced and some emerging economies which should not be discounted. The general outlook for the Eurozone also remains generally more optimistic than has been the case in the past few years although concerns linger about the stability of some Eurozone banks. If the economic environment in the Eurozone remains relatively benign, then growth in the Zone may be quicker than currently forecasted. The recent large depreciation of sterling against most currencies could be an upside risk to the UK and London's economy with it making both tourism to London and exports from the capital and domestically produced products in comparison to foreign produced products more competitive. Further, consumer expenditure has so far remained relatively robust and should this continue this should provide support to the economy. Still, on balance, the risks to the economy remain more on the downside over the coming couple of years.

3.6 Conclusion

The UK economy grew at a decent speed in the first half of 2016. And although economic sentiment became volatile in the immediate aftermath of the EU referendum result before settling down, the preliminary estimate of Q3 2016 GDP as well as most economic indicators suggest continued growth especially in the service sector. Further, the Autumn Statement provided policy announcements that if fulfilled would mean that the ongoing fiscal policy tightening would now be less tight than what was expected at the beginning of the year. Monetary policy has been loosened since the spring and should provide further support to the UK economy. However, inflation although low is now expected to pick up over the course of the coming years and may well overshoot the Bank of England's central symmetrical target slightly. This rising inflation may provide limited room for further monetary policy loosening by the Bank and could also erode households' real incomes, to some extent, and therefore consumption unless nominal wages begin to rise to compensate for the erosion of household spending power. Outside the UK, although the Federal Reserve is expected to continue its normalisation of monetary policy in the US the pace of this normalisation is likely to be slower than was initially expected. And despite the shock caused by 'Brexit' the economic situation in the Eurozone, an important trading partner for the UK, is generally more stable than for some time.

In general despite increased economic uncertainty London's economy continues to grow, and most evidence suggests that, at the moment, this growth is stronger than the UK as a whole. The labour market also remains relatively robust although consumer and business confidence is weaker than at the turn of the year. Taken all together London's economy in terms of both output, employment and household income should continue to grow over the coming years, although it is possible that the uncertainty of the initial Article 50 negotiations may act as a drag on business sentiment and therefore growth in 2017. However, against that the possibility of an easing in the ongoing fiscal retrenchment and a more accommodating monetary policy than expected at the beginning of 2016 is likely to provide a degree of support to the economy over the coming couple of years.

4. The economic impacts of the outcome of the EU referendum

On 23 June 2016 the UK voted to leave the EU. In the run up to this vote it was expected that such a vote would have both short-run and long-run impacts on the UK economy. This chapter examines what the short-run impact of this vote has been so far and also what the long-term impacts of 'Brexit' might entail.

4.1: The short-term impact of the referendum vote

Over four months have now passed since the referendum result and as such more informed assessments of the near term impacts on the economy of the results can made, as well as a review of some of the early indicators. This section provides a summary of the early impacts of the referendum result on London and the UK economy, and goes on to review how forecasts and expectations for the economy have changed before and after the referendum,

a) The immediate impacts of the referendum result on the economy

Sterling fell sharply following the announcement of the result of the referendum, with the Sterling Effective Exchange Rate falling by 9.1 per cent by the close of play on the Monday after the result (27 June). Sterling has failed to recover this initial fall and as of 28 November stood around 11.6 per cent below its level immediately preceding the referendum on 23 June.

Figure 4.1: Sterling effective exchange rate (last data point 28 November 2016)

Source: Bank of England

A closer look at the exchange rate between the pound and the dollar has shown that sterling has recovered slightly since the end of October. The result of the US Presidential election on 8 November has caused the dollar to weaken slightly, however it currently sits well below the levels seen at the start of October.

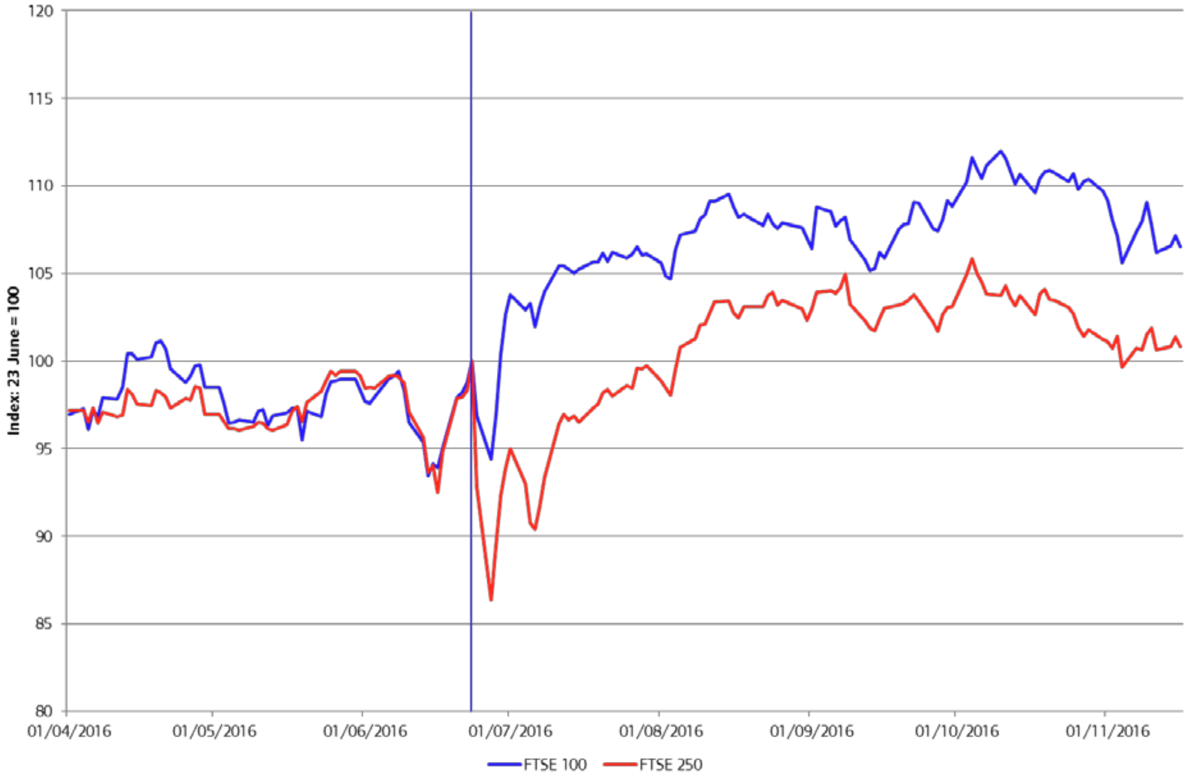
Figure 4.2: £/$ exchange rate: April – November (last data point 28 November 2016)

Source: Bank of England

Another barometer on the impact of the referendum on the economy is the stock market. The initial reaction of the markets following the referendum was negative; the FTSE 100 share index fell over 350 points (or 5.6 per cent) between the close of trade on 23 June and the close on 27 June. However movements in the FTSE 250, the largest companies listed outside of those within the FTSE 100, are arguably more important to monitor since that index is made up of smaller, more domestically focused businesses which are potentially more exposed to any negative domestic impacts resulting from the outcome of the vote compared to the more internationally focussed businesses that make up the FTSE 100. The falls in the FTSE 250 were greater, falling by 13.6 per cent between 23 and 27 June.

However, as shown in Figure 4.3, as of mid November, both the FTSE 100 and 250 had fully recovered their lost ground. The FTSE 100 now stands 6.5 per cent above the pre-referendum close value; whereas the FTSE 250 stands 0.8 per cent above.

Figure 4.3: FTSE 100 and 250



Source: Macrobond; GLA Economics analysis

b) Indicators of economic activity

Following the movements in market data, a mixture of surveys and actual data have started to be released which give an early impression as to the course of the economy following the referendum, however it should be caveated that it is a constantly evolving picture – much of the intelligence to date relates to measures of the confidence of businesses and consumers.

As shown earlier, consumer confidence contracted in the month following the referendum result, reversing a positive trend for this indicator for London over the previous couple of years. However confidence has recovered somewhat and until November when it turned marginally negative had lain in positive territory. Sentiment in the UK as a whole however has been lower (and has traditionally been lower historically); confidence has been negative over most of 2016. A significant fall immediately following the referendum has largely been reversed in recent months, but confidence remains largely negative at the UK level (see Figure 3.6).

Immediate reaction to the referendum result from businesses was more cautious. The Bank of England Agents Summary of Business Conditions report published on 20 July found that there was "no clear evidence of a sharp general slowing in activity" and that "many contacts planned to undertake strategic reviews of their operations in the coming months in light of the vote", continuing that "few had contingency plans so for the time being were in a mode of seeking to maintain 'business as usual'". As time moved on, the November release of business conditions found that "business sentiment had recovered further from its post-referendum fall, but remained relatively fragile alongside significant uncertainty around the longer-term outlook". In addition, a review of a sample of 340 businesses on investment intentions found that firms were reporting "broadly stable or slightly lower investment spending in the year ahead, after quite a significant increase in the past year". The outlook for investment was weaker for construction and in business services, with, more generally, uncertainty over future demand and future trade arrangements being the largest negative drag on potential investment.[65]

A noticeable finding from business surveys has been the divergence in sentiment between manufacturing and services. The British Chamber of Commerce Quarterly Economic Survey for Q3 2016 found (for the UK as a whole) that compared to Q2, domestic and export sales for manufacturers both increased compared to falls for the service sector. Improvements relating to exporters could be attributed to the weakening in sterling, making UK-made goods more competitive globally. However, forward-looking indicators show falls in the balance of businesses looking to invest in plant and machinery (within the manufacturing sector) and on training and development (within service sector firms).

Surveys for London on business sentiment show similar findings. The London Chamber of Commerce and Industry Capital 500 Quarterly Economic Survey found falls across a range of indicators for Q3 2016 compared to Q2. The most noticeable fall was that a net balance of 9 per cent of London businesses expected "their overall company prospects to decline, moving into negative territory for the first time and down a record 22 points on last quarter".[66] The survey also found expectations for both the UK and London economy remaining "on a downward trajectory", with a net balance of 23 per cent of companies expecting a decline, down 31 points on the previous quarter. Sentiment of businesses for the UK as a whole was worse, with a net balance of 39 per cent of businesses expecting a weaker economic outlook.

The Purchasing Managers Index for business activity showed that, despite stated falls in activity in June and July (the first falls since October 2012), the subsequent two months showed activity in London and the UK increasing again (with index scores greater than 50; as shown in Figure 4.4).

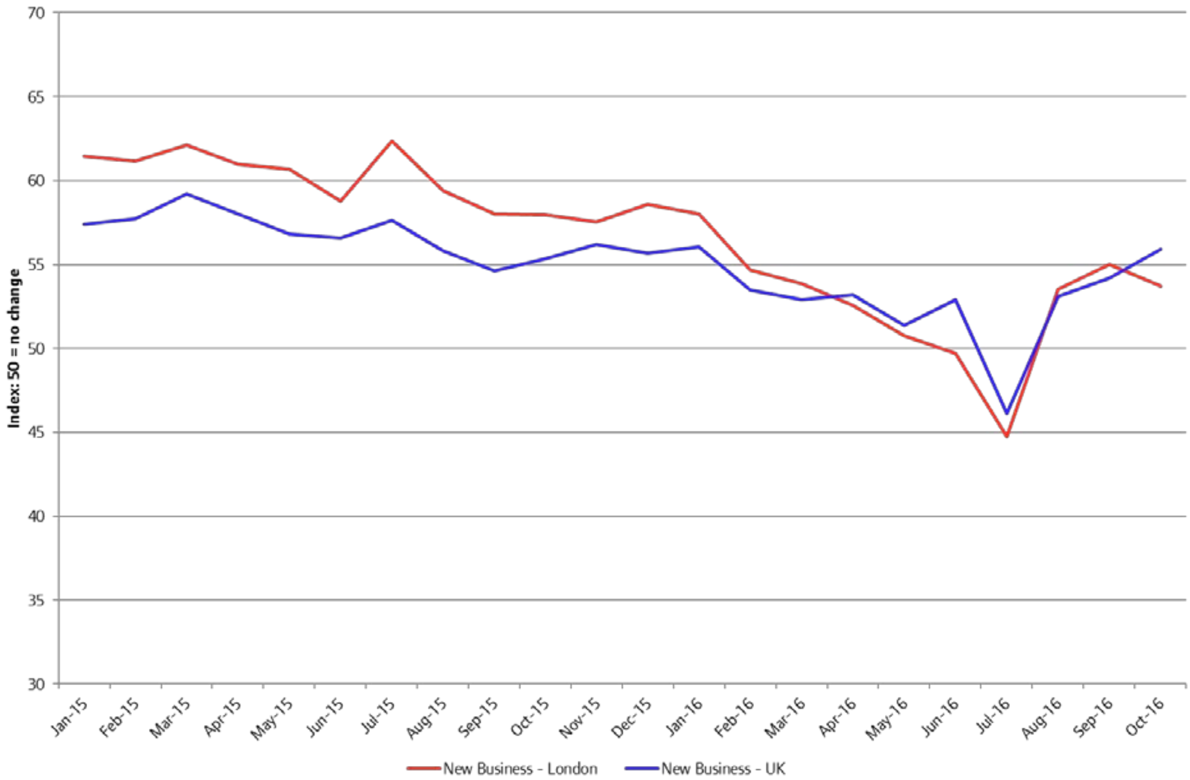
[65] Bank of England, 9 November 2016, 'Agents' summary of business conditions – November 2016 Update'.
[66] London Chamber of Commerce and Industry, 6 October 2016, 'Capital 500 London Quarterly Economic Survey'.

Figure 4.4: PMI Business Activity – London and UK

Source: Markit Economics. A score of above 50 indicates an increase in activity; a score below 50, contraction.

Similar movements have also been seen in the indicator on new business orders (Figure 4.5). Falls in June and July 2016 (the first contraction since August 2010) were followed by increases in August and September, although the index remains only marginally above 50, below the average of the period from the start of 2015.

Figure 4.5: PMI New Orders – London and UK

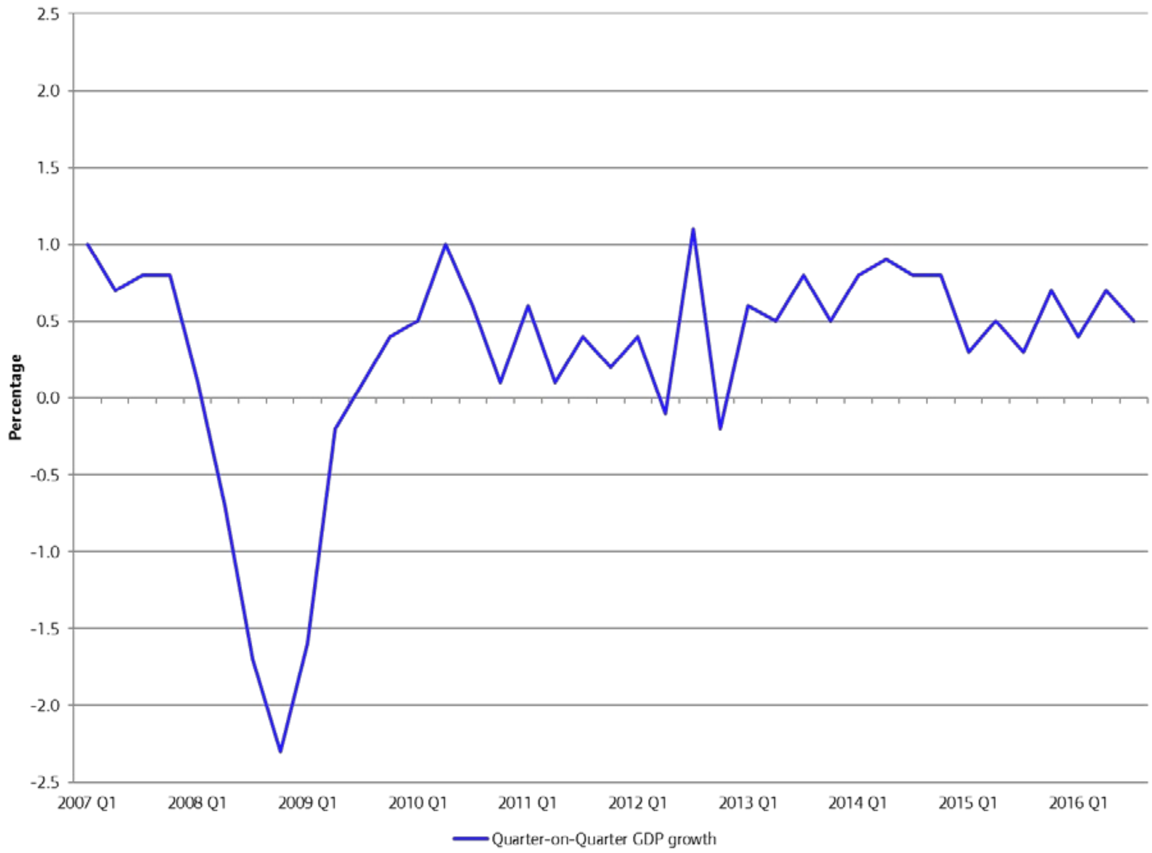


Source: Markit Economics

Despite many of these surveys pointing towards, at least initially, weaker prospects, many indicators on the actual activity within London's economy have shown more resilience than expected immediately following the referendum result. The headline indicator which generates the most interest is GDP. One quarter's worth of data has passed following the referendum, however currently the data published for Q3 2016 is still a provisional estimate that could be subject to revisions. That said, the first estimate of GDP found that output grew by 0.5 per cent in Q3 2016, compared to 0.7 per cent in Q2 2016. In their commentary from the preliminary release of data, the ONS reported that "the pattern of growth to be broadly unaffected with a strong performance in the services industries, offsetting falls in other industrial groups"[67]; and that Q3 growth "is not a significant departure from trend GDP growth" (see Figure 4.6).

[67] ONS, 27 October 2016, 'Gross Domestic Product, preliminary estimate: July to Sept 2016'.

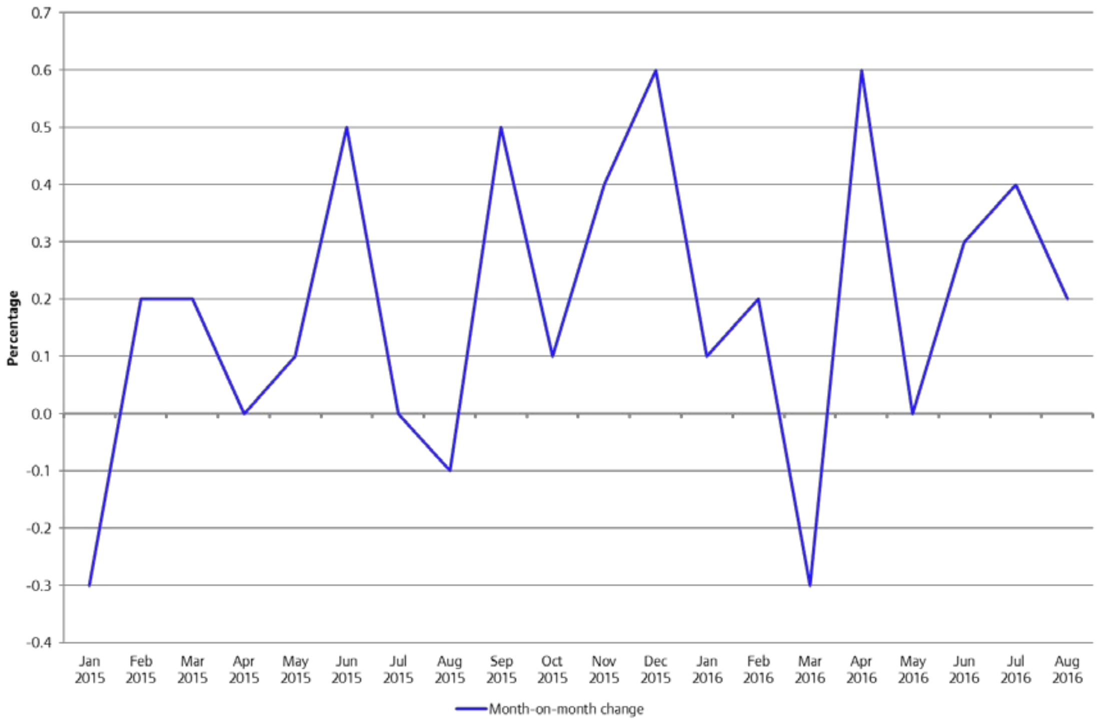
Figure 4.6: GDP growth, UK



Source: Office for National Statistics

Looking at sub-components within the economy, services account for almost four-fifths of the UK economy. Data from the two months following the referendum result have shown positive growth on a month-on-month basis, as shown in Figure 4.7.

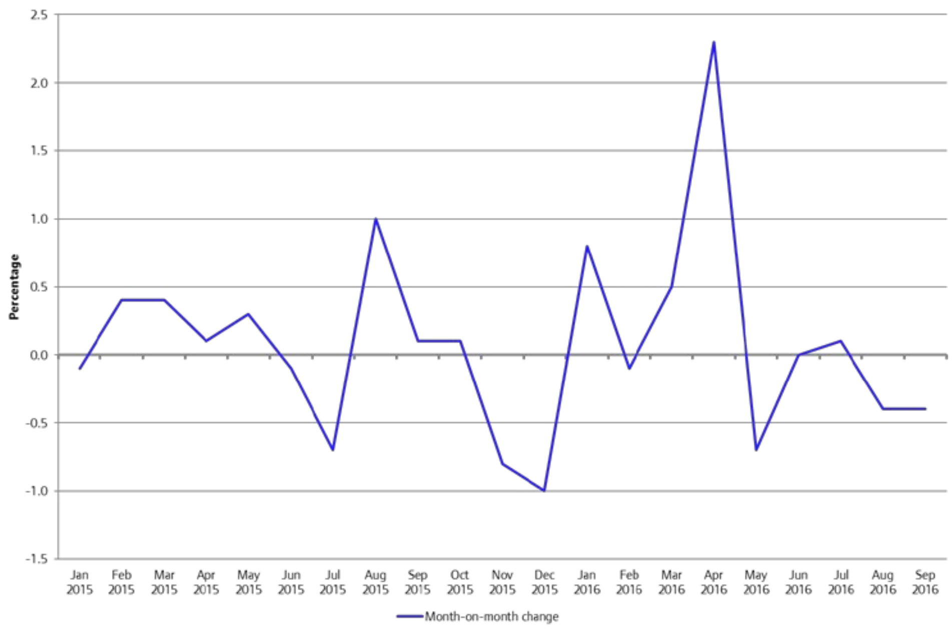
Figure 4.7: Index of Services, UK



Source: Office for National Statistics

Data on production industries however is less encouraging, and shows that despite marginal growth in July, data for August and September has been weaker (Figure 4.8). Combined though, the positive data on services outweighs the loss within the production industries, hence explaining the 0.5 per cent growth in GDP in the third quarter of 2016.

Figure 4.8: Index of Production, UK



Source: Office for National Statistics

Looking more closely at the preliminary estimate of GDP, taking account of the fact that this is based on incomplete data (hence subject to revision in later months), the largest contributions to growth came from services (0.64 percentage points), whereas agriculture, production and construction were drags on output (Table 4.1).

Table 4.1: Components of GDP growth

	GDP	Agriculture	Production	Construction	Services
Weights of GDP	**100.0%**	**0.7%**	**14.6%**	**5.9%**	**78.8%**
Q1 2015	0.3	-2.9	0.4	2.6	0.1
Q2 2015	0.5	1.1	0.7	0.7	0.5
Q3 2015	0.3	0.1	0.0	-0.8	0.5
Q4 2015	0.7	0.4	-0.4	0.6	0.9
Q1 2016	0.4	-0.1	-0.1	0.8	0.7
Q2 2016	0.7	-1.0	2.1	-0.1	0.6
Q3 2016	0.5	-0.7	-0.4	-1.4	0.8
Contribution to GDP growth Q3 2016		-0.01	-0.05	-0.09	+0.64

Source: Office for National Statistics

Following the referendum there had been a concern that confidence in the housing market in London and the UK may fall leading to a reduction in purchasing activity in the capital, for both high net worth purchasers as well as first time buyers.

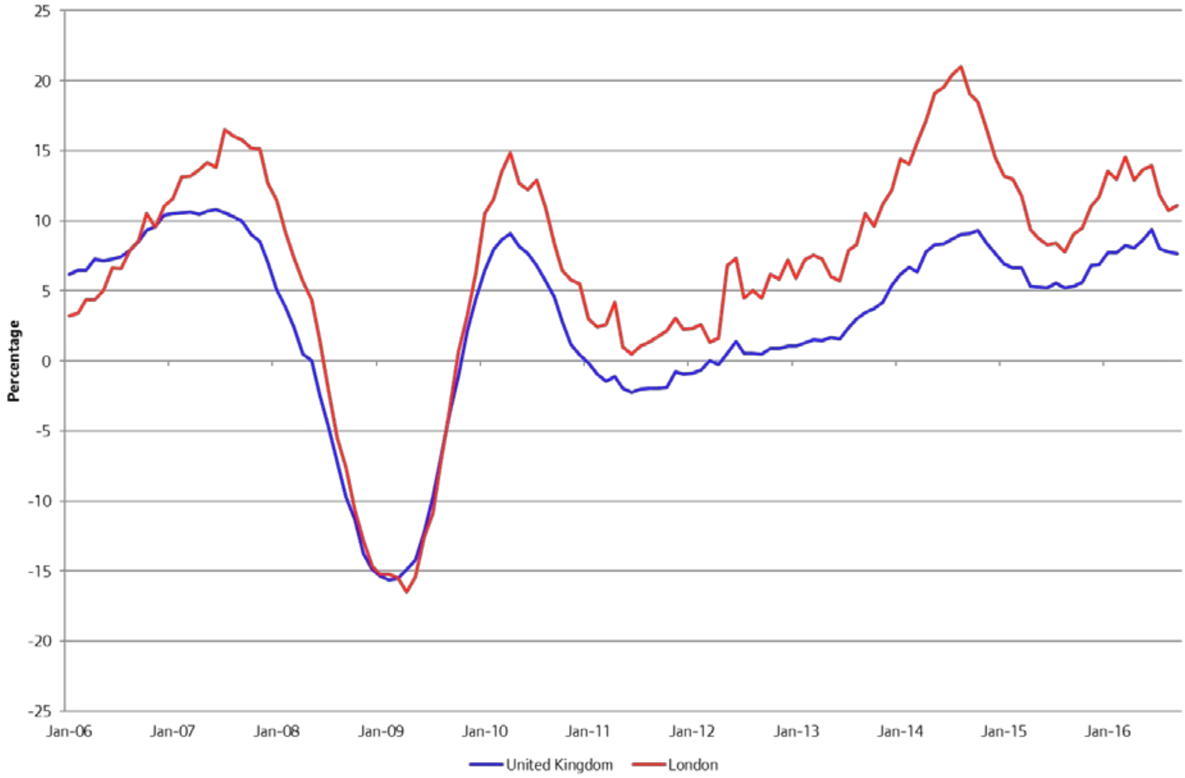
As with many indicators, it is still too early to suggest whether the referendum result will have short or longer-term impacts on the housing market in the capital. Forward-looking indicators such as from the Royal Institution of Chartered Surveyors have indicated an expectation that house prices would be falling in the capital (Figure 4.9).

Figure 4.9: Three month forward-looking house price expectations

Source: Royal Institution of Chartered Surveyors

However, recent data on house prices indicate that these house price expectations data have not translated to house price falls. House price growth remains stronger in London than the UK as a whole, and in Q3 2016, annual house price growth in London stood at 7.1 per cent (Figure 4.10).

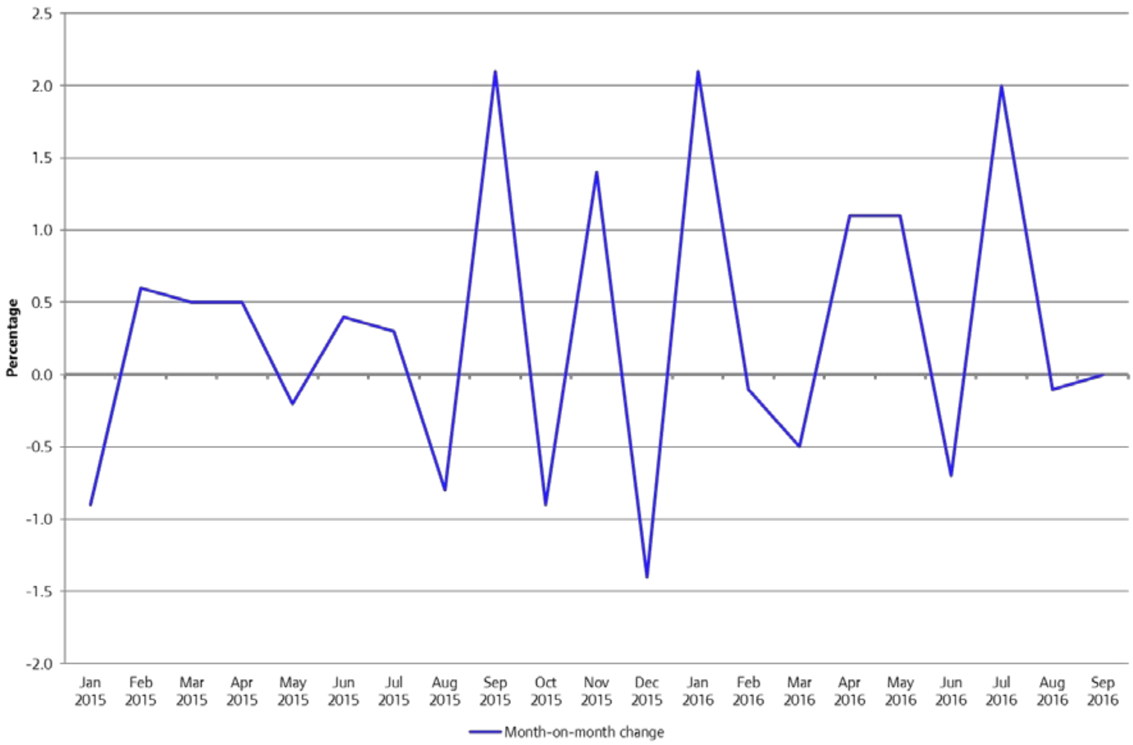
Figure 4.10: Annual house price growth



Source: Land Registry and ONS

Another useful barometer of activity within the economy are retail sales data. Figure 4.11 shows that, despite a sharp fall in consumer confidence immediately following the referendum, the observed data showed no such fall in the volumes of retail sales between July and September.

Figure 4.11: Retail sales volumes



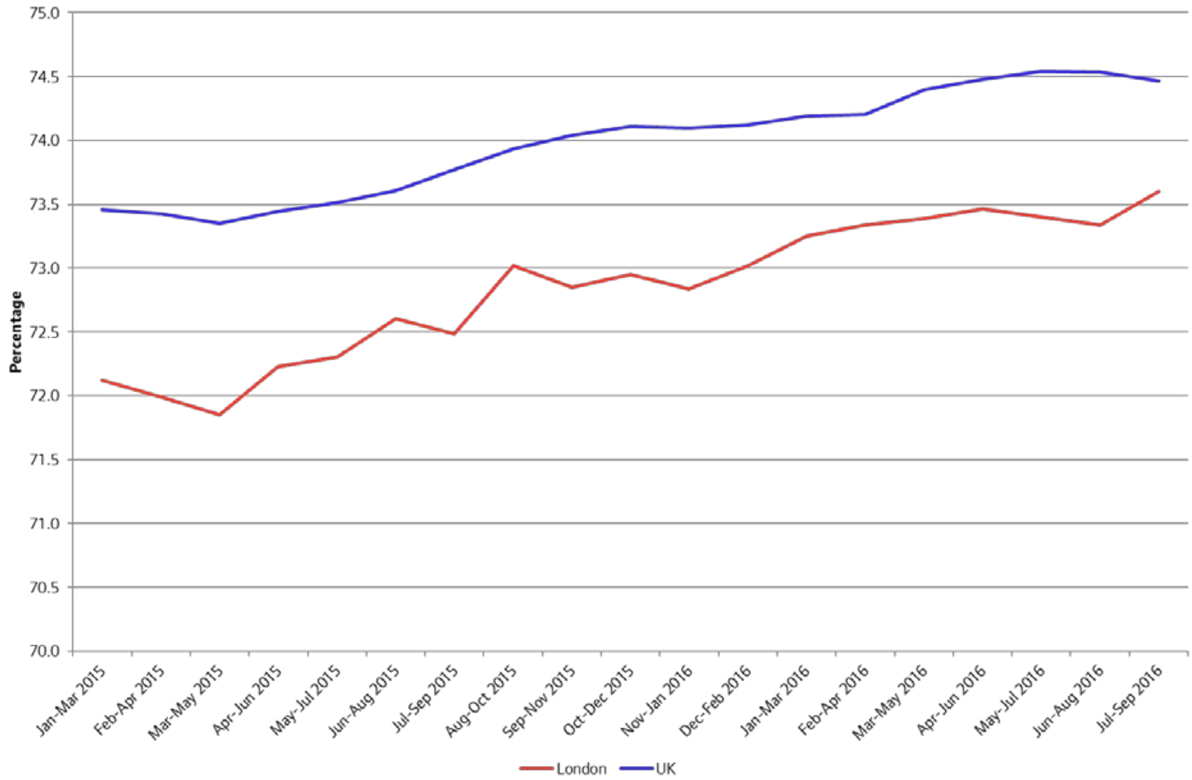
Source: Office for National Statistics

Another potentially contributory factor to the growth of retail sales may have been from the depreciation of sterling. An often cited impact of weaker sterling is on tourism. The depreciation of sterling may make the UK a more attractive location for international tourists. This is particularly important for London, as the capital attracts more than half of all international visitors to the UK. Early data from travel researcher ForwardKeys found that the depreciation of the pound led to a 4.3 per cent increase in flight bookings to the UK in the 28 days following the vote.[68] In addition, data from the New West End Company found that sales in the West End in July were 4.9 per cent higher than the previous, citing that the weakening of the pound encouraged tourists to spend more while on their visits. Further research from Deloitte indicates that the UK has become the most affordable luxury market in the world, which may drive increased levels of spending and footfall in the West End, especially driven by international visitors.[69]

Data on the labour market in the capital also shows that there has been very little observable movement on the main indicators. For the UK as a whole, the employment rate remained unchanged in the three months to September 2016. For London, the employment rate increased by 0.1 percentage points on the previous quarter to 73.6 per cent (Figure 4.12).

[68] BBC, 8 August 2016, 'UK tourism boosted by fall in pound'.
[69] The Financial Times, 21 October 2016, 'UK becomes go-to destination for luxury goods'.

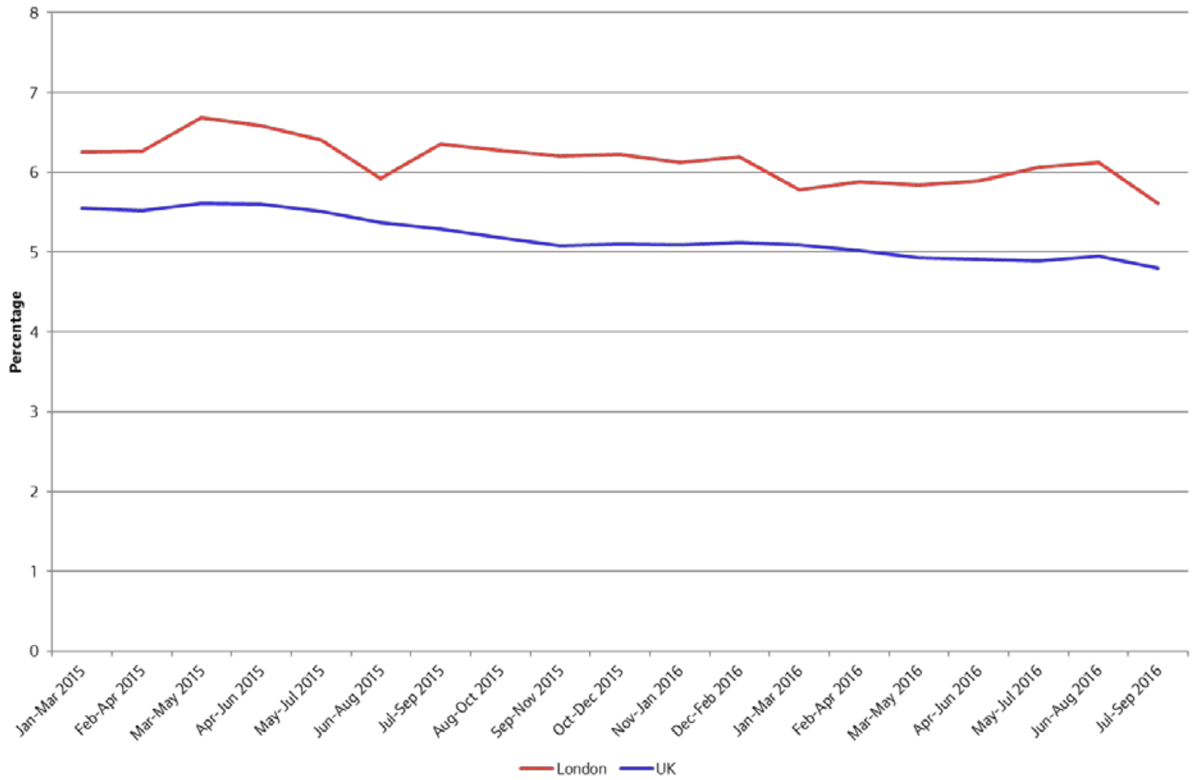
Figure 4.12: Employment rate



Source: Office for National Statistics

The unemployment rate in London fell by 0.3 percentage points in the three months to September 2016, to stand at 5.6 per cent. For the UK as a whole though, the unemployment rate fell by 0.1 percentages points to 4.8 per cent in the quarter to September (Figure 4.13).

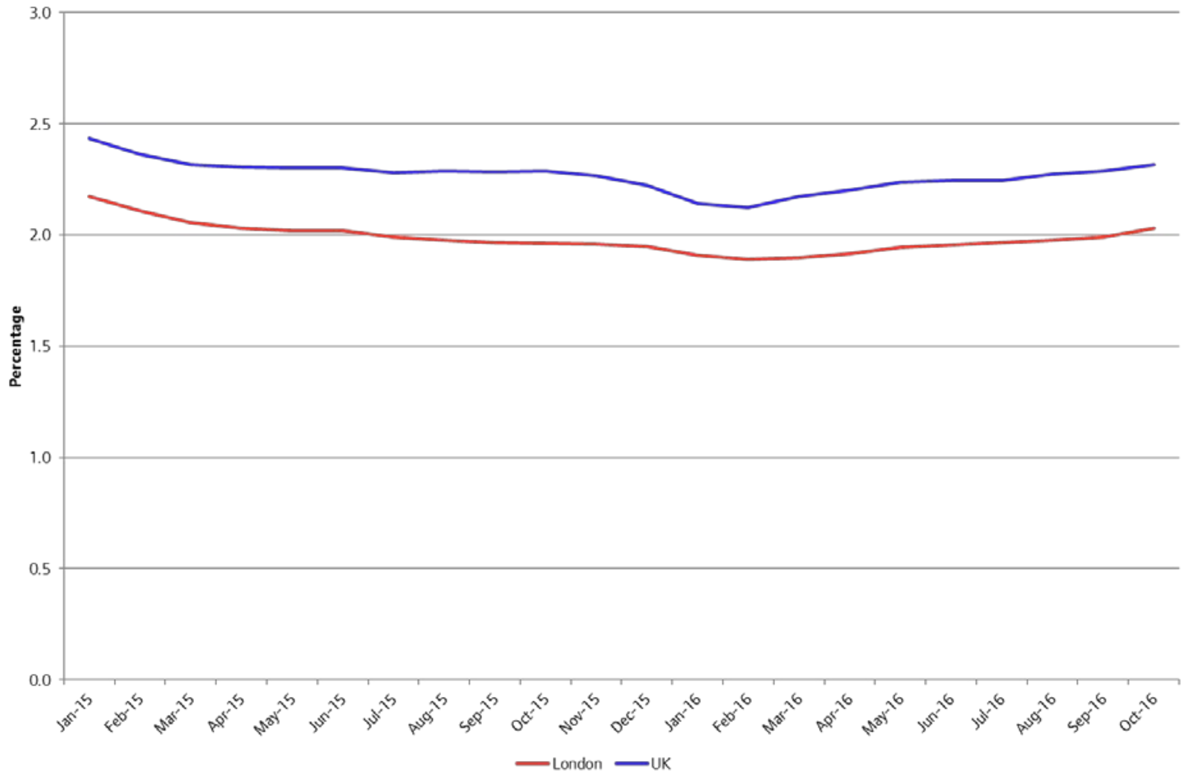
Figure 4.13: Unemployment rate



Source: Office for National Statistics

A timelier measure of unemployment is the Claimant Count. In October, for London, there were 115,800 seasonally-adjusted claimants, an increase of 2,400 on the month - continuing the slight upward trend in this measure since February 2016. For the UK as a whole, the picture is less strong and the numbers of claimants have increased since the turn of the year. However, since the referendum, there has been a small tick up in the claimant count rate (by 0.1 percentage points, to 2.3 per cent for the UK (Figure 4.14)).

Figure 4.14: Claimant Count



Source: Office for National Statistics

Whilst survey data may have suggested an immediate shock in confidence and activity, actual data covering the period since the vote suggests that there has been no notable impact on economic activity. However, it is too early to state definitively what the overall impact of the vote itself on economic activity has been. The following section looks at how forecasts for the economy have changed in recent months, taking account of observable data and sentiment.

c) A review of forecasts for London and the UK economy

In advance of the EU referendum, many forecasters attempted to quantify the potential impact of a vote to leave the EU for the UK economy. The consensus of opinion was that the impacts would be negative. The OECD's assessment of the near-term effects was that "UK GDP growth would be reduced by 0.5 percentage points in both 2017 and 2018. The onset of the trade shock in 2019 adds to these costs considerably, with GDP growth reduced by 1.5 percentage points that year".[70]

In the lead-in to the referendum, HM Treasury published their analyses of the potential impact of a vote to leave the EU on output, the labour market and sterling. Two scenarios were created to model the potential negative impacts resulting from the vote, a "shock" and a "severe shock" scenario. Under the shock scenario, "a vote to leave would result in a recession, a spike in inflation and a rise in unemployment", with the headline findings being that GDP would be 3.6

[70] OECD, 27 April 2016, 'The Economic Consequences of Brexit: A Taxing Decision', OECD Economic Policy Paper No. 16

per cent lower compared to a vote to remain, sterling would be around 12 per cent lower, and unemployment would increase by around 500,000.[71]

Analysis from NIESR undertaken on 12 May, expected that "in the short-run…it would lower GDP by around 1 per cent in 2017, compared to a world in which the UK voted to remain". At that time, NIESR stated that "our central forecast results do not imply that the economy will go into recession as a consequence of a vote to leave, but the likelihood of such an event increases". At that time it was expected that GDP would be 2.3 per cent lower in 2018 compared to a baseline where the UK remains in the EU.[72]

Following the referendum result, NIESR updated their forecasts for the UK economy, forecasting GDP to grow by 1.7 per cent in 2016, slowing to 1.0 per cent in 2017. However, it was the statement on the risk of a recession that gathered most interest, with them stating that: "We expect the UK to experience a marked economic slowdown in the second half on this year and throughout 2017. There is an evens chance of a technical recession in the next 18 months, while there is an elevated risk of further deterioration in the near term".[73]

Focussing solely on growth, it is currently too early to assess whether these forecasts will be borne out, however the balance of evidence suggests that in terms of growth, the initial forecasts for the UK economy were too pessimistic. Table 4.2 shows how forecasts have progressed from pre-referendum to this point in time, reflecting improved sentiments on economic growth in the short term.

[71] HM Treasury, 23 May 2016, 'HM Treasury analysis: the immediate economic impact of leaving the EU'.
[72] NIESR, 12 May 2016, 'The Long and Short of it: What price UK Exit from the EU?'
[73] NIESR, 3 August 2016, 'Prospects for the UK economy'.

Table 4.2: Summary of UK economy forecasts: Pre/post referendum

Pre-Referendum

Forecaster	2016	2017	2018
IMF	1.9	2.2	2.2
HMT (Summary of Independent Forecasters)[74]	1.8	2.1	--
BoE (May Inflation Report)[75]	2.0	2.3	2.3

Post-Referendum

Forecaster	2016	2017	2018
IMF	1.8	1.1	1.7
HMT (Summary of Independent Forecasters)[76]	1.9	1.0	--
BoE (November Inflation Report)[77]	2.2	1.4	1.5

Note: GDP growth forecasts (per annum, %)

Post-Referendum forecast revisions

Forecaster	2016	2017	2018
IMF	-0.1	-1.1	-0.5
HMT (Summary of Independent Forecasters)	+0.1	-1.1	--
Bank of England	+0.2	-0.9	-0.8

Many of the forecasts for the UK economy produced immediately after the referendum have subsequently been revised upwards, reflecting increased optimism in the economic outlook and reflecting the resilience of leading indicators on economic activity immediately following the recession. A review of the Bank of England's forecasts produced for their Inflation Report publications finds that immediately following the referendum, forecasts for 2017 and 2018 were sharply revised down (Table 4.3). Following the August Inflation Report, forecasts for 2017 have been upgraded, although forecasts for 2018 have continued to fall; it does still reflect that UK economic growth is forecast to be weaker compared to the pre-referendum expectations, where a "remain" result was considered the most likely outcome.

[74] HM Treasury, 15 June 2016, 'Forecasts for the UK economy, June 2016'.
[75] Bank of England, 12 May 2016, 'Inflation Report, May 2016'.
[76] Bank of England, 19 October 2016, 'Forecasts for the UK economy, October 2016'.
[77] Bank of England, 3 November 2016, 'Inflation Report, November 2016'.

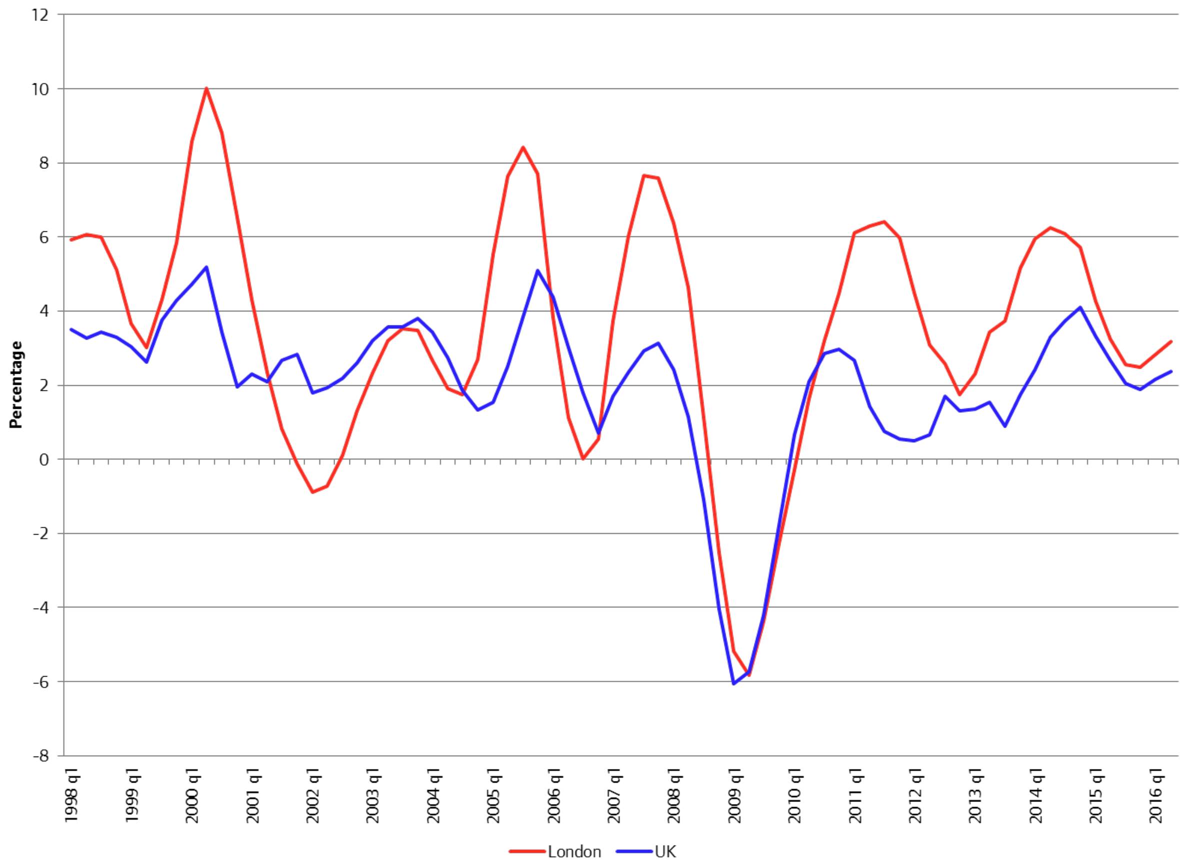
Table 4.3: Bank of England forecasts for the UK economy

Inflation Report Edition	2016	2017	2018
February[78]	2.2	2.4	2.5
May	2.0	2.3	2.3
August[79]	2.0	0.8	1.8
November	2.2	1.4	1.5

Source: Bank of England

Changing the focus towards London, Figure 4.15 shows that for most of the last decade London has grown at a faster rate than the UK as a whole. The most recent data for London calculated by GLA Economics estimate annual growth in GVA of 3.2 per cent in Q2 2016 compared to 2.4 per cent for the UK as a whole.

Figure 4.15: Real terms GVA growth, London and the UK (last data point is Q2 2016)



Source: GLA Economics and Office for National Statistics

Nevertheless, similar downgrades to those seen for the UK economy have been made by forecasters of London's economy in the immediate aftermath of the referendum, as shown in Table 4.4.

[78] Bank of England, 4 February 2016, 'Inflation Report, February 2016'.
[79] Bank of England, 4 August 2016, 'Inflation Report, August 2016'.

Table 4.4: Summary of London economy forecasts: Pre/post referendum

Pre-Referendum

Forecaster	2016	2017	2018
Consensus (LEO 28)	2.6	2.6	2.6
GLA Economics (LEO 28)	2.9	3.4	3.3

Post-Referendum

Forecaster	2016	2017	2018
Consensus (LEO 29)	2.4	1.4	1.9
GLA Economics (LEO 29)	2.8	2.0	2.3

Note: GVA growth forecasts (per annum, %). GLA Economics scenario forecast not published.

Post-Referendum forecast revisions

Forecaster	2016	2017	2018
Consensus	-0.2	-1.2	-0.7
GLA Economics	-0.1	-1.4	-1.0

Overall, forecasts and predictions as to the potential negative impacts on output have to date been too pessimistic. Nevertheless, forecasts still see growth in 2017 and 2018 as being lower than the pre-referendum situation.

4.2: The long-run impact of 'Brexit'

This part of the chapter looks beyond the usual time horizon of London's Economic Outlook ie the current year and following two years, to examine the potential impact of 'Brexit' on the economy in the longer term. It should be noted that the impact of 'Brexit' is likely to be felt across a vast array of areas such as trade, regulation, labour and skills access etc. This summary will, by necessity, only touch on these issues here. Although, as shown in the first half of this chapter, it is possible that the process of the UK leaving the EU may or may not lead to some economic turbulence over the coming couple of years, the long-term impact of the decision is, arguably, of more serious concern for the prospects for London's and the UK's economies.

In particular a number of factors will determine the long-run success or otherwise of the UK economy in a post Article 50 process world, which include:

1) The post 'Brexit' trading relationship between the UK and EU. Economic theory argues that international trade increases the total welfare and income of those countries involved in it with greater trade increasing these benefits. This is based on the idea of comparative advantage with specialisation and trade leading to more efficiently produced output rather than in the case of autarky where each country produces everything it wishes to consume itself no matter how inefficient this is in the allocation of resources. Therefore with higher trade greater income is available to the country as a whole. Thus everything else being equal a decline in trade or a slowdown in the growth of trade with the EU due to a less open post 'Brexit' trading environment could reduce the prosperity of the UK economy from what it otherwise would have been. However, this impact is likely to fall differentially on the different sectors of the economy with for

instance the Financial services sector highlighting the importance of maintaining 'passporting' rights into the EU market.

The importance to London of trade is highlighted in recent GLA Economics research. Thus although no data has been published on London's trade with the European Union specifically, globally London business units exported around £120.8 billion worth of goods and services[80]. The London Business Survey estimated that London businesses exported £28 billion more than they imported in the year to mid-2014[81,82,83]. Additional analysis from the London Business Survey, estimated that around 115,000 business units in London exported to the rest of Europe in the 12 months to mid-2014, this is equivalent to 26 per cent of all London's business units; around 85,000 (or 19 per cent) of London's business units imported from the rest of Europe.

The impact on UK/EU trade of the UK leaving the EU is likely to be heavily dependent on the type of post 'Brexit' trading deal that is set up between the two, and this will also hold for the capital as well. Of London businesses surveyed in the London Business Survey in 2014[84] the majority of surveyed business units (64 per cent) expected the "impact on [their] business of leaving the EU (but not the single market)" to neither negatively nor positively impact their business. However, of those that did expect an impact, around three quarters thought it would have a negative or very negative impact. While, of the sectors of London's economy those with the most negative views on leaving the EU (but not the Single Market) were Information, communications, arts, entertainment and recreation (37 per cent of surveyed business expected that leaving the EU would have a negative or very negative impact on their businesses), Real estate, architecture, engineering and building services (34 per cent), and Accommodation, food, travel and tourism (30 per cent).

Further the Institute for Fiscal Studies (IFS) has observed that "UK service exports are especially important. They accounted for 31% of all exports in 1999 and 44% of exports in 2015. The UK runs a significant trade surplus in services and the EU is the UK's largest service export destination, accounting for 40% of service exports whereas emerging economies such as Brazil, Russia, India and China together account for less than 5%"[85]. This highlights the importance of the post 'Brexit' services trade relationships with the EU for not only the UK but also for London given the importance of service exports to London's economy.

2) The potential positive impact that future trade deals with the rest of the world could have on UK trade. There is also the potential that these trade deals negotiated solely by the UK would more closely fit the needs of the UK economy. For instance, few trade deals focus heavily on the service sector, however this sector accounts for a large part of the UK economy and its exports and UK negotiated deals could focus on this. So although it should be noted that the EU and thus the UK are currently party to a

[80] GLA Economics, November 2016, 'Economic Evidence Base for London 2016'.
[81] This result and those from the ONS Pink Book are not consistent with one another, so some caution is required with this finding.
[82] GLA Economics, November 2014, 'London Business Survey 2014: Exports'.
[83] For reference, in 2014 the UK as a whole had a surplus in its trade in services with the EU of £15.4 billion: ONS, 26 June 2015, 'How important is the European Union to UK trade and investment?'.
[84] GLA Economics, November 2014, 'London Business Survey 2014: London as a place to do business'.
[85] IFS, 10 August 2016, 'Brexit options: budget contributions pale against wider trade and economic impacts'.

number of trade deals with other countries as highlighted by the recent deal with Canada, these deals were negotiated for the benefit of all 28 EU member states. Therefore renegotiated versions of these deals may better reflect the UK's needs although it is currently unclear how easy or quickly this process could be undertaken and also whether bridging agreements between these countries and the UK would be possible in the intervening time.

3) The impact on the labour supply and the availability of highly qualified workers. If significant restrictions on the movement of European workers led to shortages in labour, especially skilled labour, then this would increase the operating costs of firms. This is of particular importance to London as the capital's economy relies on a highly skilled labour force as shown by Table 4.5 which shows the skills level of UK born, EEA born and other non EEA born workers.

Table 4.5: Share of jobs in London by highest qualification and country of birth of job holder in 2015

Highest qualification	Born in the UK	Born elsewhere in the EEA (excluding the UK)	Born in any other country (excluding the UK/EEA)
Higher degree	16.9%	21.2%	20.4%
Ordinary degree or equivalent	34.6%	27.1%	29.9%
Higher education	6.7%	8.7%	10.0%
GCE, A level or equivalent	18.8%	12.3%	10.8%
GCSE grades A*-C or equivalent	15.7%	5.2%	7.0%
Other qualifications	4.2%	20.3%	16.1%
No qualifications	3.1%	5.2%	5.8%
Total	**100.0%**	**100.0%**	**100.0%**

Note: the Workforce Jobs series is the preferred measure of jobs, but the Annual Population Survey is used here for its individual-level information such as country of birth and educational qualification. Source: ONS Annual Population Survey

4) The relaxation of regulation on businesses in a post-'Brexit' world could improve the business environment in the UK. However, against that leaving the EU's customs union could add to the red tape faced by exporting companies and in international comparisons the UK regulatory environment is already seen as relatively relaxed compared to other European countries as shown by Table 4.6.

Table 4.6: Strictness of employment protection legislation for selected countries, regular employment, 1990 – 2013, range 0 to 6 (a higher score represents stricter regulation)[86]

	1990	1995	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014
Australia	1.17	1.17	1.42	1.42	1.17	1.17	1.17	1.67	1.67	1.67	1.67	
Austria	2.75	2.75	2.75	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	..
Belgium	1.85	1.85	1.85	1.89	1.89	1.89	1.89	2.08	2.08	1.89	1.89	..
Canada	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	..
Czech Republic	..	3.31	3.31	3.31	3.05	3.05	3.05	3.05	3.05	2.92	2.92	..
Denmark	2.18	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.20	2.20	2.20	..
Finland	2.79	2.45	2.31	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	..
France	2.34	2.34	2.34	2.47	2.47	2.47	2.38	2.38	2.38	2.38	2.38	..
Germany	2.58	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68	..
Greece	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.17	2.17	2.12	..
Hungary	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.59	..
Ireland	1.44	1.44	1.44	1.44	1.27	1.27	1.27	1.27	1.27	1.40	1.40	..
Italy	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.68	..
Japan	1.70	1.70	1.70	1.70	1.37	1.37	1.37	1.37	1.37	1.37	1.37	..
Korea	3.04	3.04	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	..
Mexico	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.03	..
Netherlands	3.04	2.84	2.88	2.88	2.88	2.88	2.82	2.82	2.82	2.82	2.82	..
New Zealand	1.24	1.24	1.24	1.56	1.56	1.56	1.56	1.56	1.56	1.39	1.39	..
Norway	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	..
Poland	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	..
Portugal	4.83	4.58	4.58	4.42	4.42	4.42	4.42	4.13	4.13	3.56	3.18	..
Slovak Republic	..	2.47	2.47	2.22	2.22	2.22	2.22	2.22	2.22	1.71	1.84	..
Spain	3.55	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.21	2.21	2.05	..
Sweden	2.80	2.80	2.65	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	..
Switzerland	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	..
Turkey	2.39	2.39	2.39	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	..
UK	1.10	1.10	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.10	1.10
United States	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	..
China	..	..	..	..	..	3.26	3.26	3.26	3.26	3.26	..	..
India	..	..	..	..	..	3.29	3.29	3.29	3.29	3.29	..	..
OECD countries	..	..	..	..	..	2.17	2.16	2.15	2.12	2.08	2.04	..

Source: OECD

[86] The OECD notes that: "the dataset contains the indicator of strictness of regulation of individual dismissal of employees on regular/indefinite contracts. The OECD indicators of employment protection are synthetic indicators of the strictness of regulation on dismissals and the use of temporary contracts. For each year, indicators refer to regulation in force on the 1st of January. Data range from 0 to 6 with higher scores representing stricter regulation".

5) The impact of leaving on Foreign Direct Investment (FDI) into the UK and London. Various academic studies have found EU membership to have had a positive impact on FDI to the UK[87,88,89]. London has attracted the most FDI of any city in Europe. In the five financial years to 2014/15, London was the destination for more than double the number of inward investment projects compared to any other European city[90]. Between 2010/11 and 2014/15, over 35 per cent of all inward investments to London originated from Europe, and over a quarter of FDI projects which originated from London went to the European Union[91]. The UK and London have historically been attractive to investors because of the stable economic environment, good prospects for returns, and the access provided to wider EU markets[92].

   The current importance of London as a centre for international business is highlighted by the proportion of global or European regional HQ's currently located within it as shown by Table 4.7.

Table 4.7: HQ locations of Top 250 companies with global or regional HQ in Europe

City	Percentage
London	40
Paris	8
Madrid	3
Amsterdam	2.5
Brussels	2.5
Munich	2
Luxembourg	2
Moscow	2
Geneva	2
Other European cities	37

Source: Deloitte London Futures Report, 2014

   The impact of 'Brexit' on FDI is unknown and will vary depending on the type of investment and the investor's position. The picture will become clearer with time but most forecasters prior to 'Brexit' assumed a decline in FDI. For example, a London School of Economics (LSE) Centre for Economic Performance (CEP) study predicted that, controlling for other factors, FDI would be about 22 per cent lower over the 'next decade' if the UK left the EU[93]. This is consistent with the centre of the range of the HM Treasury estimates produced prior to the referendum[94]. However, this outcome is not a foregone conclusion and could be influenced by many other variables.

6) Any international impact on London's and the UK's reputation as a place in which to do business.

[87] HM Treasury, April 2016, 'The long-term economic impact of EU membership and the alternatives''. p.52.
[88] Dhingra, S., Gianmarco, O., Sampson, T. & Van Reenen, J., 2016, 'The impact of Brexit on foreign investment in the UK'.
[89] EY, 2015, '2015 UK attractiveness survey'
[90] fDi Markets, Crossborder Investment Monitor
[91] Ibid.
[92] Dhingra, S., Gianmarco, O., Sampson, T. & Van Reenen, J., 2016, 'The impact of Brexit on foreign investment in the UK'.
[93] Ibid.
[94] HM Treasury, April 2016, 'The long-term economic impact of EU membership and the alternatives' p.131

7) Any long-term impact on tourism. This could be due to a long-term depreciation of sterling making London a relatively cheaper place to visit and thus attracting tourists or the introduction of hurdles (such as removing the ability to do a joint application to both visa areas to the UK and Schengen area) hitting tourism from certain markets such as China.

8) The long-term future of projects and programmes currently funded by the EU. London benefits from a number of different European funding streams for a variety of projects and programmes. For example, the London Enterprise Panel was allocated €745 million for the delivery of the European Structural and Investment Funds (ESIF) 2014-2020 which includes the European Social Fund (ESF) and the European Regional Development Fund (ERDF). The potential loss of these funds puts projects and programmes at risk unless alternative funding sources can be found. One such source could be the savings from UK contributions to the EU budget. The UK's gross contributions to the EU in 2014 were £19.1 billion but after the rebate and contributions to the public sector, the net contribution was £9.9 billion[95]. When payments to non-public sector bodies (e.g. research payments to universities) are accounted for, the five year average net contribution to the EU from the UK was £7.1 billion[96].

Still currently it is unclear what relationships will exist between the EU and UK and this will obviously have implications on the issues raised above. Thus there currently remains an uncertainty over whether at the end of the Article 50 process the UK will opt for a 'hard' or 'soft' withdrawal from the EU. With a 'hard Brexit' being towards the line of the UK falling back on World Trade Organisation (WTO) rules for trading with the EU (although with the possibility of a future trade deal with the EU also mooted) while a 'soft Brexit' would see the UK retain a number of relationships with the EU including access to the European Single Market. What eventual type of exit is negotiated is likely to be dependent on a number of negotiating points between the UK and EU such as the free movement of people.

To this end a number of post-EU membership regimes have been suggested for the UK's trading relationship with the remaining EU27 which include:

a) European Economic Area (EEA) membership: this would see the UK remain part of the European Single Market (such as in the case of Norway). The UK would continue to adopt the EU's economic regulations; however the UK would leave the EU's customs union allowing it to make trade deals with other countries although this may increase the inconvenience of companies exporting to the EU due to such issues as 'rules of origin'[97].

b) Some looser agreement such as:
    i) A bespoke and close deal possibly like Switzerland where the UK would have access to the EU market via a series of bilateral agreements. Note that any deal

[95] ONS Pink Book 2015, Table 9.9
[96] HM Treasury, April 2016, 'The long-term economic impact of EU membership and the alternatives', Annex B.
[97] Fraser of Allander Institute state that: "these require exporters to obtain certificates to prove the domestic content of their exports. The cost of these can be significant, particularly for smaller firms and businesses who rely on complex cross-border supply chains. Firms trading with the EU have to submit customs declarations and there can be complications with VAT arrangements when products cross borders. This may have implications for costs, efficiency and time competitiveness". From: Fraser of Allander Institute, October 2016, 'Long-term Economic Implications of Brexit'. Prepared for the Culture, tourism, Europe and external relations committee of the Scottish Parliament.

would need to be negotiated and agreed between the EU and all its members (and their various parliaments) and the UK.

ii) A more general free trade agreement with the EU, such as that recently ratified between the EU parliaments and Canada.

iii) Membership of the customs union but not of the single market like the situation with Turkey.

c) No deal and trading under WTO rules. This would give the UK greater control over economic regulation but lead to UK exports facing tariffs in the EU.

Prior to the 23 June referendum a number of analysts undertook work looking at the potential long-term impact on the UK economy of leaving the EU. It should be noted that the results of such analysis greatly depend on the underlying assumptions placed within the models used to produce the analysis.

However as observed by the IMF "most formal assessments indicate that the UK economy would be worse off economically in the long run if it were to leave the EU, but the range of estimates is large and some studies suggest the potential for positive net benefits. Most formal estimates conclude that the UK would face a permanent net loss in the levels of output and incomes, but some studies argue that there would be net gains"[98]. The IMF added "studies that find net losses to the UK economy typically emphasize the impact of reduced trade, based on the assumption that the UK would not be able to entirely make up for the loss of access to the single market by switching to other markets; estimates are more negative in scenarios in which the UK has to "go it alone" and rely on WTO MFN [most favoured nation] rules, as these would involve the largest disruptions in trade"[99]. They further observe that "in addition, some studies, drawing on econometric evidence on the positive relationship between EU membership and trade, assume substantial reductions in labour productivity following exit, in addition to the immediate and direct effects of reduced trade"[100]. The argument being that trade allows the specialisation of output in the most productive sectors, with less trade leading to a country needing to produce some of the goods previously produced more efficiently abroad at home. They also observe that "studies that find net gains to the UK either focus exclusively on the elimination of fiscal and regulatory costs of EU membership; assume unilateral elimination of tariffs that facilitates a shift in and expansion of UK production; or assume that the UK embarks on substantial deregulation that can compensate for reduced trade income, together with renegotiated access to the EU single market or new FTAs with other countries"[101].

In terms of the long-run impact of leaving the EU on London's economy a more limited amount of econometric analysis has been undertaken. However, in 2014 the GLA commissioned research into the impact of various possible relationships with the EU on London's economy[102]. This research found that growth could be improved from the baseline situation, either on leaving the EU or by remaining inside the EU but instituting significant reform of the EU. Still, it should be

[98] IMF, June 2016, 'United Kingdom: Selected Issues'. IMF Country Report No. 16/169.
[99] Ibid.
[100] Ibid.
[101] Ibid.
[102] Volterra, August 2014, 'The Europe report: a win-win situation'. Greater London Authority.

noted that it is likely any impact of the vote to leave the EU will be felt differently across the sectors of London's economy[103].

Thus as can be seen from this brief survey, the long-term impact of 'Brexit' on the UK and London is still open to debate, with some scenarios having less of an impact than others. However, for London the impact on service exports is likely to be of great importance, although other factors such as easy access to high-skilled labour, the attractiveness of London to FDI etc. is also of significant consequence.

[103] GLA Economics provided Appendix A to 'The Europe Report' which examined the relationship between sectors of London's economy and the EU this can be found at: Mayor of London, August 2014, 'The Europe report: a win-win situation: Appendix A'. Greater London Authority.

5. Review of independent forecasts

What the forecasts provide

In Chapter 6, GLA Economics' forecast of four economic indicators is provided: workforce jobs, real GVA, private consumption (household expenditure) and household income in London. In this chapter the consensus view as of 29 November 2016 on the first three of these indicators is summarised[104], drawing on forecasts from outside (independent) organisations[105]. Both annual growth rates and 'standardised' absolute levels are reported. All the data is in real terms (constant prices). The source for the historic data in the following tables and charts is for GVA and workforce jobs GLA Economics modelling using ONS data while the source data for Household Income and Expenditure is EE for the historic growth rates and GLA Economics modelling using EE data for the levels data.

Additionally, both the consensus[106] and GLA Economics' own forecasts provide predictions of employment and output growth in six broad sectors:

- manufacturing
- construction
- transportation and storage
- distribution[107], accommodation and food service activities
- finance and business services[108]
- other (public & private) services[109].

It should be noted, that since our Spring 2012 forecast GLA Economics has been using the new Standard Industrial Classification (SIC 2007)[110].

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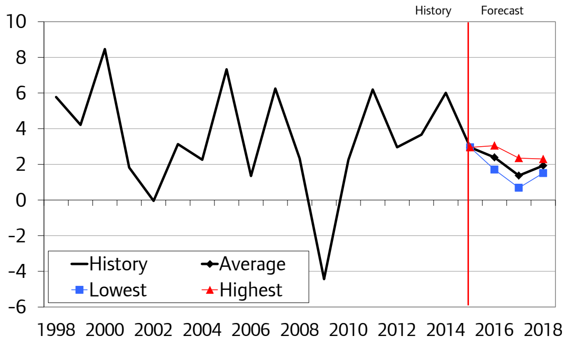
[104] The consensus forecast for GVA and employment is based on the latest available forecast from CE, CEBR, EE and OE, while the consensus forecast for household expenditure is based on the latest available forecast from CE, EE and OE only.
[105] Most forecasters do not yet provide forecasts of household income.
[106] The consensus GVA forecast for the six broad sectors is based on the latest available forecast from CE, CEBR, EE and OE for GVA but the consensus employment forecast for the six broad sectors is based on the latest available forecast from CE, EE and OE only.
[107] Distribution is made from the summation of Wholesale and Retail.
[108] Business services is made from the summation of Information and Communication, Professional, scientific and technical services and real estate, and Administrative and support service activities.
[109] This is made from the summation of Public admin and defence, Education, Health, Arts, entertainment and recreation and Other services.
[110] For more information see Appendix A of: GLA Economics, June 2012, 'London's Economic Outlook: Spring 2012'.

Output

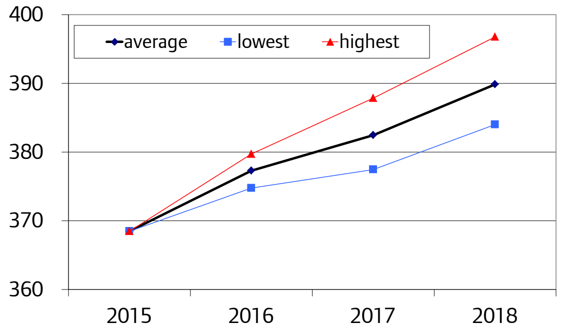
(London GVA, constant prices (base year 2012), £ billion)

The consensus (mean average view) is for real output growth to be 2.4 per cent in 2016, 1.4 per cent in 2017, and 1.9 per cent in 2018.

Annual growth (per cent)



Level (constant year 2012, £ billion)



Annual growth (per cent)					Level (constant year 2012, £ billion)			
	2016	2017	2018			2016	2017	2018
Average	2.4	1.4	1.9		Average	377	382	390
Lowest	1.7	0.7	1.5		Lowest	375	377	384
Highest	3.1	2.3	2.3		Highest	380	388	397

History: Annual growth (per cent)

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
5.8	4.2	8.5	1.8	0.0	3.1	2.3	7.3	1.4	6.3	2.3	4.4	2.3	6.2	3.0	3.7	6.0	3.0

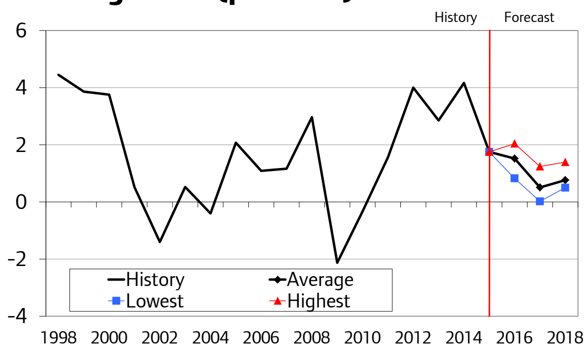
History: Level (constant year 2012, £ billion)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
200.9	212.4	221.4	240.1	244.5	244.4	252.0	257.7	276.6	280.4	297.9	304.8	291.3	297.9	316.3	325.7	337.6	357.9	368.5

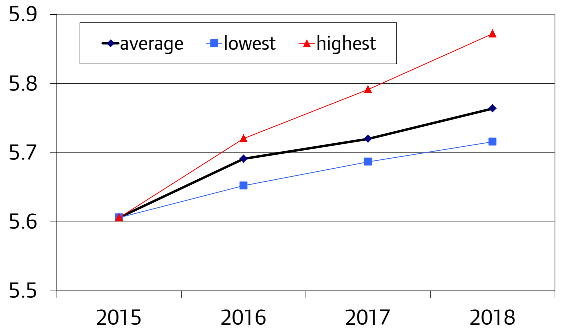
Employment
(London workforce jobs)

The consensus view is for the number of workforce jobs to increase by 1.5 per cent in 2016, by 0.5 per cent in 2017 and 0.8 per cent in 2018.

Annual growth (per cent)



Level (millions)



Annual growth (per cent)					Level (millions)			
	2016	2017	2018			2016	2017	2018
Average	1.5	0.5	0.8		Average	5.69	5.72	5.76
Lowest	0.8	0.0	0.5		Lowest	5.65	5.69	5.72
Highest	2.0	1.2	1.4		Highest	5.72	5.79	5.87

History: Annual growth (per cent)

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
4.4	3.9	3.8	0.5	-1.4	0.5	-0.4	2.1	1.1	1.2	3.0	-2.1	-0.3	1.6	4.0	2.9	4.2	1.8

History: Level (millions)

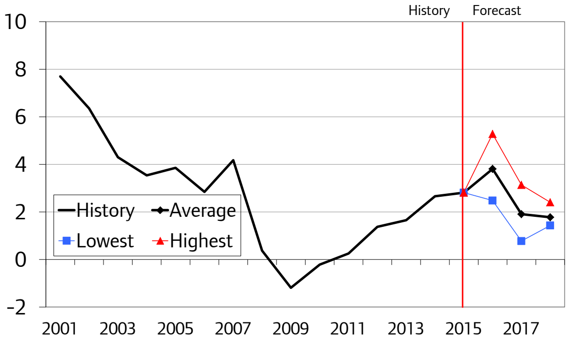
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
4.16	4.34	4.51	4.68	4.70	4.64	4.66	4.64	4.74	4.79	4.85	4.99	4.88	4.87	4.94	5.14	5.29	5.51	5.61

Household expenditure

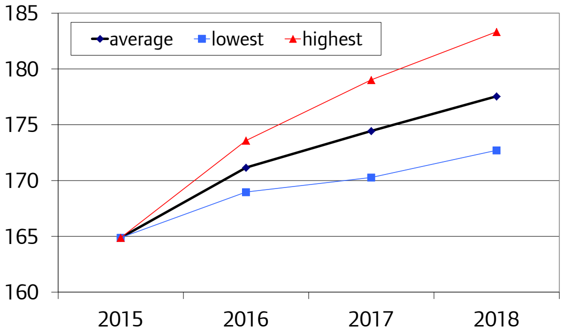
(London household spending, constant year 2012, £ billion)

The consensus view is for positive household expenditure growth of 3.8 per cent in 2016, 1.9 per cent in 2017, and 1.8 per cent in 2018.

Annual growth (per cent)



Level (constant year 2012 £ billion)



Annual growth (per cent)					Level (constant year 2012 £ billion)			
	2016	2017	2018			2016	2017	2018
Average	3.8	1.9	1.8		Average	171	174	178
Lowest	2.5	0.8	1.4		Lowest	169	170	173
Highest	5.3	3.1	2.4		Highest	174	179	183

History: Annual growth (per cent)

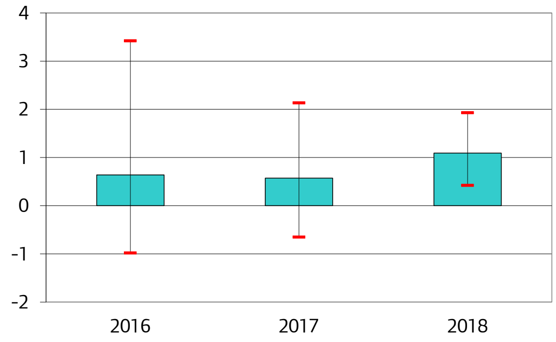
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
7.7	6.4	4.3	3.5	3.9	2.8	4.2	0.4	-1.2	-0.2	0.3	1.4	1.7	2.7	2.8

History: Level (constant year 2012, £ billion)

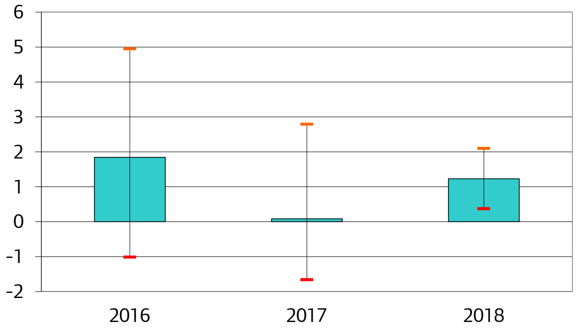
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
111.0	119.6	127.2	132.6	137.3	142.6	146.7	152.8	153.4	151.5	151.2	151.6	153.7	156.2	160.4	164.9

Output growth by sector (per cent annual change)
As the economic expansion continues it is expected that there will be positive output growth in all sectors.

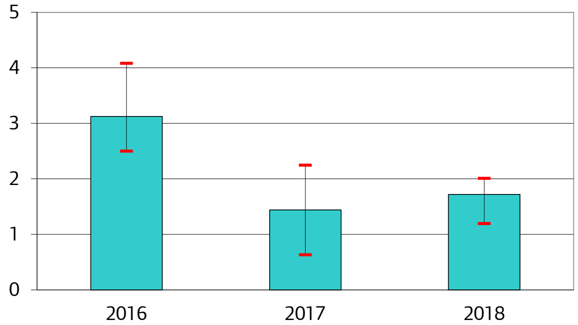
Manufacturing



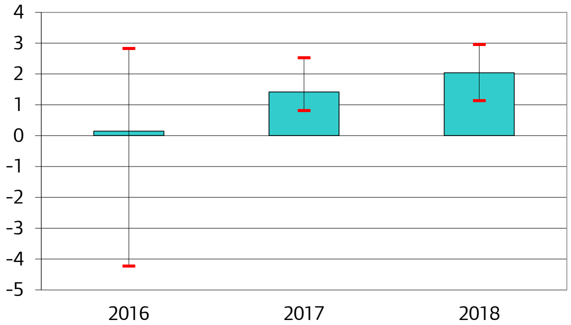
Construction



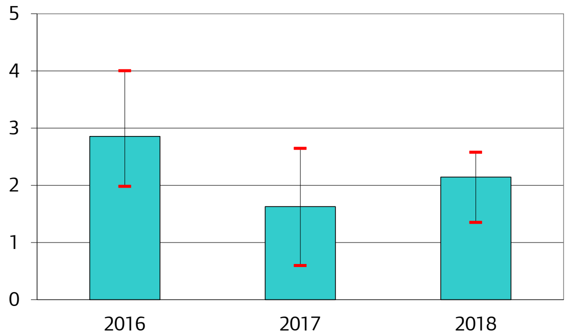
Distribution, accommodation and food service activities



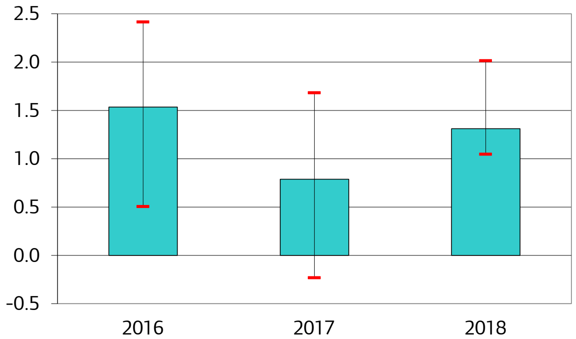
Transportation and storage



Finance and business



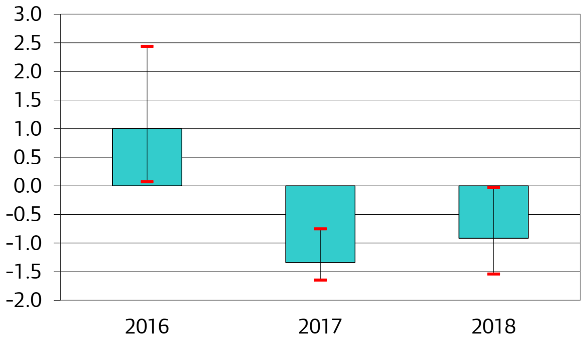
Other (public & private) services



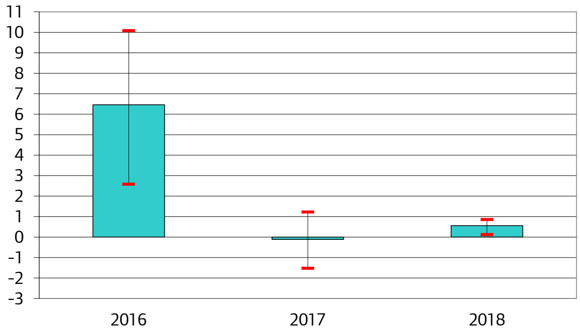
		2016	2017	2018			2016	2017	2018
Manufacturing	*Average*	0.6	0.6	1.1	**Construction**	*Average*	1.8	0.1	1.2
	Lowest	-1.0	-0.7	0.4		*Lowest*	-1.0	-1.7	0.4
	Highest	3.4	2.1	1.9		*Highest*	5.0	2.8	2.1
Distribution, accommodation and food service activities	*Average*	3.1	1.4	1.7	**Transportation and storage**	*Average*	0.1	1.4	2.0
	Lowest	2.5	0.6	1.2		*Lowest*	-4.2	0.8	1.1
	Highest	4.1	2.2	2.0		*Highest*	2.8	2.5	2.9
Finance and business	*Average*	2.9	1.6	2.1	**Other (public & private) services**	*Average*	1.5	0.8	1.3
	Lowest	2.0	0.6	1.3		*Lowest*	0.5	-0.2	1.0
	Highest	4.0	2.6	2.6		*Highest*	2.4	1.7	2.0

Employment growth by sector (per cent annual change)
Forecast employment growth is mixed across the sectors with Distribution, accommodation and food services, and Finance and business both expected to see increases in employment across all years of the forecast period, while the other sectors are expected to see some years of declining employment.

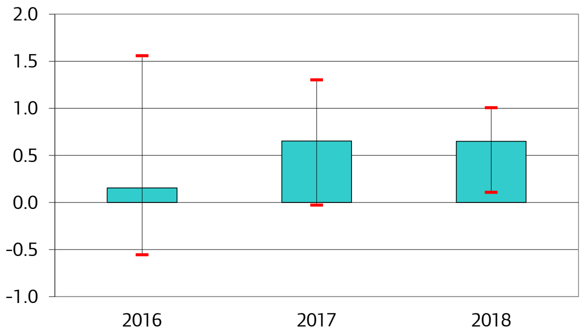
Manufacturing



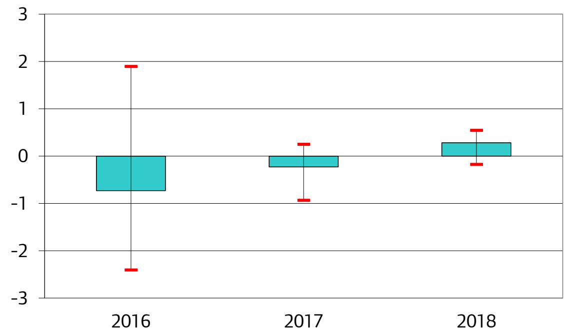
Construction



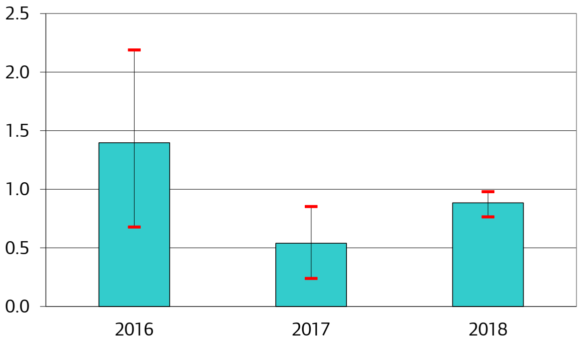
Distribution, accommodation and food service activities



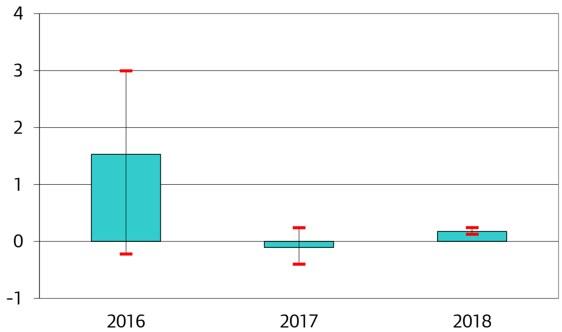
Transportation and storage



Finance and business



Other (public & private) services



		2016	2017	2018			2016	2017	2018
Manufacturing	*Average*	1.0	-1.3	-0.9	**Construction**	*Average*	6.5	-0.1	0.6
	Lowest	0.1	-1.6	-1.5		*Lowest*	2.6	-1.5	0.1
	Highest	2.4	-0.8	0.0		*Highest*	10.1	1.2	0.9
Distribution, accommodation and food service activities	*Average*	0.2	0.7	0.6	**Transportation and storage**	*Average*	-0.7	-0.2	0.3
	Lowest	-0.6	0.0	0.1		*Lowest*	-2.4	-0.9	-0.2
	Highest	1.6	1.3	1.0		*Highest*	1.9	0.2	0.5
Finance and business	*Average*	1.4	0.5	0.9	**Other (public & private) services**	*Average*	1.5	-0.1	0.2
	Lowest	0.7	0.2	0.8		*Lowest*	-0.2	-0.4	0.1
	Highest	2.2	0.9	1.0		*Highest*	3.0	0.2	0.2

6. The GLA Economics forecast

6.1 The background

It is necessary to distinguish carefully between the GLA's long-term employment projections and this forecast, which contains the GLA's medium-term planning projections. Trend projections, by definition, do not incorporate cyclical variations. The actual course of output and employment will vary around this trend. Trend projections are essential for planning to provide capacity (such as office space, housing and transport) to accommodate the needs of the economy throughout and at the peak of the cycle, not just at its low points. For business planning (for example the likely course of revenue), estimates of actual numbers of jobs and actual output at any point in time are required. The medium-term planning projections provide these estimates. As time progresses and more data become available, it becomes possible to identify turning points in the data; whether underlying trends are continuing or new trends are being established. The source for the historic data in the following tables and charts is for GVA and workforce jobs GLA Economics modelling using ONS data while the source data for Household Income and Expenditure is EE for the historic growth rates and GLA Economics modelling using EE data for the levels data.

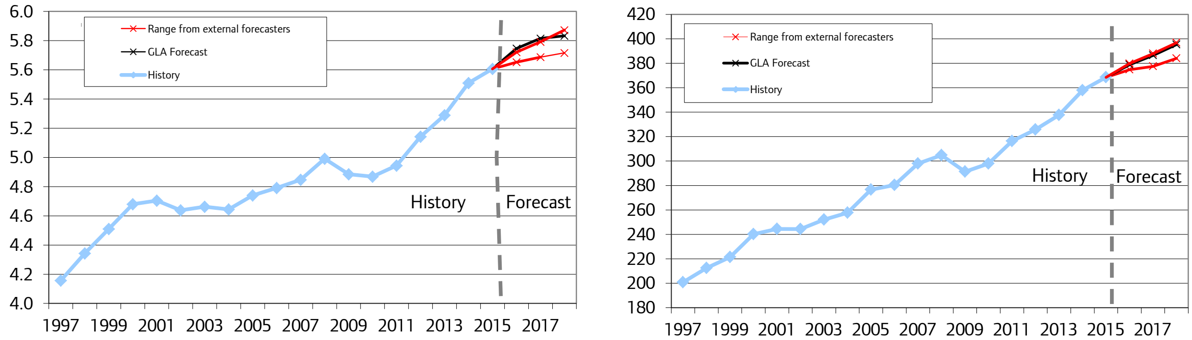
6.2 Results

Following the resumption of positive growth in 2010, output is expected to continue to rise between 2016 and 2018. Employment growth is forecast to be positive over the forecast period.

Household spending is expected to continue to grow between 2016 and 2018. Household income growth is also expected to be positive over the forecast period.

Figure 6.1: Trend and forecast employment and output

Employment (millions of workforce jobs) **Output (constant year 2012, £ billion)**



Source: GLA Economics estimates for historic data and GLA Economics' calculations for forecast

Table 6.1: Forecast and historical growth rates

(Annual % change)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
GVA	2.3	6.2	3.0	3.7	6.0	3.0	2.8	2.0	2.3
Workforce jobs	-0.3	1.6	4.0	2.9	4.2	1.8	2.5	1.2	0.3
Household spending	-0.2	0.3	1.4	1.7	2.7	2.8	3.3	1.3	1.3
Household income	1.1	-1.4	3.4	0.4	2.6	2.4	2.2	1.5	1.3

Table 6.2: Forecast and historical levels

(constant year 2012, £ billion except jobs)

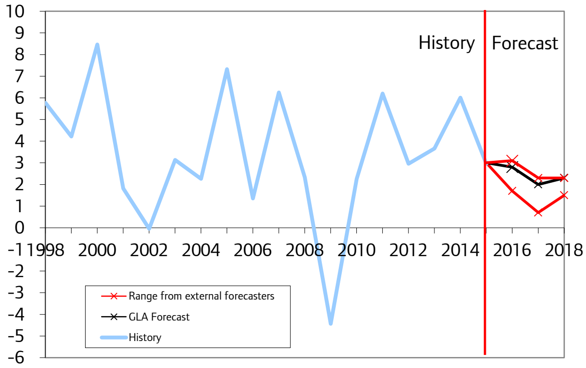
	2010	2011	2012	2013	2014	2015	2016	2017	2018
GVA	297.9	316.3	325.7	337.6	357.9	368.5	378.8	386.4	395.3
Workforce jobs (millions)	4.87	4.94	5.14	5.29	5.51	5.61	5.75	5.82	5.83
Household spending	151.2	151.6	153.7	156.2	160.4	164.9	170.3	172.5	174.8
Household income	182.7	180.1	186.3	187.0	191.8	196.4	200.7	203.7	206.4

Output
(London GVA, constant year 2012, £ billion)

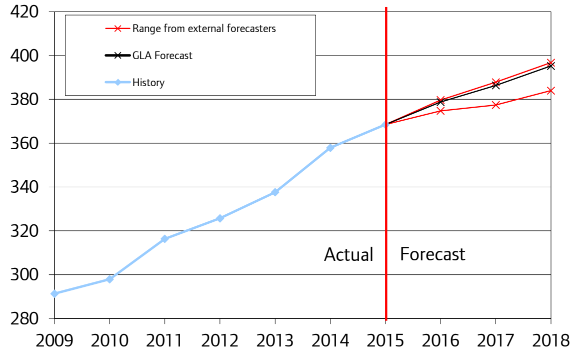
London's real GVA is forecast to grow between 2016 and 2018. Forecast growth rates are 2.8 per cent in 2016, 2.0 per cent in 2017 and 2.3 per cent in 2018.

The GLA Economics' forecast is higher than the consensus average forecast for all years of the forecast period.

Annual growth (per cent)



Level (constant year 2012, £ billion)



Growth (annual per cent)						Level (constant year 2012, £ billion)				
	2015	2016	2017	2018			2015	2016	2017	2018
GLA	3.0	2.8	2.0	2.3		GLA	368	379	386	395
Consensus		2.4	1.4	1.9		Consensus		377	382	390

History: Annual growth (per cent)

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
5.8	4.2	8.5	1.8	0.0	3.1	2.3	7.3	1.4	6.3	2.3	4.4	2.3	6.2	3.0	3.7	6.0	3.0

History: Level (constant year 2012, £ billion)

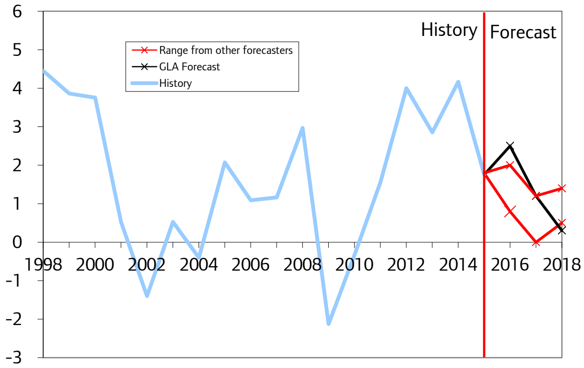
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
200.9	212.4	221.4	240.1	244.5	244.4	252.0	257.7	276.6	280.4	297.9	304.8	291.3	297.9	316.3	325.7	337.6	357.9	368.5

Employment
(London workforce jobs)

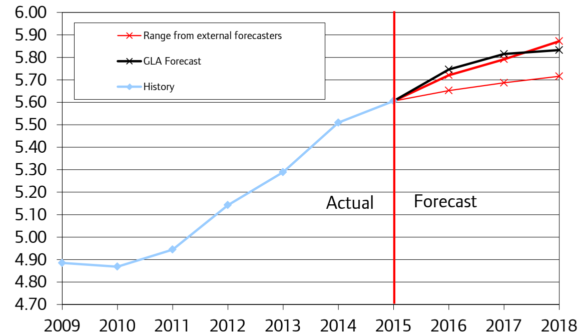
London's employment is forecast to rise between 2016 and 2018.

GLA Economics' forecast for employment growth is higher than the consensus average forecast for 2016 and 2017, but lower in 2018.

Annual growth (per cent)



Level (millions of workforce jobs)



Growth (annual per cent)						Level (millions of workforce jobs)				
	2015	2016	2017	2018			2015	2016	2017	2018
GLA	1.8	2.5	1.2	0.3		GLA	5.61	5.75	5.82	5.83
Consensus		1.5	0.5	0.8		Consensus		5.69	5.72	5.76

History: Annual growth (per cent)

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
4.4	3.9	3.8	0.5	-1.4	0.5	-0.4	2.1	1.1	1.2	3.0	-2.1	-0.3	1.6	4.0	2.9	4.2	1.8

History: Level (millions)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
4.16	4.34	4.51	4.68	4.70	4.64	4.66	4.64	4.74	4.79	4.85	4.99	4.88	4.87	4.94	5.14	5.29	5.51	5.61

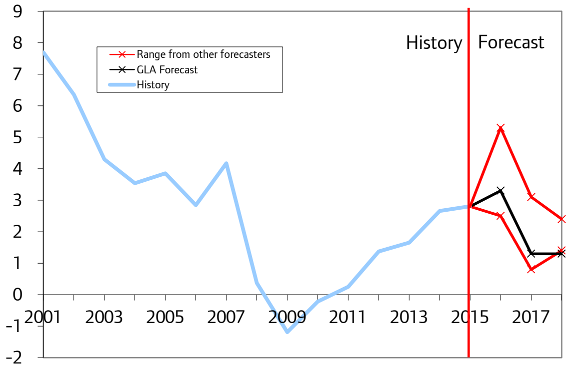
Household expenditure

(London household spending, constant year 2012, £ billion)

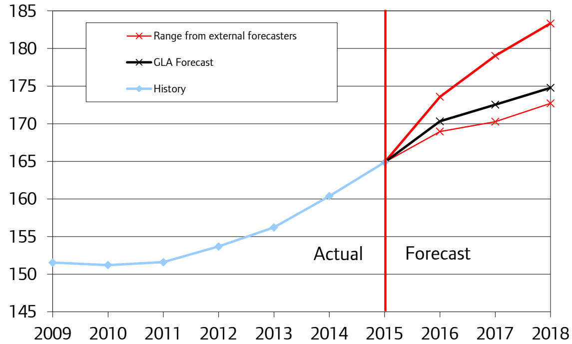
Growth in London's household spending is forecast to be positive over the forecast period.

GLA Economics' household spending growth forecast is lower than the consensus average over all of the forecast period.

Annual growth (per cent)



Level (constant year 2012, £ billion)



Growth (annual per cent)						Level (constant year 2012, £ billion)				
	2015	2016	2017	2018			2015	2016	2017	2018
GLA	2.8	3.3	1.3	1.3		GLA	165	170	173	175
Consensus		3.8	1.9	1.8		Consensus		171	174	178

History: Annual growth (per cent)

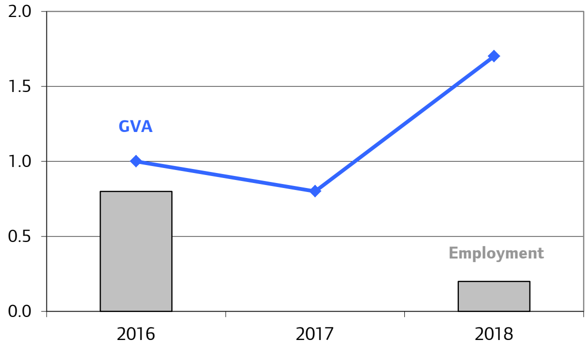
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
7.7	6.4	4.3	3.5	3.9	2.8	4.2	0.4	-1.2	-0.2	0.3	1.4	1.7	2.7	2.8

History: Level (constant year 2012, £ billion)

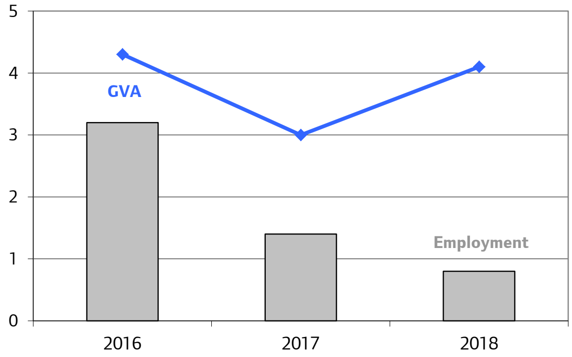
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
111.0	119.6	127.2	132.6	137.3	142.6	146.7	152.8	153.4	151.5	151.2	151.6	153.7	156.2	160.4	164.9

Output and employment growth by sector (per cent annual change)

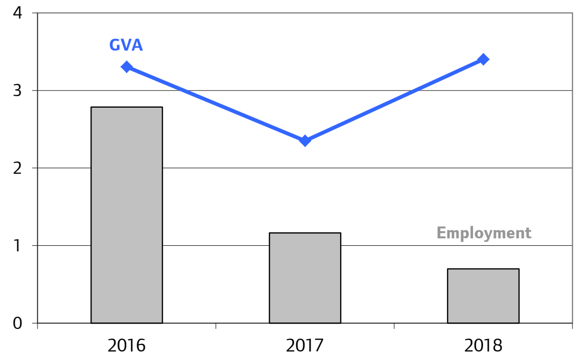
Financial services



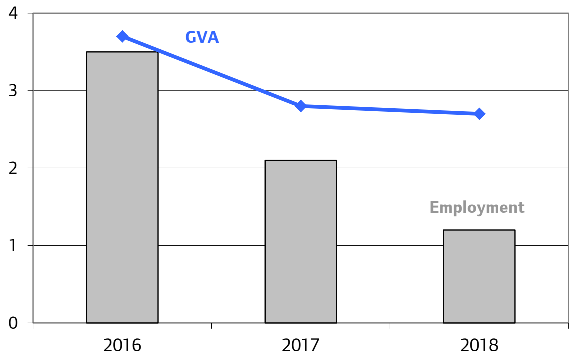
Business services



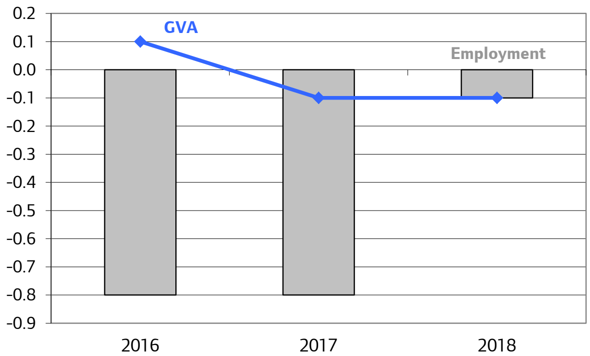
Finance and business (combined)



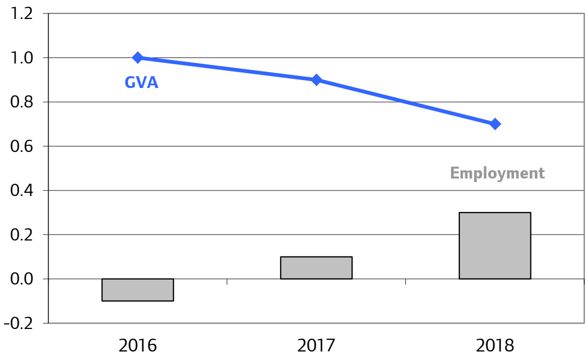
Distribution, accommodation and food service activities



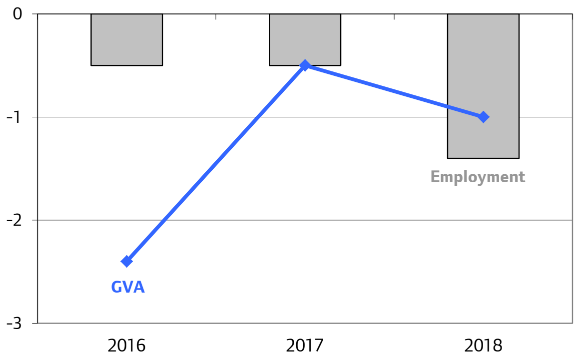
Transportation and storage



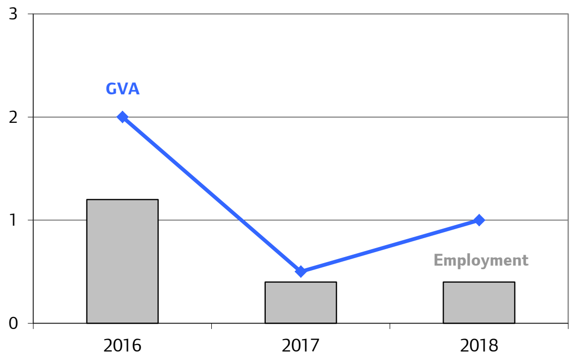
Other (public & private) services



Manufacturing



Construction



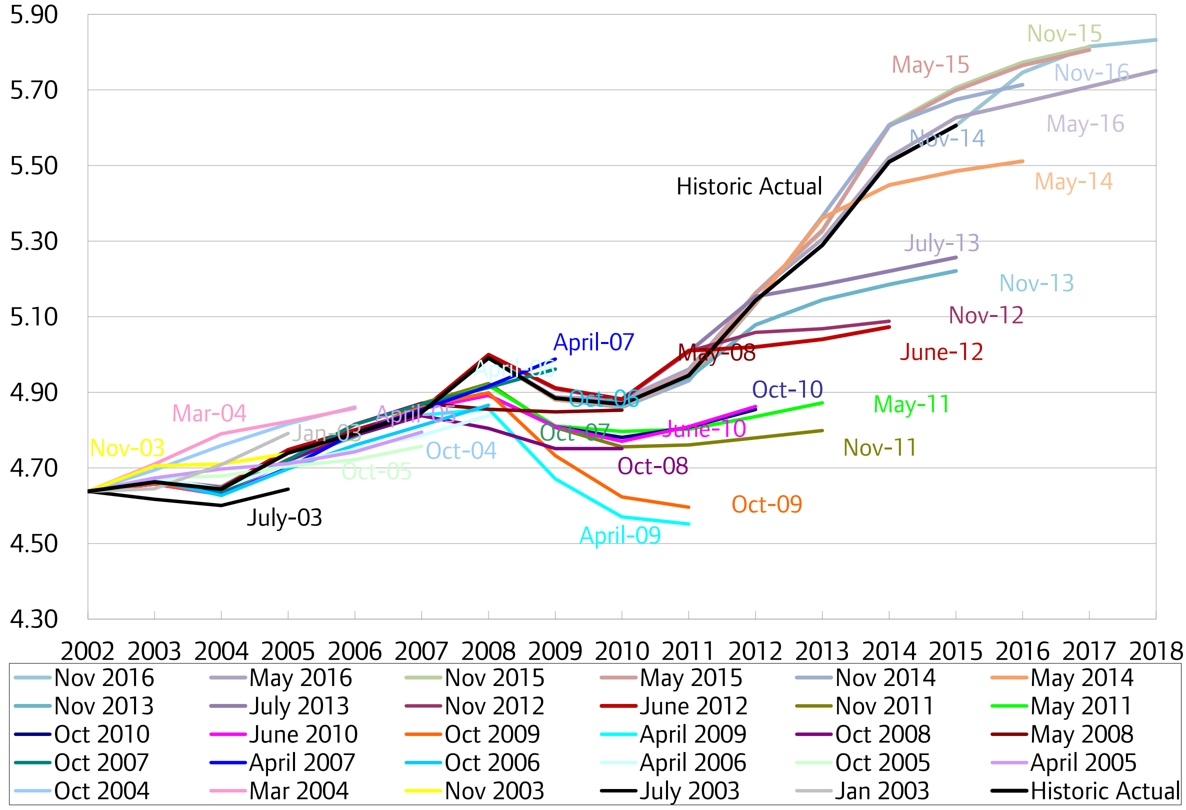
Output and employment growth by sector (per cent annual change)

	2016	2017	2018
Financial services			
Output	1.0	0.8	1.7
Employment	0.8	0.0	0.2
Business services			
Output	4.3	3.0	4.1
Employment	3.2	1.4	0.8
Financial and business services combined			
Output	3.3	2.4	3.4
Employment	2.8	1.2	0.7
Distribution, accommodation and food service activities			
Output	3.7	2.8	2.7
Employment	3.5	2.1	1.2
Transportation and storage			
Output	0.1	-0.1	-0.1
Employment	-0.8	-0.8	-0.1
Other (public & private) services			
Output	1.0	0.9	0.7
Employment	-0.1	0.1	0.3
Manufacturing			
Output	-2.4	-0.5	1.0
Employment	-0.5	-0.5	-1.4
Construction			
Output	2.0	0.5	1.0
Employment	1.2	0.4	0.4
(Memo: non-manufacturing)			
Output	2.9	2.1	2.4
Employment	2.6	1.2	0.3

6.3 Comparison with previous forecasts

This section compares the current forecast with previous forecasts in this series. Since the base years for the forecasts change and the base data is continuously revised, the forecasts have been rebased into a common base year for the comparison in Figures 6.2 and 6.3. The most recent forecast for London's workforce jobs growth is higher than in the May 2016 forecast for this year and next but lower for 2018, and lower for all years of the forecast period for GVA.

Figure 6.2: Employment – latest forecast growth rates compared with previous forecasts
(millions of workforce jobs)

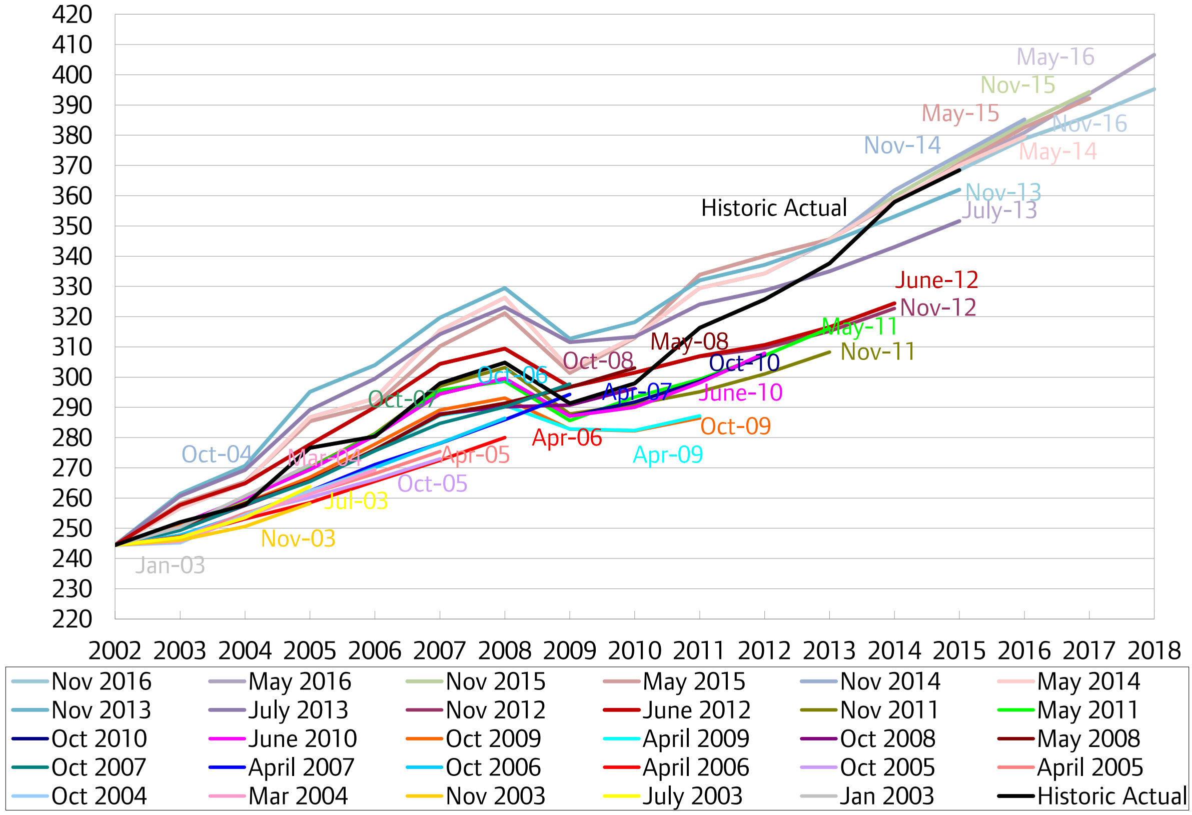


Source: Various London's Economic Outlooks

Table 6.3: Comparisons with previous published forecasts
(London workforce jobs, per cent annual growth)

Forecast	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nov 2016	**0.5%**	**-0.4%**	**2.1%**	**1.1%**	**1.2%**	**3.0%**	**-2.1%**	**-0.3%**	**1.6%**	**4.0%**	**2.9%**	**4.2%**	**1.8%**	**2.5%**	**1.2%**	**0.3%**
May 2016														0.7%	0.7%	0.7%
Nov 2015													1.7%	1.2%	0.7%	
May 2015													1.7%	1.2%	0.7%	
Nov 2014												4.5%	1.2%	0.7%		
May 2014												1.6%	0.7%	0.5%		
Nov 2013											1.3%	0.8%	0.7%			
July 2013											0.6%	0.7%	0.7%			
Nov 2012										1.0%	0.2%	0.4%				
June 2012										0.2%	0.4%	0.6%				
Nov 2011									0.1%	0.4%	0.4%					
May 2011									0.1%	0.7%	0.8%					
Oct 2010								-0.6%	0.6%	1.0%						
June 2010								-0.8%	0.8%	1.1%						
Oct 2009							-3.4%	-2.3%	-0.6%							
April 2009							-3.8%	-2.2%	-0.4%							
Oct 2008						-0.7%	-1.1%	0.0%								
May 2008						-0.3%	-0.1%	0.1%								
Oct 2007					1.2%	0.9%	1.0%									
April 2007					1.2%	1.4%	1.5%									
Oct 2006				1.3%	1.1%	1.1%										
April 2006				0.8%	0.8%	1.1%										
Oct 2005			0.6%	0.4%	0.8%											
April 2005			0.3%	0.7%	1.1%											
Oct 2004		1.4%	1.2%	0.9%												
Mar 2004		1.7%	0.7%	0.7%												
Nov 2003	1.5%	0.1%	0.6%													
July 2003	-0.5%	-0.4%	0.9%													
Jan 2003	0.2%	1.4%	1.8%													

Figure 6.3: Output – latest forecast growth rates compared with previous forecasts
(constant year 2012, £ billion)



Source: Various London's Economic Outlooks

Table 6.4: Comparisons with previous published forecasts
(London GVA, per cent annual growth)

Forecast	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nov 2016	**3.1%**	**2.3%**	**7.3%**	**1.4%**	**6.3%**	**2.3%**	**-4.4%**	**2.3%**	**6.2%**	**3.0%**	**3.7%**	**6.0%**	**3.0%**	**2.8%**	**2.0%**	**2.3%**
May 2016														2.9%	3.4%	3.3%
Nov 2015													3.4%	3.2%	2.7%	
May 2015													3.6%	3.2%	2.5%	
Nov 2014												4.8%	3.3%	3.1%		
May 2014												3.8%	3.2%	2.6%		
Nov 2013											2.2%	2.5%	2.5%			
July 2013											1.9%	2.4%	2.5%			
Nov 2012										0.9%	1.8%	2.4%				
June 2012										1.2%	1.9%	2.5%				
Nov 2011									1.4%	2.0%	2.4%					
May 2011									2.0%	2.6%	2.9%					
Oct 2010								1.6%	2.4%	2.9%						
June 2010								1.0%	2.8%	3.3%						
Oct 2009							-3.5%	-0.2%	1.5%							
April 2009							-2.7%	-0.2%	1.7%							
Oct 2008						0.8%	0.2%	1.9%								
May 2008						1.3%	1.8%	2.2%								
Oct 2007					3.3%	2.0%	2.6%									
April 2007					2.6%	2.8%	3.0%									
Oct 2006				3.1%	3.0%	3.0%										
April 2006				2.7%	2.6%	2.8%										
Oct 2005			2.0%	2.3%	2.6%											
April 2005			2.6%	2.5%	2.7%											
Oct 2004		3.8%	3.1%	2.7%												
Mar 2004		3.3%	2.9%	3.0%												
Nov 2003	0.7%	1.9%	3.0%													
July 2003	1.1%	2.6%	4.1%													
Jan 2003	2.4%	4.1%	4.0%													

Appendix A: Explanation of terms and some sources

Definitions, differences, and revisions

Forecasting organisations use varying definitions of the regional indicators they supply. It is therefore not always possible to assign a completely consistent meaning to the terms used.

Throughout this report, as far as is compatible with the individual definitions applied by the forecasters, 'employment' refers to 'workforce employment' as defined in, the ONS publication *Labour Market Trends*. *London's Economic Outlook: December 2003* and *The GLA's Workforce Employment Series* provide a more detailed explanation of this term.

Forecasters' definitions are broadly compatible with this but in some cases differences arise from the treatment of small items such as participants in government training schemes or the armed forces. The GLA uses civilian workforce employment throughout.

Output refers to GVA, a term introduced by the 1995 revision of the European System of Accounts (ESA95). Some forecasters still estimate GDP, which differs slightly from GVA. Imputed rental income from the ownership of property is included in some cases but not in others. GLA Economics' *London's Economic Outlook: December 2003* provides a more detailed explanation of this term.

Estimates of nominal regional GVA are available up to 2014 from the ONS[111]. So far only experimental official estimates of real regional GVA[112] are available because of the difficulties in producing authoritative regional price deflators, although the ONS has produced regional price indexes for the year 2010[113]. Most regional forecasters supply their own estimates of London's real GVA. The historic real London GVA figures used in this GLA Economics' forecast are estimates produced by GLA Economics using ONS data.

GVA estimates are less reliable than employment estimates because there is no independent source of information from which to judge the size of total sales by London-based agents. ONS estimates are calculated by the factor incomes method, beginning from wages paid to people with workforce jobs located in London. Profits are imputed on the basis of these earnings estimates from knowledge of national sectors of employment. Most regional forecasters adopt a variant of this technique.

Consumption refers to private consumption, otherwise known as household expenditure; in some cases the expenditure of non-profit organisations is included and in other cases it is not.

111 ONS, 10 December 2015, 'Regional Gross Value Added (Income Approach): December 2015'.
112 ONS, 16 December 2015, 'Regional Gross Value Added (Production Approach): 1998 to 2013'.
113 ONS, 12 July 2011, 'UK Relative Regional Consumer Price Levels for Goods and Services for 2010'.

Appendix B: Glossary of acronyms

ADB	Asian Development Bank
ASI	Adam Smith Institute
BIS	The Bank for International Settlements
bn	Billion
CE	Cambridge Econometrics
CEBR	The Centre for Economic and Business Research
CPI	Consumer Price Index
DCLG	Department for Communities and Local Government
ECB	European Central Bank
EE	Experian Economics
EERI	Effective Exchange Rate Index
EU	European Union
Fed	Federal Reserve
FT	Financial Times
GDP	Gross Domestic Product
GLA	Greater London Authority
GVA	Gross Value Added
GDP	Gross Domestic Product
HM Treasury	Her Majesty's Treasury
IFS	Institute for Fiscal Studies
ILO	International Labour Organisation
IMF	International Monetary Fund
LEO	London's Economic Outlook
LFS	Labour Force Survey
LHS	Left Hand Scale
mn	Million
MPC	Monetary Policy Committee
OBR	Office for Budget Responsibility
OE	Oxford Economics
OECD	Organisation for Economic Co-operation and Development
ONS	Office for National Statistics
PMI	Purchasing Managers' Index
Q2	Second Quarter
QE	Quantitative Easing
RHS	Right Hand Scale
RICS	Royal Institution of Chartered Surveyors
RPI	Retail Price Index
TfL	Transport for London

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