GLAECONOMICS

London's Economic Outlook: Autumn 2017
The GLA's medium-term planning projections

November 2017

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Contents

1. Executive summary

GLA Economics' 31st London forecast[1] suggests that:

- London's Gross Value Added (GVA) growth rate is forecast to be 2.1 per cent in 2017. The growth rate is expected to slow slightly to 1.8 per cent in 2018, before picking up to 2.6 per cent in 2019.

- London is forecast to see increases in the number of workforce jobs in 2017, 2018 and 2019.

- London's household income and spending are both forecast to increase over the next three years, albeit at slower rates than for 2016.

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)	2016[2]	2017	2018	2019
London GVA[3] (constant 2013, £ billion)	2.0	2.1	1.8	2.6
Consensus (average of independent forecasts)		1.8	1.7	1.9
London civilian workforce jobs	1.8	1.4	0.3	0.5
Consensus (average of independent forecasts)		1.2	0.7	0.8
London household spending (constant 2013, £ billion)	3.0	1.3	0.7	1.9
Consensus (average of independent forecasts)		2.7	1.4	1.7
London household income (constant 2013, £ billion)	2.2	1.0	0.9	1.8
Memo: Projected UK RPI[4] (Inflation rate)	1.7	3.2	2.9	3.1
Projected UK CPI[5] (Inflation rate)	0.7	2.4	2.6	2.2

Sources: GLA Economics' Autumn 2017 forecast and consensus calculated by GLA Economics

[1] The forecast is based on an in-house model built by GLA Economics. For more detail, see: Douglass, G & van Lohuizen, A (2016). '[The historic performance of the GLA's medium-term economic forecast model]', GLA Economics Current Issues Note 49, November 2016.

[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 2016 figures for London GVA and civilian workforce jobs are estimates.

[3] The methodology used to estimate London's GVA is outlined in Keijonen, M & van Lohuizen, A (2016). '[Modelling real quarterly GVA data for London]', GLA Economics Current Issues Note 50, December 2016.

[4] RPI = Retail Price Index. Although not part of the GLA Economics forecast for London. Instead the consensus forecasts provided by HM Treasury are reported here. See: HM Treasury (2017). '[Forecasts for the UK economy: a comparison of independent forecasts]', November 2017.

[5] CPI = Consumer Price Index. Although not part of the GLA Economics forecast for London. Instead the consensus forecasts provided by HM Treasury are reported here. See: HM Treasury (2017). '[Forecasts for the UK economy: a comparison of independent forecasts]', November 2017. Also, since December 2003, the Bank of England's symmetrical inflation target has been annual CPI inflation at 2 per cent.

The UK having voted to leave the European Union (EU) in a referendum in June 2016 and, having triggered the Article 50 procedure of the Lisbon Treaty to leave the EU in March 2017, finds itself in the middle of this process which should end by March 2019. The Autumn 2016 London's Economic Outlook (LEO)[6] and Spring 2017 LEO[7] have examined London's position given this vote in detail. However, at the time of writing, although several meetings have taken place between the UK and EU negotiating teams, uncertainty about any final exit deal with the EU remains. Box 3.2 in Section 3 of this forecast summarises what has occurred in the Brexit process since the publication of the Spring 2017 LEO.

Still, the UK currently remains part of the EU and beyond the large depreciation of sterling seen in the aftermath of the vote, the pre-referendum economic environment generally remains in place. The strength of a number of economic indicators is however weaker than it was at the beginning of 2016. However, most of these indicators show an ongoing expansion of London's economy, but with continuing signs of a slowing in growth compared to that seen in the past few years. This general slowdown in growth is occurring at the UK level also. For example, the Bank of England's agents found in the third quarter of 2017 that "households had responded to squeezed incomes by trading down or focusing on essential purchases. As a result, demand growth had slowed across many consumer-facing sectors, and modest nominal consumer spending growth primarily reflected price inflation"[8]. In addition, "investment intentions indicated weaker growth within services, but were more positive for goods exporters."[9].

In terms of credit conditions, the Bank noted that "the availability of secured credit to households was reported to have increased slightly in the three months to mid-September 2017". Although they also observed that, "lenders reported that the availability of unsecured credit to households decreased in Q3 and expected a significant decrease in Q4". With them further adding that "default rates on credit card lending were reported to have increased slightly in Q3, while those on other unsecured lending increased significantly …. A further slight increase was expected for credit card lending only in Q4. Losses given default were reported to have increased slightly on credit card lending while remaining unchanged on other unsecured lending. Both were expected to be unchanged in Q4"[10]. In London, ignoring the period in the immediate aftermath of the referendum, consumer confidence has generally been positive month-on-month with a few exceptions. It is also above the UK average, but remains below the highs seen in the year or so prior to June 2016[11]. Companies in London also show growth in business activity as measured by the Purchasing Managers' Index, having bounced back from their post-referendum fall, but this growth is at a generally more subdued level[12].

Statistics from the Office for National Statistics (ONS) show that the UK economy continues to grow but at a relatively subdued pace, with output increasing by 0.4 per cent in Q3 2017. This was a slightly faster increase than the 0.3 per cent seen in Q2 2017. Output in Q3 2017 was 1.5 per cent higher than a year earlier with UK GDP having grown by 19 consecutive quarters[13].

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6 GLA Economics (2016). 'London's Economic Outlook: Autumn 2016 The GLA's medium-term planning projections', November 2016.
7 GLA Economics (2017). 'London's Economic Outlook: Spring 2017 The GLA's medium-term planning projections', June 2017.
8 Bank of England (2017). 'Agents' summary of business conditions, and results from the Decision Maker Panel 2017 Q3', 20 September 2017.
9 Ibid.
10 Bank of England (2017). 'Credit Conditions Survey', Q3 2017, 12 October 2017.
11 Christie, C & Wingham, M (2017). 'London's Economy Today', Issue 182, 26 October 2017.
12 Ibid.
13 ONS GDP Q3 2017 statistics, preliminary estimate.

Inflation, having risen due in part to the large depreciation of sterling after the referendum, continues to stand above the Bank of England's central symmetrical inflation target. Consumer Prices Index (CPI) inflation stood at 3.0 per cent in October 2017 compared to a year earlier, unchanged from the level seen in September 2017 but still the joint highest rate since 2012[14]. In part given these mild but continuing inflationary pressures caused by the depreciation of sterling, the Bank tightened monetary policy for the first time in ten years in November with it raising interest rates by 0.25 percentage points to 0.5 per cent[15]. However, even if the expectations of further monetary policy tightening occur, policy is likely to remain extremely accommodating for some time to come. The Bank of England therefore continues to face a balancing act between higher inflation and more moderate growth in the UK's economy. And in their November 2017 Inflation Report the Bank observed that the Monetary Policy Committee (MPC) expects inflation to continue to overshoot its central symmetrical target in the short-term. Still they also observe that "on balance, inflation is expected to fall back over the next year and, conditioned on the gently rising path of Bank Rate implied by current market yields, to approach the 2% target by the end of the forecast period"[16]. They however further note "there remain considerable risks to the outlook, which include the response of households, businesses and financial markets to developments related to the process of EU withdrawal. The MPC will respond to developments as they occur insofar as they affect the behaviour of households and businesses, and the outlook for inflation"[17].

The growth in workforce jobs in London has continued but at a more moderate pace than in the recent past; a similar situation is seen in the UK as a whole as well. Thus, in London, the number of jobs increased to 5.796 million in Q2 2017, a 59,000 (1.0 per cent) increase from a year earlier[18] and a new record-high for this series which began in 1996. The employment rate in London stood at 74.3 per cent in the three months to September 2017, one of the highest levels recorded. However, real wages in the UK, having previously risen, have now started to decline[19]. With inflation standing slightly higher on the back of the large depreciation of sterling there has been speculation as to how long this real wage decline will continue for.

Risks to the economy remain relatively unchanged compared to those seen in June 2017 with a number of them remaining in part related to the ongoing uncertainty around the impact of the Brexit process. Other risks however remain more subdued than in recent years with, for instance, the prospects for global economic growth appearing more upbeat than they have been for some time. Further, the expected economic drag from the referendum outcome and Brexit process has so far been more modest than had been anticipated by many prior to the vote. However, the current uncertainty about the UK's long-term future trading arrangements appears – according to some business surveys – to have dampened some business investment and other decisions. Finally, as observed in all published LEOs since the Brexit vote, it should be noted that the longer-term impact of the vote remains hard to model with competing claims by a variety of commentators. In fact, the exact long-term growth prospects will likely be highly dependent on what post Brexit economic relationships and policies are followed.

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[14] ONS consumer prices statistics.
[15] Bank of England (2017). 'Monetary Policy Summary and minutes of the Monetary Policy Committee meeting ending on 1 November 2017', 2 November 2017.
[16] Bank of England (2017). 'Inflation Report', November 2017.
[17] Ibid.
[18] ONS Regional labour market statistics.
[19] ONS (2017). 'Analysis of real earnings: October 2017', 18 October 2017.

Other risks to the economy also remain. Thus, the slow growth in recent years of UK productivity if it were to continue over the long term, as some forecasters now suspect, will act as a damper on GDP growth. Some concerns about the size of UK consumer debt and the ability of lenders to absorb losses have been expressed[20]. As has been highlighted over several years now, structural problems remain in the Eurozone and could flare up again to cause further shocks to its members. All these are concerns due to the impact they could have on the UK and London's trade and therefore growth. Still, despite these risks, the prospects for the Eurozone in the near term have picked up while the risks of deflation within the euro area have receded. Further, although global growth has improved, the high debt levels seen in China have remained a concern for the economic stability of that country and the knock-on impact this would have on the global economy. The disruptive effects on the world economy of an intensification of the current regional conflicts or radical changes to the trade and economic policies of key trading partners cannot be discounted.

Monetary policy normalisation has continued in the United States with this having the potential for negative knock on effects on emerging market economies (i.e. due to the impact on their borrowing costs) with other effects on the rest of the global economy. This could be especially destabilising if differing stages in the various countries monetary policy cycle interact to exasperate this issue. However, although the tightening in US monetary policy continues with, for instance, the rolling back of its Quantitative Easing (QE) programme announced in September, it may take some time yet to return to a more historically normal monetary policy regime.

In summary, although the economic environment continues to be more uncertain than in recent years, the outlook for the London economy remains generally positive for the coming few years. However, inflation while moderate is likely to remain higher than in recent years given the inflationary impact of the depreciation of sterling. Given higher inflation, it is likely that growth in real income will be less strong in the coming few years than in the previous couple of years and puts some restraint on household spending which has been a significant driver of economic growth until now. Still, despite the recent rate rise and speculation of further tightening in the coming years, UK monetary policy is likely to stay at what are historically very low levels for a time to come providing support to the national and London economies. Sterling remains low, most business surveys show continued growth and London consumers remain generally confident about the short-term future economic outlook after suffering some jitters immediately after the referendum. Fiscal policy also appears to be heading in a slightly more expansionary direction with reports of the Government easing its policy of fiscal consolidation to an extent. Of the sectors of the UK economy, Business services and finance continues to grow and given its size in London, this should provide some foundation to London's economy. So, balancing all these forces interacting on London's economy, it is likely that both output and employment should see continued growth in the next few years but at a rate that is more subdued than seen in the past few years.

[20] Bank of England (2017). 'Financial Stability Report', June 2017.

2. Introduction

The autumn 2017 edition of London's Economic Outlook (LEO) is GLA Economics' 31st London forecast. The forecasts are issued roughly every six months to assist those preparing planning projections for London in the medium-term. The report contains the following:

- An overview of the recent economic conditions in London, the UK and the world economies and includes analysis of important events, trends and risks to short and medium-term growth (Section 3).
- 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 4). 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 5).

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[21]. Before that, previous 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)[22]
- 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 reported in this paper show the lowest and highest estimates respectively from the external organisations for each year. Therefore, the reported forecasts can come from different forecasters and means that they 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.

[21] The production of the forecast model is described in more detail in: Douglass, G & van Lohuizen, A (2016). 'The historic performance of the GLA's medium-term economic forecast model', GLA Economics Current Issues Note 49, November 2016.
[22] CEBR does not provide a forecast for household expenditure in London.

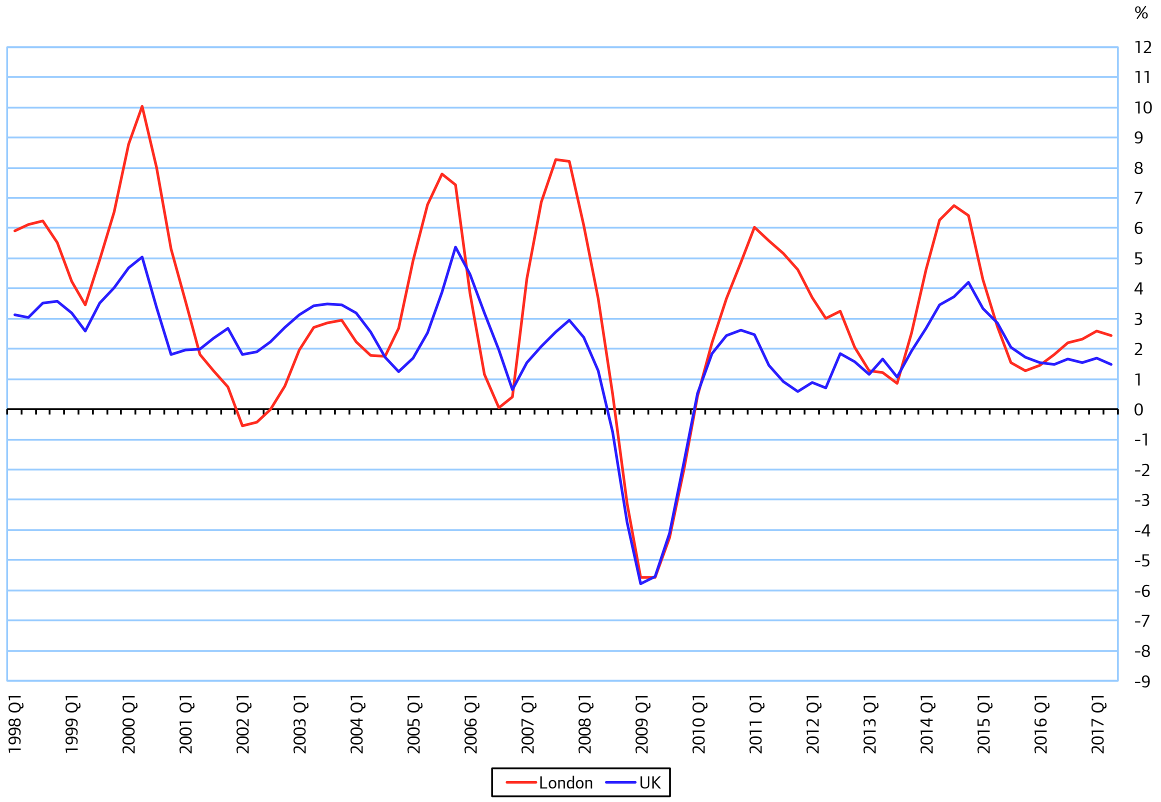
3. Economic background: Subdued growth in the UK economy as global growth continues to show positive signs

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 economic output (as measured by gross value added) stood at 2.4 per cent in the second quarter of 2017, slowing marginally from 2.6 per cent in Q1 (see Figure 3.1). Annual output growth for the UK as a whole slowed to 1.5 per cent, down from 1.7 per cent in Q1. This represents the fifth consecutive quarter that London's economic expansion has outpaced the UK. However, not all economic indicators suggest that the London economy is doing as well compared to the UK as these data imply.

Figure 3.1: Output growth for London and the UK
Real GVA, annual % change, last data point is Q2 2017

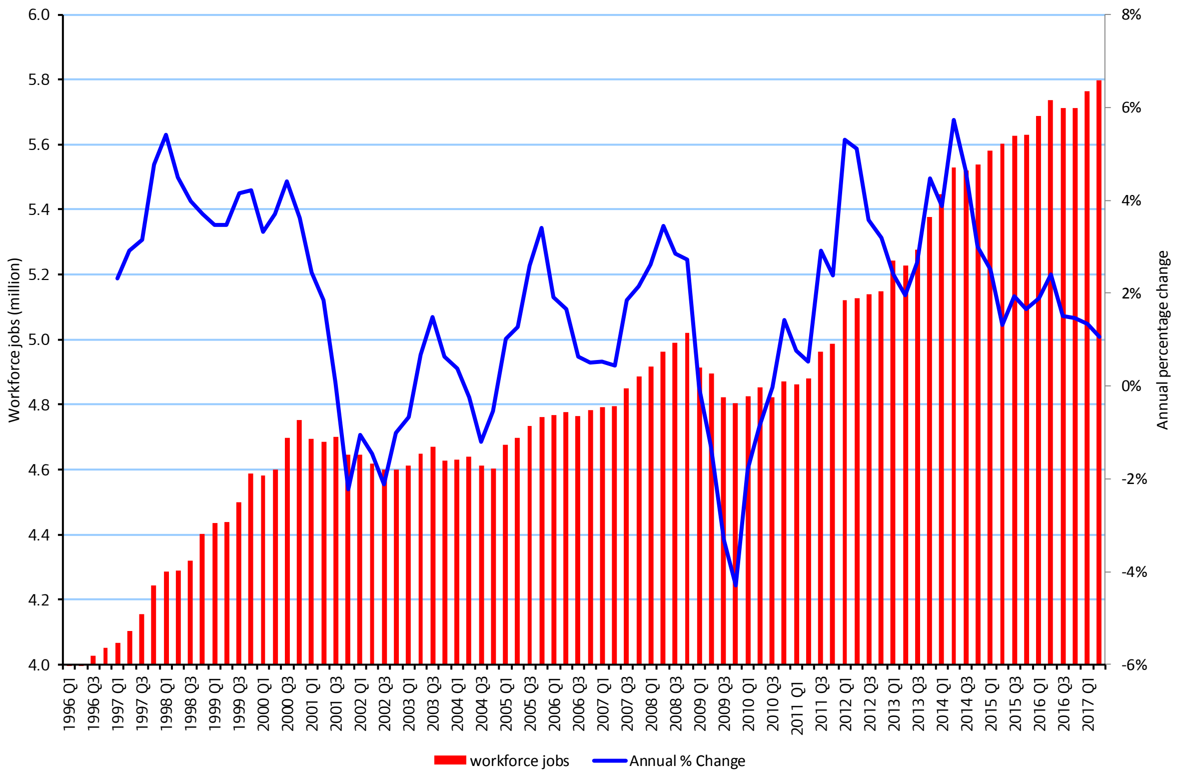


Source: ONS Regional GVA and GLA Economics

Aside from economic output, another indicator of growth is trends in the number of jobs. If jobs are being created, this gives some indication that businesses are growing. It also gives an indication to rising household income which could lead to increasing household spending which can act as a further boost to economic growth. In the year to Q2 2017, there was a 1.0 per cent increase in the number of workforce jobs in London (see Figure 3.2). This means that the total number of workforce jobs in the capital now stands at 5.796 million – a record high.

Meanwhile, London's employment rate (i.e. the proportion of London's resident working age population[23] in employment) also continued to rise. In the period July to September 2017, London's employment rate stood at 74.3 per cent, unchanged on the quarter and but up 0.8 percentage points on the year. In comparison, the UK posted a generally similar rate to the capital, with the employment rate at 75.0 per cent. Overall, the UK's employment rate fell 0.1 percentage points on the quarter but increased by 0.6 percentage points on the year. Therefore, London saw a larger improvement overall.

Figure 3.2: London civilian workforce jobs, level and annual percentage change
Last data point is Q2 2017



Source: ONS Workforce Jobs

A rise in the number of jobs does not necessarily mean there are fewer people out of work, however. Some of these jobs could be taken by people commuting outside of the capital for instance. It is therefore also important to look at the unemployment rate. Unemployment can act as a drag on economic growth as these people are, by definition, not necessarily being fully economically productive. London's unemployment rate using the ILO definition[24] was 5.0 per cent in the three months to September 2017 and was down 0.6 percentage points from a year earlier. This compared to the UK's employment rate of 4.3 per cent, which was also down 0.6 percentage points on the year.

Elsewhere, public transport usage can be a useful and timely indicator of economic activity in London. Those using public transport are likely to be engaging in some sort of economic activity, whether this be going to work or spending money in shops for example. Figure 3.3 shows that there were year-on-year falls in the moving averages of both bus and Tube usage in

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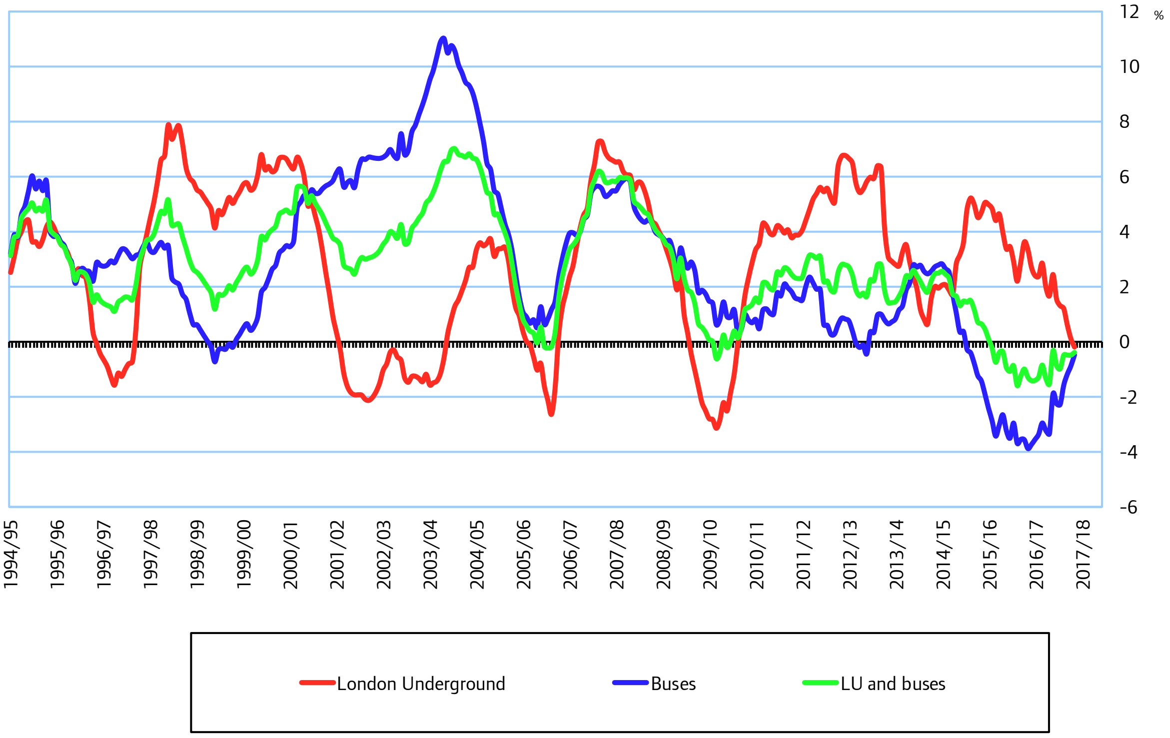
[23] 16-64 years.
[24] The ILO defines unemployment as the number of people aged 16 years and over who are not in work, but is available and actively seeking work. It also includes people who have accepted a job, though they are waiting to start in the next fortnight.

the 28-days to 16 September 2017. This was the first time there has been a negative change in the annual rate of Tube passenger journeys in almost eight years, while bus passengers have been declining since April 2015. Consequently, this suggests a relatively downbeat tone for London's economic outlook.

Figure 3.3: London public transport usage

Annual moving average % change in passengers using London Underground and buses (adjusted for odd days). Last data point is the 28-day period ending 16/09/2017



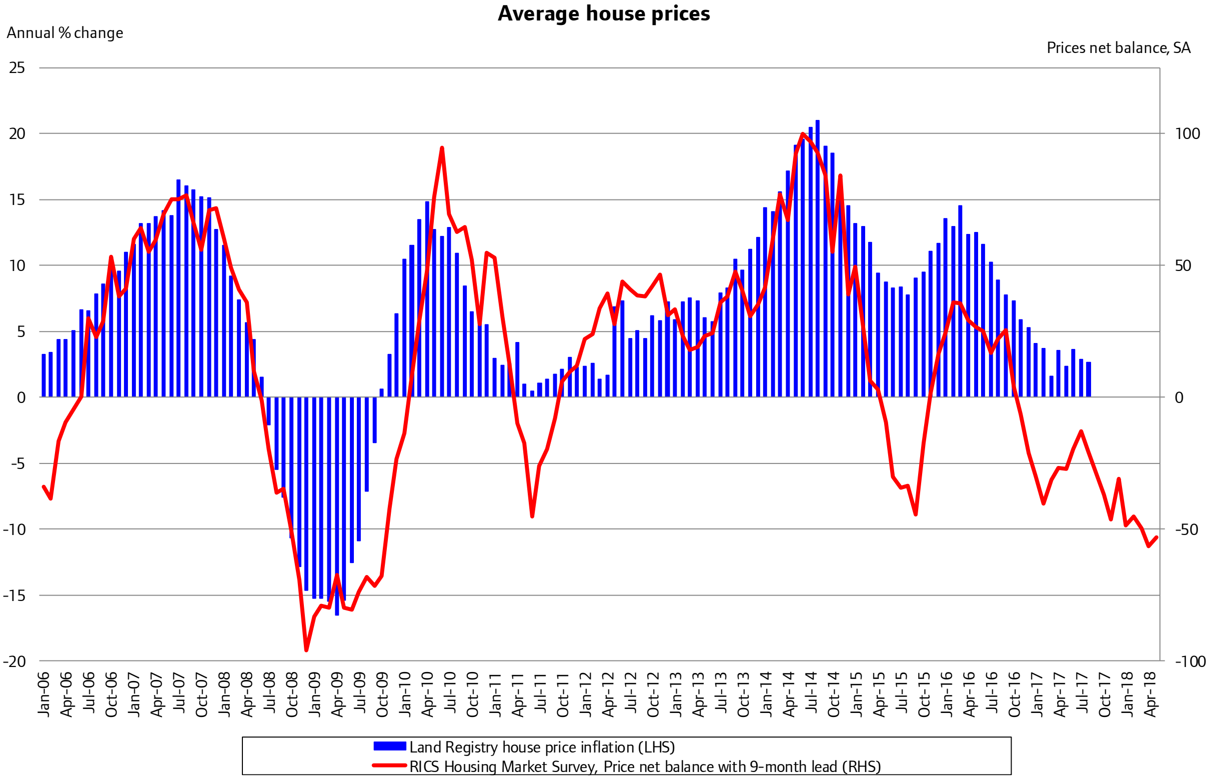
Source: Transport for London

In London's housing market, most evidence points to a further slowdown in the second half of 2017. For example, annual house price inflation in London (as measured by the Land Registry and the ONS) has been at some of the weakest rates for five years in 2017 so far (see Figure 3.4). Additionally, as of January 2017, annual house price inflation in London has been slower than the UK as a whole. For instance, in August 2017, house prices rose 2.7 per cent year-on-year in London and this compared with a 5.1 per cent annual rise for the UK. Looking to the future, data from the Royal Institution of Chartered Surveyors (RICS) Residential Market Survey suggests that a majority of surveyors were pessimistic towards London's future house prices. In fact, this RICS indicator was at one of the lowest points since early 2009 in October 2017.

Figure 3.4: House price inflation in London

Adjusted % change and prices net balance, seasonally adjusted

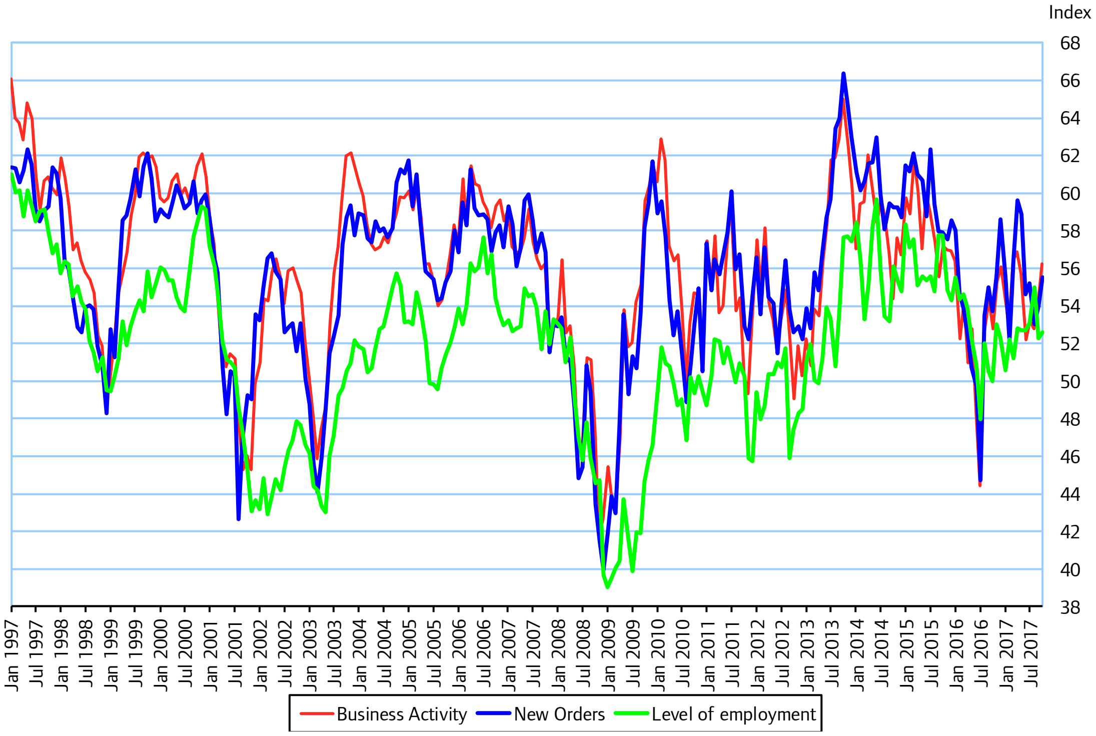
Last data point is August 2017



Sources: Land Registry; ONS; RICS.

Another survey is the Purchasing Managers' Index (PMI) business survey. This asks private sector businesses about the month-on-month changes in a variety of business indicators and can show the state of overall business conditions in London. The most recent data indicated a rise in business activity and new orders in London over the third quarter of 2017 (see Figure 3.5). For instance, the Business Activity and New Business Indices registered 56.3 and 55.5 respectively in October 2017, both of which were above the 50.0 no-change mark. However, both indices are down from those recorded in April (56.9 and 59.6 respectively), suggesting slower rates of growth than at the start of 2017.

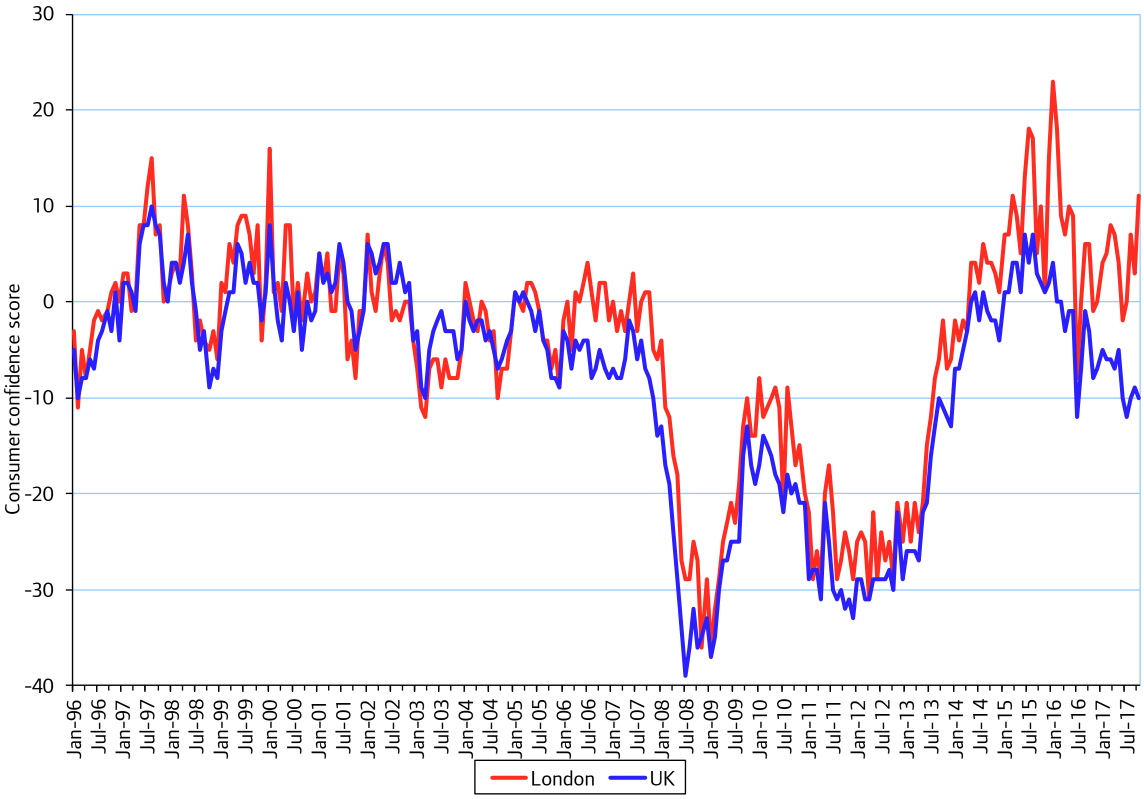
Figure 3.5: Recent survey evidence on London's economic climate
Purchasing Managers' Index (PMI) survey, seasonally adjusted (above 50 indicates an increase; below 50 indicates a decrease)
Last data point: October 2017



Sources: IHS Markit ONS

A final survey is the UK Consumer Confidence Barometer, produced by GfK-NOP, which asks consumers' opinions about their household finances, the general economy, and the purchasing climate. The most recent index suggested that consumer confidence remained largely positive for London, bucking against the negative sentiment shown in the UK as a whole (Figure 3.6). For instance, in October 2017, the Consumer Confidence Barometer was +11 in London versus -10 for the UK. Positive consumer confidence could suggest an increase in household spending over the coming months which will, therefore, support economic growth in London.

Figure 3.6: UK Consumer confidence barometer
Consumer confidence score
Last data point is October 2017



Sources: GfK NOP on behalf of the European Commission

Overall, London's economy is currently performing well. While GVA growth has slowed slightly during the first half of 2017, it still remains faster than the UK as a whole. Employment is also high, unemployment continues to fall, and consumer and business surveys remains positive. Together, these suggest that economic growth in the capital will continue in the short-run. However, there are early signs of weakness in the economy as well. For instance, some surveys have fallen from the levels seen at the start of 2017, London's housing market continues to slow, and public transport usage has declined. This could suggest that London's future rates of economic growth could be slower than what was seen previously.

Box 3.1: The changing influences on London's economy

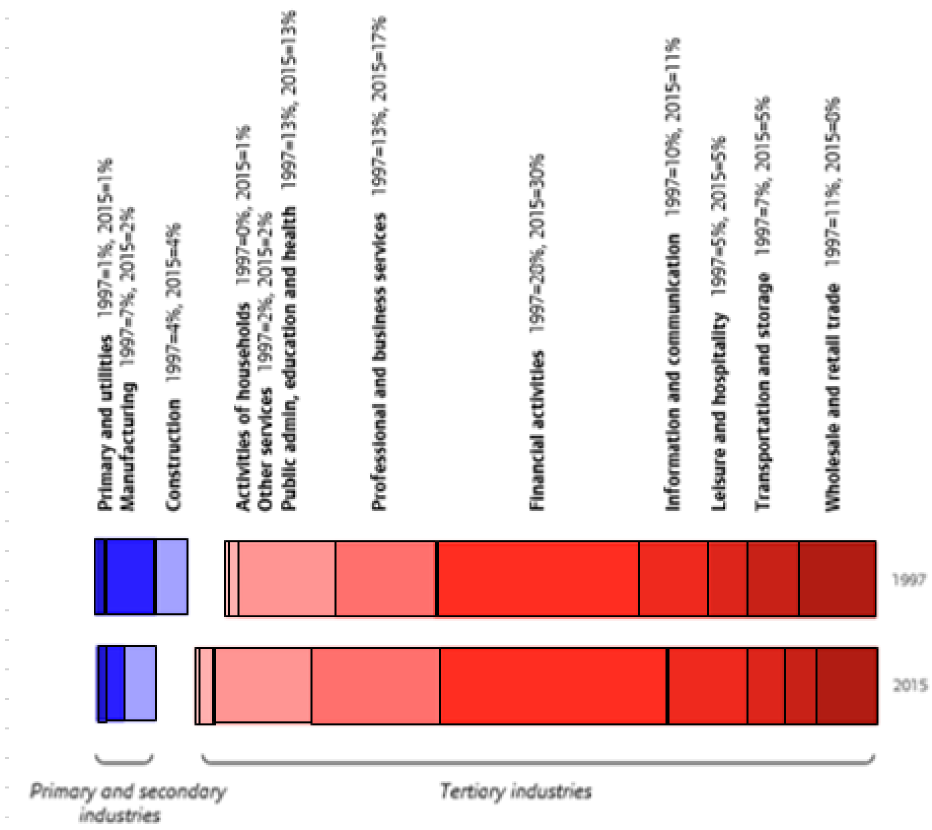
London's economy has evolved over time. It has been shaped by globalisation which has enabled the capital to develop industrial specialisms and become an attractive place to live and work. There are many reasons which explain how London has developed over time including its geographical position and its well-established political, legal and regulatory frameworks. All this means that the drivers of growth in the capital have also changed – and are likely to further do so in the future.

This box discusses some of these changing influences on London's economy. It starts by looking at the historic trends; mainly how the capital's economy has become increasingly concentrated on services. It also discusses some of the important future trends that can broadly be grouped into domestic and global influences. It then ends with a look at how these future trends are accounted for in the GLA Economics medium-term forecasts for London.

Historic trends

The structure of London's economy has already changed substantially. It has shifted away from being focussed on manufacturing and industrial sectors to services, particularly in finance and professional services (see Figure 3.7). For example, the Primary & Utilities[25] and Manufacturing industry groups together previously represented 7.8 per cent of London's economy (as measured in terms of GVA) in 1997, but this has since fallen to 3.5 per cent in 2015[26]. At the same time, the shares of Financial Activities[27] and Professional & Business Services[28] were 27.5 per cent and 13.3 per cent in 1997. These have since increased to 30.5 per cent and 17.3 per cent respectively to now represent almost half of London's economy in 2015.

Figure 3.7: The changing structure of London's economy



Source: ONS Regional GVA (income approach)

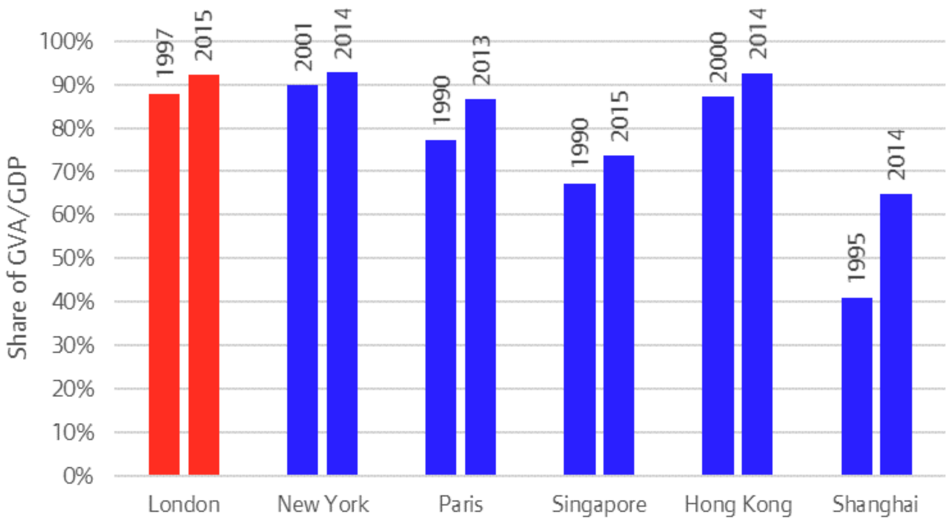
This is partly reflective of a general shift towards services for the UK economy. For instance, the share of GVA produced by the Primary & Utilities and Manufacturing industry groups

[25] This includes Agriculture, Forestry & Fishing, Mining & Quarrying, Electricity, Gas, Steam & Air-conditioning supply, and Water Supply, Sewage & Waste Management.
[26] The ONS GVA data series currently covers the 1997 to 2015 period.
[27] This includes Financial & Insurance Activities and Real Estate Activities.
[28] This includes Professional, Scientific & Technical Activities and Administrative & Support Service Activities.

together used to be 22.8 per cent in 1997 for the UK, but this has fallen to 13.9 per cent by 2015. That said, services are relatively more important in London than the UK.

It is also not just a shift peculiar to London (or the UK). This move towards services (or the tertiary industry[29] more generally) can also be seen for other global cities. For example, the tertiary sector represented 77.2 per cent of regional GVA in the Paris Île de France region in 1990, increasing to 86.7 per cent in 2013[30]. This shift to services is even more pronounced in emerging global cities, such as Shanghai where it increased from 40.8 per cent in 1995 to 64.8 per cent in 2014[31]. You can read more about London's economy in comparison with other global cities in GLA Economics Current Issues Note 48.

Figure 3.8: Tertiary sector's share of economic output for selected global cities



Source: ONS, US Bureau of Economic Analysis, France National Institute of Statistics and Economic Studies (INSEE), SingStat, HK Census and Statistics Department, China National Bureau of Statistics.

Notes: Shanghai only includes urban units (i.e. business units in towns and cities). New York refers to the New York, Newark and Jersey City region. Paris refers to the Ile de France region.

The changing structure of London's economy can also be seen by looking at how the number of jobs in the capital has shifted over time. Table 3.1 shows how this has changed over the past 45 years. It shows the rise of service sector activities, while there has been a decline in the number of manufacturing sector jobs.

[29] This includes all sectors apart from Primary & Utilities which refers to the primary industries, as well as Manufacturing and Construction which refer to the secondary industries.
[30] National Institute of Statistics and Economic Studies France (INSEE) Regional GVA.
[31] National Bureau of Statistics China (NBS) Gross regional product.

Table 3.1: Number of workforce jobs by industry in London between 1971 and 2016, thousands

	1971	1996	2006	2016	Change 1971-2016	
					Num.	%
Primary & utilities	78	31	30	30	-48	-61%
Manufacturing	878	264	166	129	-750	-85%
Construction	276	207	259	291	15	5%
Wholesale	299	220	216	205	-94	-31%
Retail	408	347	418	467	59	14%
Transportation and storage	396	247	263	282	-114	-29%
Accommodation and food service activities	182	205	318	389	207	114%
Information and communication	229	247	351	449	219	96%
Financial and insurance activities	268	336	340	370	102	38%
Professional, real estate, scientific and technical activities	281	468	636	915	634	225%
Administrative and support service activities	227	367	482	584	357	157%
Public admin and defence	339	224	244	223	-117	-34%
Education	268	228	304	424	155	58%
Health	311	352	408	575	264	85%
Arts, entertainment and recreation	80	132	162	213	133	167%
Other services	57	98	136	139	82	142%
London total	**4,579**	**3,973**	**4,732**	**5,683**	**1,104**	**24%**

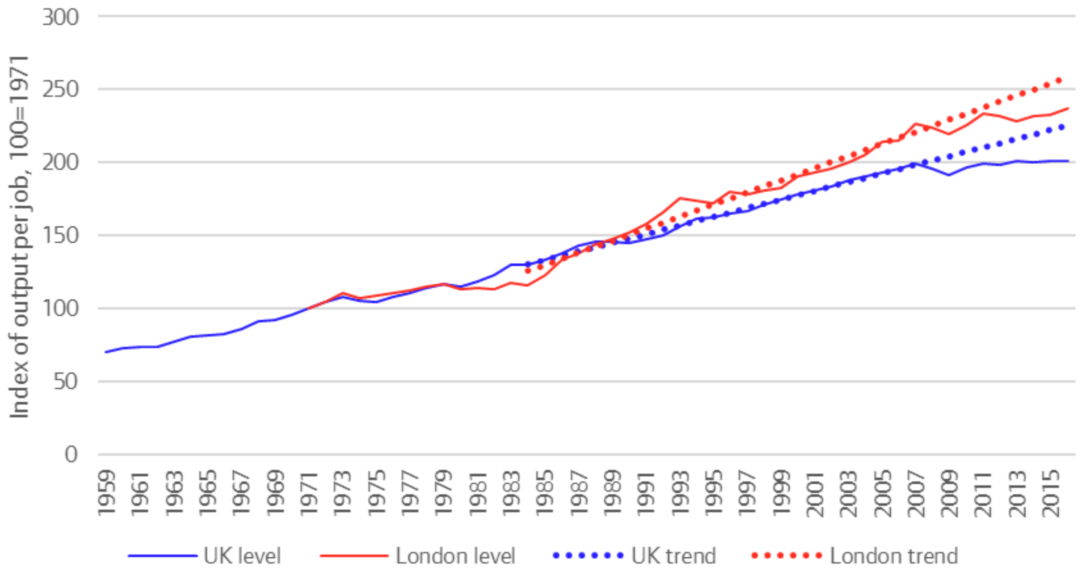
Source: ONS Workforce Jobs

The type of people in employment has also changed over time. For example, the number of women aged 16-64 years in work has increased on average by 2.2 per cent per annum in London between 2004 and 2016[32]. That was slightly faster than for men at 2 per cent. People in work have also become increasingly more qualified. For instance, the number of people in work with at least NVQ Level 4 (e.g. a Bachelor's degree) has increased on average by 5.7 per cent per annum between 2004 and 2016. In contrast, those with no qualifications have declined by 4.7 per cent per annum on average.

Combining data on economic output and jobs can shed some light on productivity. That is, through indicators like output per job and output per hour worked. Productivity is an important measure of an economy as it shows whether more outputs can be produced per unit of input and, consequently, generate additional income. Historically, productivity in London has improved over time and has been one of the driving factors of economic growth. However, since the financial crisis, productivity has been broadly stagnant and well below trend (see Figure 3.9). This has largely been because of strong employment growth exceeding growth in output and is often called the 'productivity puzzle'.

[32] ONS Annual Population Survey, January to December periods.

Figure 3.9: Productivity in London and the UK between 1959 and 2016



Source: ONS and GLA Economics calculations

You can read more about the historic changes to London's economy in the Economic Evidence Base for London. Though, looking forwards, there are several factors that can influence London's economy in the future. This ranges from technological advances, new ways of working and the UK's exit from the EU among others. These can be broadly grouped into domestic and global trends and are discussed separately below.

Future domestic trends

Over time, the what, how and where we work has changed. For example, the introduction of computers has completely changed the way we work and created whole new industries. Similarly, the characteristics of the workforce has also evolved (see above). It is likely that these trends will continue, specifically:

- Emerging technologies
  Tech is transforming the way information is collected, shared and used. Consequently, it has the potential to create new industries, as well as improving the way existing sectors work. Additionally, it can lead to improved productivity and support economic growth.

  London is already regarded as the European capital for the tech sector and is a global leader in areas such as fin tech and smart cities[33]. Overall, there were 197,500 employee jobs in London's digital technologies sector in 2016, and this has been growing at a rate almost twice as fast as the London all-sector average (between 2003 and 2016)[34]. The impact of London's emerging tech industry can also be seen in terms of the capital's

[33] FinTech is the application of digital technologies to create, record, transfer and manage financial value and risk. Whereas smart cities are broadly defined as how human, physical and digital systems can be used to solve city problems and support sustainable growth. See: Tech City UK (2017). 'Tech nation report 2017'.
[34] Between 2003 and 2016, the number of employee jobs in London's digital technology sector increased by 63.2 per cent. In comparison, the London all-sector average was 28.8 per cent. Source: ONS Inter-Departmental Business Register.

service exports. London exported £15.6 billion of services belonging to the Information & communication functional category in 2015[35]. That was the equivalent of 15.6 per cent of all London service exports and is up from the 12.3 per cent share for 2011.

Technology also has far wider influences. For example, some jobs could potentially be automated. This can lead to productivity improvements in terms of the task at hand, but also by better using labour inputs. It can also lead to more job opportunities by developing the mechanics behind automation, as well as through greater demand for workers who have skills that machines are unable to provide. However, job automation can impact sectors and people disproportionally. Various studies produce different estimates of the proportion of jobs that could be automated. For example, PwC estimated that up to 30 per cent of UK jobs could be at high risk of automation by the 2030s[36]. Meanwhile, academics at the University of Oxford suggested that 47 per cent of jobs in the US could be at risk[37]. Subsequently, a similar proportion could be expected for the UK.

- Types of work
  London's economy can also be influenced by different types of work. Two recent phenomena include zero hour contracts and work relating to the 'gig economy'. For example, gig economy work refers to people who use technology to sell their labour, with common examples including Uber and Deliveroo. This has enabled people to enter the labour market or even supplement or substitute entirely other types of employment. These types of work also provide flexibility over working hours. However, there are also some commonly cited drawbacks, such as job security and that it is not treated the same as other more traditional forms of work.

  The ONS estimated that 117,000 people were in employment on zero hour contracts in London during April to June 2017[38]. That was the equivalent to 2.5 per cent of all jobs in London, up from 2.1 per cent a year earlier. A longer time series is available for the UK. This showed that the percentage of people in employment on zero hour contracts across the UK was 2.8 per cent during October to December 2016. While that was still a relatively small percentage, it was nonetheless up from just 0.8 per cent ten years earlier.

  Meanwhile, the number of people working in the gig economy is not yet measured by the ONS. That said, the Chartered Institute of Personnel and Development (CIPD) estimated that there were approximately 1.3 million people in the gig economy across the UK[39]. That was the equivalent of around 4 per cent of all in employment. Their research suggests that this has the potential to grow, with 12 per cent of adults not yet participating in the gig economy thinking about doing so over the next year.

- Changing work patterns
  Different work patterns can also affect London's economy in the future. For example, remote working can change the demand for office space and the location where economic

[35] ONS (2017). 'Regionalised estimates of UK service exports'. May 2017.
[36] PwC (2017). 'UK Economic Outlook', March 2017.
[37] Frey, C & Osborne, M (2013). 'The future of employment: how susceptible are jobs to computerisation?', September 2013.
[38] ONS Labour Force Survey.
[39] CIPD (2017). 'To gig or not to gig? Stories from the modern economy', March 2017.

activity takes place. Similarly, flexible working hours can affect the time that people travel to and from work, which can have wider knock-on effects on infrastructure requirements. Overall, estimates from the ONS suggested that 7.1 per cent of all employees in the UK mainly worked from home during the September to November 2016 period[40].

- The 'productivity puzzle'
  As can be seen in Figure 3.9, productivity in London and the UK has been broadly stagnant since the financial crisis giving rise to the 'productivity puzzle'. While many forecasters had expected productivity to return to historic levels of growth in recent years, this has not materialised. In fact, the Office for Budget Responsibility (OBR) noted that while they believe that there will be a "recovery from the very weak productivity performance of recent years, the continued disappointing outturns…means that [they] anticipate significantly reducing [their] assumption for potential productivity growth over the next five years"[41]. The point at which productivity growth will return to trend is particularly important as it will directly impact future rates of economic and employment growth. This is a point discussed in greater detail in the GLA Economics Labour Market Projections.

- Brexit
  The UK's exit from the European Union can also affect London's economy into the future. It is not yet clear as to how London's economy will be affected, though possible effects could be around the impact on: migration; the labour supply and the availability of highly-skilled workers; the legal frameworks and the location of specific activities; investment; and the future trading relationship with the EU and other countries (see below). A more detailed assessment of how Brexit could affect the capital is in London's Economic Outlook 29 – Autumn 2016 edition, as well as in Box 3.2 in this report.

Future international trends

As noted at the start of this box, global economic trends have already shaped London's economy and this is likely to continue. This not only relates to the rates of global economic growth, but also the economic conditions in key global economies. Already, the US has seen its position as the world's largest economy challenged by China. The Chinese economy has climbed from being the 15th largest global economy in 1960 to second place since 2009[42], and is part of a wider global economic shift away from The West to East Asia and other emerging countries. This brings new and different opportunities for London including:

- Global trade
  The rates of global economic growth (and the rates of growth for London's key trade partners) can affect the demand for London's goods and services abroad. For example, a slower rate of global growth could mean lower demand for London's exports. The global economic shift to emerging markets can also influence the types of goods and services London exports as demand can vary between countries.

[40] ONS Labour Force Survey. Home working is defined as people who mostly work in their own home, in the same grounds or buildings as their home, in different places using homes as a base, or somewhere quite separate from home.
[41] Office for Budget Responsibility (2017). 'Forecast evaluation report', October 2017.
[42] World Bank National Accounts.

The challenges and opportunities of Brexit can also affect London's international trade. In 2015, around two-fifths of goods[43] (40.8 per cent) and one-third of service[44] (36.7 per cent) exports from London went to the EU (this does not include Financial services among other sectors). While this suggests that the EU is an important trading partner for the capital, it also highlights the opportunities of trade with other countries. Therefore, the UK's future relationship with the EU and other countries can potentially have a large effect on London's international trading position.

- Foreign direct investment
  The strength of the global economy (and, to some extent, London's future international trading position) can also affect foreign direct investment (FDI) into and out of the capital. London has historically been a major destination of FDI, ranking in the top three global cities for the number of inward investment projects between 2005 and 2015[45]. However, if global economic growth was to wane, it could mean less FDI flowing into London. The UK's FDI trends will also be influenced by Brexit, with the EY Attractiveness Survey already suggesting concerns about the long-term future of the UK as a place of investment[46].

- Tourism
  The global economy can also influence the number of international tourists that come to London. Consequently, this can have knock-on effects on tourism-related industries such as accommodation, transportation and visitor attractions. The global economy can affect tourism in many ways. For example, the rates of economic growth in key overseas markets could dictate the number of people able to travel abroad. Similarly, global events that include positives like hosting major events to negatives like terrorism can affect London's desirability as a place to visit in comparison with other cities. Also, it can depend on exchange rates which can make London a cheaper or more expensive place to visit. For instance, sterling remains relatively low against the dollar and euro (see Figure 3.11) and this is one of the factors behind the record number of 4 million overseas visitors coming to the UK in July 2017 (up by 6.2 per cent from a year earlier)[47].

How these future trends are accounted for in the GLA Economics forecasts

The extent of which these influences are accounted for in the London economic forecasts varies. The GLA Economics in-house forecast model is essentially based on historic trends for a variety of indicators which are projected forwards[48]. In some cases, independent forecasts of these indicators are used instead of the historic trend. For example, forecasts from the OBR and the Bank of England are used for UK GDP. Therefore, the forecast model does consider the impact of some of the above influences if it is captured in the historic data or independent forecasts. For instance, the impact of Brexit has, to some extent, been included in the OBR forecasts of UK GDP.

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43 HMRC Regional Trade Statistics.
44 ONS Regional Service Exports.
45 fDi Markets data. See: GLA Economics (2016). 'Economic Evidence Base for London 2016', November 2016.
46 EY (2017). 'UK's Attractiveness Survey 2017', May 2017.
47 ONS International Passenger Survey.
48 For more details on the GLA Economics in-house forecast model, see Douglass, G & van Lohuizen, A (2016). 'The historic performance of the GLA'S medium-term economic forecast model', GLA Economics Current Issues Note 49, November 2016.

For other influences, it could be that the impact on the London economy is much more long-term. Consequently, the effect may be limited in the GLA Economics medium-term forecasts that predominantly look at the next three years. For example, the impact of some emerging technologies may not happen until the 2020s and beyond, so this will not feature heavily in the current medium-term forecast. Instead, the impact will become more important in future iterations. That said, there is some allowance for technological progression as these would be captured in the historic data for example.

Additionally, it would be much harder to quantify the future impact of some other trends like job automation. This could be because they are novel or there is limited information for example. In cases like these and where there is insufficient evidence of the potential impact, it is sometimes appropriate to use expert judgement to adjust the forecast estimates. This is sometimes the case for the GLA Economics medium-term forecasts.

Overall, GLA Economics regularly monitors the new and emerging trends that could affect London's economy. These are discussed in a variety of publications and used to provide the evidence behind the way that they are included in the medium-term forecasts. These include editions of London's Economic Outlook, as well as our monthly publication London's Economy Today and Current Issues Notes, Working Papers and Reports that are available on the GLA Economics publications webpage.

3.2 The UK economy

Gross Domestic Product (GDP), and changes to GDP, are the main indicators of economic growth used for the UK. The ONS estimated that the UK economy continued to grow during the third quarter of 2017, with the most recent data showing a quarter-on-quarter expansion of 0.4 per cent. That was broadly similar to the rates of expansion of 0.3 per cent recorded for Q1 and Q2. On a year-on-year basis, GDP growth remained at 1.5 per cent in Q3 2017, which was one of the weakest year-on-year expansions in over five years[49].

Prior to this data release, the IMF maintained their July forecast for the UK, amid upward revisions for most other developed economies. However, the July forecast for the UK represented a downward revision on the April forecast and came as a result of lower-than-expected growth in the first half of 2017[50]. The IMF currently expects the UK economy to grow 1.7 per cent in 2017 (down from 2.0 per cent in April) and 1.5 per cent in 2018[51]. HM Treasury also publishes a consensus forecast for the UK economy from independent research organisations. This suggested that the UK economy would grow by 1.6 per cent in 2017 and 1.4 per cent in 2018, so slightly weaker than the forecasts from the IMF[52]. Meanwhile, the Office for Budget Responsibility (OBR) has raised their forecast for 2017, but lowered it for 2018. The OBR currently expects GDP growth to be 2.0 per cent in 2017 (up from 1.4 per cent in November 2016) and 1.6 per cent in 2018 (down from 1.7 per cent)[53]. Table 3.2 shows a summary of forecasts for the UK economy.

[49] ONS GDP Q3 2017 statistics, preliminary estimate.
[50] IMF (2017). 'World Economic Outlook', October 2017.
[51] Ibid.
[52] HM Treasury (2017). 'Forecasts for the UK economy: a comparison of independent forecasts', October 2017.
[53] Office for Budget Responsibility (2017). 'Economic and fiscal outlook', March 2017.

Table 3.2: Office for Budget Responsibility and HM Treasury consensus forecasts for the UK economy
Annual % change, unless otherwise indicated

	HM Treasury's Average of Independent Forecasters (October 2017)		Office for Budget Responsibility (March 2017)	
	2017	2018	2017	2018
GDP growth (per cent)	1.6%	1.4%	2.0%	1.6%
Claimant unemployment (millions of people)	0.80m	0.90m	0.83m	0.86m
Current account (£ billion)	-£62.2bn	-£51.2bn	-£69.6bn	-£66.2bn
PSNB (2017-18; 2018-19: £ billion)	£58.9bn	£47.2bn	£58.3bn	£40.8bn

Sources: HM Treasury (2017). 'Forecasts for the UK economy: a comparison of independent forecasts', November 2017; and Office for Budget Responsibility (2017). 'Economic and fiscal outlook', March 2017.

However, it should be noted that the single biggest risk to these economic forecasts is the impact of the UK's exit from the European Union. The UK Prime Minister triggered Article 50 on 29 March 2017 and recently announced that the UK will leave at 11pm (GMT) on 29 March 2019. Brexit has created significant uncertainty to the above forecasts (as well as to GLA Economics' own forecasts for London) with the risks being both on the up and downside. More information on the current progress of the negotiations and the impact of Brexit so far is contained within Box 3.2.

Box 3.2: An update on Brexit

This box provides an update on the process and impact of Brexit so far. This follows the updates included in the two previous editions of LEO and so covers the period since June 2017.

At the time of publication of the Spring 2017 LEO, formal negotiations between the UK and the EU had just started. There are two planned main phases to the negotiations. The first is focussed on the UK's withdrawal from the EU itself, while the second is focussed on the future relationship between the UK and the EU. Currently, with the fifth round of negotiations having ended on 12 October, talks are still focussed on the first phase.

Progress with the negotiations has generally been slow. This prompted the Prime Minister Theresa May to give a speech in Florence with the aim of providing some clarity over the UK's negotiating position. Among other things, the PM said that there will be legal protections for EU citizens and that the UK will honour its financial commitments. Perhaps most importantly of all, the PM wants a transition period from March 2019 and lasting for "around two years". It should be "status quo" meaning that access to the single market will remain and that the UK will observe EU rules.

Despite the PM's announcement, the EU chief negotiator said there is still "deadlock" on several key issues. These include the UK's financial responsibilities to the EU (occasionally referred to as the 'divorce bill'), the Irish border and the rights of EU citizens[54]. The lack of progress was emphasised by the other EU leaders announcing on 20 October that the talks have not yet reached a stage where negotiations can begin on the future relationship or transition period. That said, they will reassess the state of progress at their next EU Council session on 14 December and will, at least internally, start preparatory discussions about their

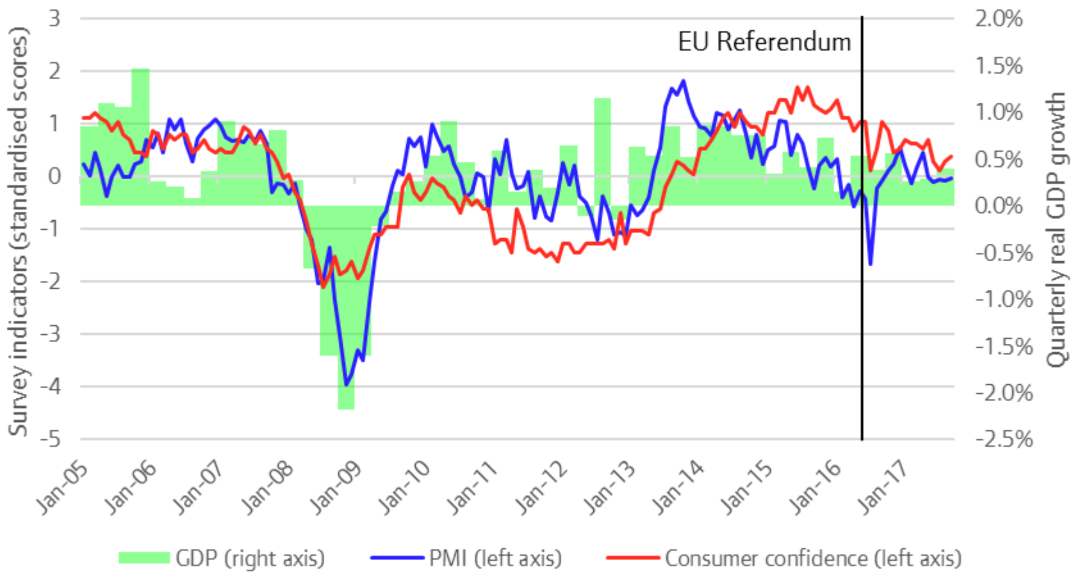
[54] European Council (2017). 'European Council (Art. 50) guidelines for Brexit negotiations', 29 April 2017.

vision of the future relationship. Following this, the UK Brexit secretary, David Davis, believes that a transition deal could potentially be agreed in early 2018 and confirmed that the Government is still working towards having a final deal ratified before the UK's exit on 29 March 2019.

Meanwhile, the UK Government has published two White Papers that look at the trade[55] and custom[56] laws that will need to be in place – regardless of the negotiations outcome – when the UK leaves the EU. There are three broad strategic objectives in the papers: ensuring UK-EU trade is as frictionless as possible; avoiding a hard border in Ireland; and establishing an independent international trade policy.

While the negotiations are still ongoing, the impact of Brexit on the UK economy has so far been mixed. Many forecasters expected the impact of Brexit to be negative both before and immediately following the EU referendum result[57]. However, both the UK PMI and to an extent consumer confidence indicators have been relatively buoyant since July 2016, albeit at lower levels than those seen since the financial crisis (see Figure 3.10). Similarly, the latest GDP numbers showed that the UK economy grew 0.4 per cent during Q3 2017, up slightly from the 0.3 per cent expansions recorded in Q1 and Q2. That said, the rate of quarterly GDP growth was nonetheless slower than the average between 2012 and 2017 (0.5 per cent).

Figure 3.10: Survey indicators and quarterly real GDP growth for the UK between 2005 and 2017



Note: the survey indicators have been transformed into standardised scores to present them on this chart. Source: IHS Markit, GfK, ONS

Reflective of the mixed impact so far, many forecasters have revised up their predictions of GDP growth for 2017, although these still remain relatively subdued. However, they have also revised down their forecasts for 2018 and 2019 (see Table 3.3). The explanations given for these downward revisions mainly relate to the weakness in consumer spending. Previously,

[55] Department for International Trade (2017). 'Preparing for our future UK trade policy', October 2017.
[56] HM Government (2017), 'Future customs arrangements – a future partnership paper', August 2017.
[57] See the summaries in LEO Autumn 2016 and LEO Spring 2017 for example.

household expenditure had been one of the strongest sources of recent economic growth, but the latest GDP estimates[58] suggests that household spending in Q2 2017 grew at the slowest rate (0.2 per cent) since Q4 2014. This weakness in consumer spending is expected to continue in the near-term because of a squeeze on real earnings due to relatively high inflationary pressures. This itself reflects higher import prices because of the depreciation of sterling following the EU referendum (see Figure 3.11 later in this chapter).

Forecasters also attributed the downward revisions to the uncertainty of Brexit itself. For example, the OECD said in their latest Economic Survey of the UK that Brexit has "raised uncertainty and dented business investment" and argued that this would affect future labour productivity growth[59]. This uncertainty has consequently prompted the Bank of England to call for a transition period to be agreed by Christmas[60]. Otherwise, the Bank argued, "firms would start discounting the likelihood of a transition in the central case of their planning".

Table 3.3: Summary of real GDP growth forecasts for the UK*

		2017	2018	2019	2020	2021	2022
IMF World Economic Outlook							
Pre-vote	Apr-16	2.2%	2.2%	2.1%	2.1%	2.1%	..
Post vote	Oct-16	1.1%	1.7%	1.8%	1.9%	1.9%	..
Latest	Oct-17	1.7%	1.5%	1.6%	1.7%	1.7%	1.7%
Bank of England Inflation Report							
Pre-vote	May-16	2.3%	2.3%	..	..	..	..
Post vote	Aug-16	0.8%	1.8%	..	..	..	..
Latest	Nov-17	1.5%	1.7%	1.7%	1.7%	..	..
Office for Budget Responsibility Economic and Fiscal Outlook							
Pre-vote	Mar-16	2.2%	2.1%	2.1%	2.1%	..	..
Post vote	Nov-16	1.4%	1.7%	2.1%	2.1%	2.0%	..
Latest	Mar-17	2.0%	1.6%	1.7%	1.9%	2.0%	..
HM Treasury Summary of Independent Forecasts**							
Pre-vote	May-16	2.2%	2.3%	2.2%	2.2%	..	..
Post vote	Nov-16	1.3%	1.5%	1.8%	2.1%	..	..
Latest	Nov-17	1.6%	1.3%	1.6%	1.8%	1.9%	..

**Some other organisations produced bespoke forecasts looking at the impact of the vote to leave the EU. While these are not all reflected in this table (as these were one-off pieces of analysis), the consensus was that the potential impact of a leave vote would be negative.*
***HM Treasury publishes medium-term forecasts every three months and short-term forecasts every month. The medium-term forecasts are shown here. Earlier in Section 3 of this paper, the short-term forecasts for November 2017 were reported.*

Source: IMF World Economic Outlook, Bank of England Inflation Report, Office for Budget Responsibility Economic and Fiscal Outlook, HM Treasury Summary of Independent Forecasts.

Overall, the uncertainty around Brexit means that the medium-term economic forecasts are also subject to a lot more uncertainty than is usually the case. At this stage of the negotiations, there is no way of knowing what the future relationship the UK will have with the EU. This means that all the economic forecasts have made various assumptions as to what this relationship could be. For instance, the Bank of England assumes that there will be a "smooth adjustment" to the eventual UK/EU relationship[61]. The Bank has also made

[58] Household expenditure data is published alongside the second estimate of GDP meaning that data is currently only available up to Q2 2017.
[59] OECD (2017). 'OECD Economic Surveys: United Kingdom 2017', October 2017.
[60] Bank of England (2017). 'Geofinance – speech by Sam Wood', 4 October 2017.
[61] Bank of England (2017). 'Inflation Report', November 2017.

assumptions about sector-specific impacts. For example, the Bank expects (as one of a range of scenarios) that up to 75,000 jobs could be lost in financial services and associated professional services following the UK's exit as the EU could impose location specific regulations[62]. That said, that number could go up or down depending on the potential future trade deal with the EU and other countries. Similarly, the IMF assumes that there will be no "excessive uncertainty" as negotiations proceed and that the new arrangements will be introduced in a way that avoids "a very large increase in economic barriers"[63]. Consequently, if the future relationship turns out differently to these assumptions underpinning the medium-term forecasts, it could lead to significantly different forecasts than those shown in Table 3.3 above.

A more thorough, though still high-level, assessment of the potential long-term impact of Brexit on the UK economy is discussed in the Autumn 2016 LEO. Meanwhile, GLA Economics will continue to monitor the Brexit process and report on its impact on London in both future LEOs and our monthly publication 'London's Economy Today'.

Turning to a more detailed analysis of the UK economy, Table 3.4 shows that annual growth was positive in Q3 2017 in all sectors except for the Mining & quarrying and Electricity, gas, steam and air industries which make up only a tiny percentage of UK GDP. Of more significance is the low levels of growth which are observable in most of the service sectors. Services make up a significantly larger proportion of total UK GDP and, as such, growth rates here will have a proportionally higher effect on UK total GDP. The general trends across the seven-quarter period shown below appears to be one of a general slowdown in growth rates, particularly evident in the last quarter. However, the Business services and finance industry group – a sector of particular importance for London – bucked this trend with the rate of growth remaining largely the same over the past two years.

Table 3.4: Recent growth in broad industrial sectors of the UK economy
Annual % change (current as of 25 October 2017)

	2016				2017		
Industrial sectors	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**
Agriculture, forestry, and fishing	-5.1%	-6.7%	-6.5%	-4.4%	-0.6%	0.4%	1.6%
Mining & quarrying inc oil & gas extraction	3.6%	-2.8%	0.7%	-5.2%	0.7%	-0.9%	-4.1%
Manufacturing	-0.8%	1.3%	1.0%	2.2%	2.8%	0.9%	2.7%
Electricity gas and water supply	-2.3%	5.5%	0.9%	6.2%	0.9%	-4.8%	-0.7%
Construction	2.0%	3.4%	4.3%	5.4%	6.9%	4.1%	2.8%
Distribution hotels and catering	4.8%	4.6%	5.1%	5.7%	2.9%	3.1%	2.3%
Transport, storage and communication	3.8%	3.1%	4.6%	4.8%	2.6%	3.4%	1.2%
Business services and finance	1.8%	1.9%	1.7%	1.5%	1.7%	1.3%	1.6%
Government and other services	1.5%	1.1%	1.7%	1.0%	1.0%	1.1%	0.8%

Source: ONS

Looking at possible additional indicators of future growth, expenditure is a vital tool for analysing demand and, therefore, estimating future growth. Consumer trends, such as those shown in Table 3.5, are used in national accounts to measure the contribution of households to

[62] House of Lords (2017). 'EU financial affairs sub-committee meeting', Lords Select Committee, 1 November 2017.
[63] IMF (2017). 'World Economic Outlook', October 2017.

economic growth (using the expenditure measure). Table 3.5 shows that household annual spending growth in Q2 2017 was half that in Q2 2016, having fallen from 3.2 per cent to just 1.6 per cent. Final consumption expenditure for non-profit institutions has been in decline since Q4 of last year, while growth in general government consumption expenditure remains low at just 0.5 per cent. Gross fixed capital formation, although down on the 3.7 per cent growth seen in Q1 2017 and Q4 2016, remains strong, measuring 2.4 per cent in Q2 of this year. This is up from -0.6 per cent for the same quarter a year earlier.

Table 3.5: UK domestic expenditure growth
Annual % change

	2016				2017	
Expenditure	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**
Households	2.9%	3.2%	2.7%	2.7%	2.3%	1.6%
Non-profit institutions	0.9%	0.7%	1.1%	-0.2%	-0.1%	-0.2%
General Government	1.6%	0.9%	0.6%	1.1%	0.3%	0.5%
Gross fixed capital formation	-1.1%	-0.6%	3.5%	3.7%	3.7%	2.4%

Source: ONS

Inflation (as measured by the Consumer Price Index or CPI) continued to be relatively elevated, standing at 3.0 per cent in October 2017, unchanged from September. This was above the Bank of England's 2.0 per cent target and the joint highest level it has been since March 2012. The Bank of England expects inflation to peak soon before starting to fall back towards the 2.0 per cent target in the near-term[64]. That is because the Bank expects the depreciation of sterling following the EU referendum result and recent increases in energy prices to have worked their way through the economy. Although this inflation may therefore only be short-lived, it currently exceeds earnings growth and will, therefore, at least in the short-term cause a fall in real earnings. This, in turn, could act as a dampener on consumer spending (see above) and have an overall negative effect on the UK economy.

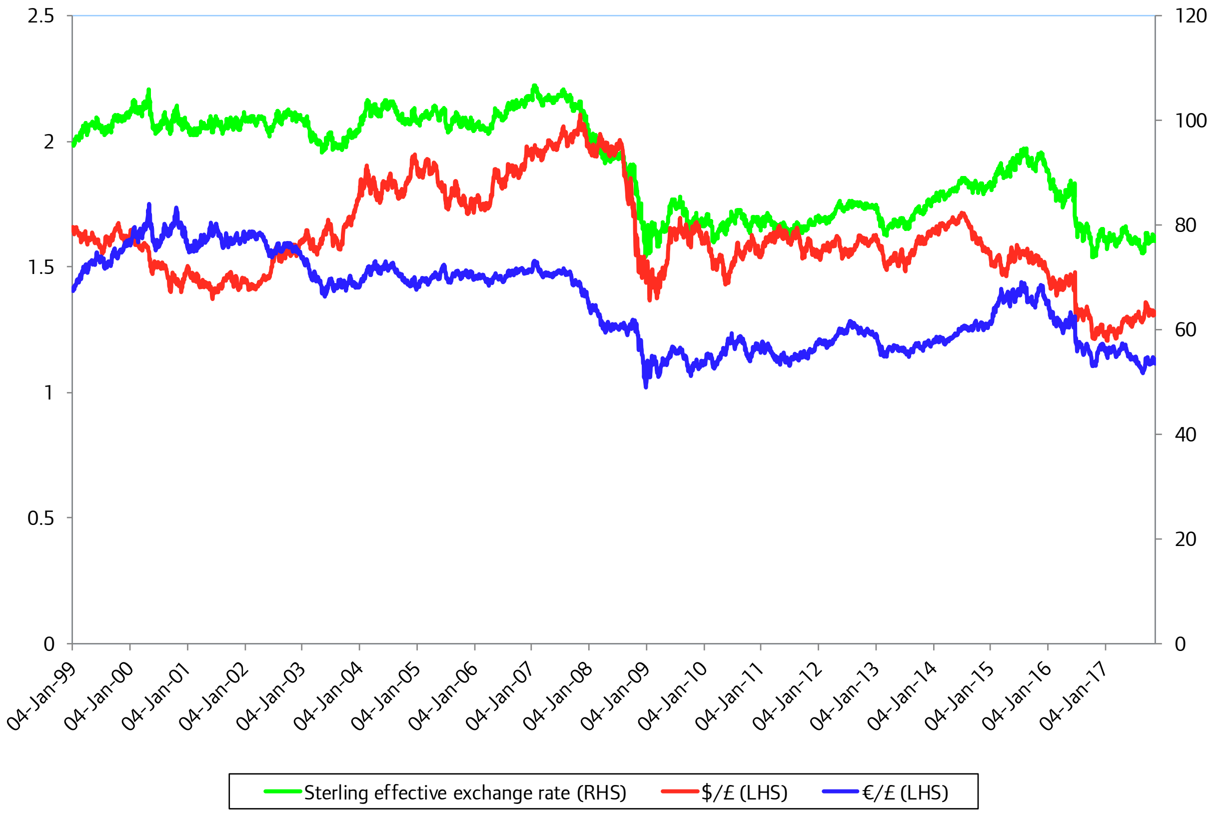
This rise in inflation prompted the Bank of England's Monetary Policy Committee (MPC) to raise interest rates, increasing the base rate from 0.25 per cent to 0.5 per cent at their November meeting[65]. The MPC further cited the improving economic environment more generally as what prompted the rise. The MPC also signalled future interest rate rises as a result of a normalisation of monetary policy. Though this interest rate rise was only marginal, it was the first increase in over a decade and could have significant effects on the UK economy. As well as bolstering the weak pound, it could risk reducing consumer demand by raising the opportunity cost of spending (i.e. in terms of potential interest lost), as well as increase the cost of borrowing. This could further dampen consumer spending and restrict investment which could both negatively affect economic growth.

Following the results of the EU referendum on 23 June 2016, sterling saw a marked depreciation against both the dollar and euro over the following months. Since the start of 2017, the pound has generally continued to depreciate against the euro, but is starting to strengthen against the dollar. However, in both cases, it nevertheless remains low by historic standards as is also shown by the sterling effective exchange rate[66] (see Figure 3.11). Despite

[64] Bank of England (2017). 'Monetary Policy Summary and minutes of the Monetary Policy Committee meeting ending on 1 November 2017', 2 November 2017.
[65] Ibid.
[66]

contributing to inflation through increased import prices, a continuation of these trends can be expected to boost the UK's and London's economy in the longer run. The prolonged fall in the pound should make the UK's and London's exports relatively cheaper and boost exports growth. In addition, it may encourage some substitution of comparably more expensive imports towards relatively cheaper domestically produced goods and services. From an international perspective, London could also appear a cheaper place to undertake foreign investment and increase the city's attractiveness as a tourist destination for foreigners.

Figure 3.11: Exchange rates
Last data point is 16/11/2017
For the effective exchange rate, January 2005 = 100



Source: Bank of England

3.3 The world economy

In October, the IMF released their latest World Economic Outlook (WEO) in which they revised their global growth forecasts for both 2017 and 2018. Global growth is now expected to be 3.6 per cent in 2017 and 3.7 per cent in 2018. These are up from the forecasts of 3.5 per cent and 3.6 per cent growth for 2017 and 2018 respectively made in both the April WEO and the July update. The revisions include broad-based upward revisions of economic growth for the euro area and Japan, as well as many emerging economies. However, in relation to their latest forecast, the IMF noted that "while the baseline outlook is strengthening, growth remains weak in many countries, and inflation is below target in most advanced economies". They further observed that "commodity exporters, especially of fuel, are particularly hard hit as their adjustment to a sharp stepdown in foreign earnings continues. And while short-term risks are broadly balanced, medium-term risks are more tilted to the downside"[67].

The IMF also published their latest Global Financial Stability Report in October, which found that the global financial system was continuing to strengthen in response to "extraordinary policy support, regulatory enhancements, and the cyclical upturn in growth". The health of banks in many advanced economies is continuing to improve, "while a majority of systemic institutions are adjusting business models and restoring profitability". The upswing in global economic activity has boosted market confidence while reducing threats to financial stability in the near-term. The IMF further found that global bank balance sheets have strengthened because of "improved capital and liquidity buffers, amid tighter regulation and heightened market security"[68].

In light of significant policy uncertainty in the **US**, the IMF revised down economic growth expectations between April and July 2017. However, the IMF has since slightly revised up the rates of economic growth in the US in its October 2017 forecasts. The IMF now expects growth to be 2.2 per cent in 2017 and 2.3 per cent in 2018 (though these are still down from the April forecasts of 2.3 per cent and 2.5 per cent respectively). In the medium-term, growth prospects are expected to be constrained by weak productivity growth, falling labour market participation rates, increasingly polarised income distribution, and high levels of poverty among certain groups. Overall, the IMF says that these factors have led to the lowest potential growth rate for the US since the 1940s[69].

Meanwhile, the economic outlook has improved for the **Eurozone** which has shown accelerating growth since mid-2016. In particular, growth in the first half of 2017 has been bolstered by "stronger private consumption, investment, and external demand" according to the IMF[70]. Eurozone GDP rose by 0.6 per cent in Q3 2017, broadly in line with the 0.7 per cent expansion recorded in Q2, and is indicative of the area's continued recovery[71]. In annual terms, GDP expanded by 2.5 per cent in the third quarter; this represents the strongest rise since Q1 2011[72]. Meanwhile, the IMF predicts the euro area will expand 2.1 per cent in 2017 and 1.9 per cent in 2018; both are upward revisions of 0.2 percentage points on their July estimates[73]. In more good news for the Eurozone, inflation is expected to pick up from 0.2 per cent in 2016 to 1.5 per cent in 2017, reflecting the continued rise in energy prices and the ongoing cyclical recovery in demand[74]. However, despite this growth and stronger economic activity, risks to this recovery remain. In particular, demographic factors and weak productivity weigh on the Eurozone's growth potential.

Like the Eurozone, **Japan** saw an acceleration of growth in the first half of 2017 because of buoyant financial conditions seen across the world. Consequently, the IMF has revised up forecasts of Japan's economic growth in both July and October, though with some caution due to persistently low inflation which has been less than 1 per cent for over a year. In the IMF's

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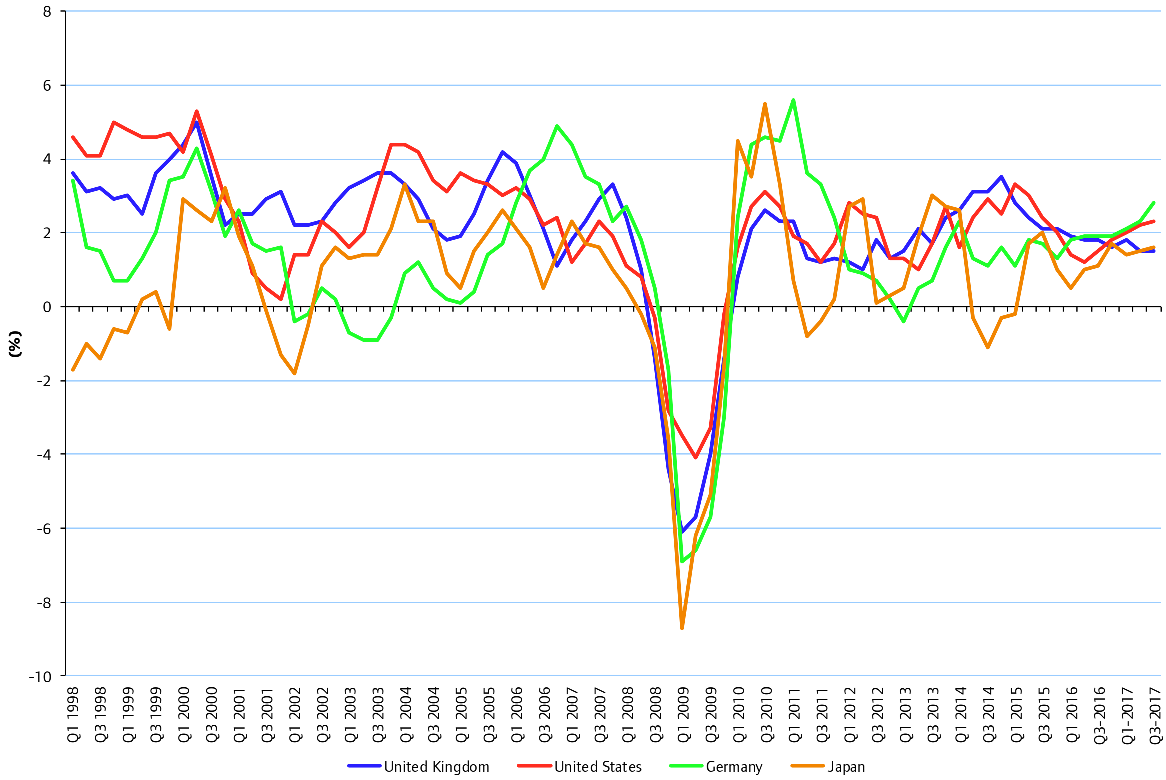
[67] IMF (2017). 'World Economic Outlook', October 2017.
[68] IMF (2017). 'Global Financial Stability Report', October 2017.
[69] Lizarazo, S & Peralta-Alva, A & Puy, D (2017). 'The Benefits and Costs of a US Tax Cut', IMF Blog, 1 September 2017.
[70] IMF (2017). 'World Economic Outlook', October 2017.
[71] Eurostat GDP Q3 2017 statistics, preliminary estimate.
[72] Ibid.
[73] Ibid.
[74] Ibid.

October forecasts, Japan was projected to grow by 1.5 per cent in 2017, though the rate of expansion is expected to slow to 0.7 per cent in 2018.

Figure 3.8: GDP growth in selected advanced countries
Real GDP, growth compared to same quarter of previous year
Last data point is Q3 2017



Source: OECD

3.4 Emerging market economies

Emerging market economies showed better-than-expected growth in the first half of 2017. The IMF observed that the growth in emerging and developing economies was "supported by improved external factors – a benign global financial environment and a recovery in advanced economies" [75]. Further, the IMF says that "growth in China and other parts of emerging Asia remains strong, and the still-difficult conditions faced by several commodity exporters in Latin America, the Commonwealth of Independent States and sub-Saharan Africa show some signs of improvement"[76]. Overall, the emerging market economies are predicted to grow by 4.6 per cent in 2017 and 4.9 per cent in 2018[77].

Of the major emerging markets, **China's** economy continued to expand most rapidly, with year-on-year growth of 6.8 per cent in the third quarter of 2017. This is slightly below the previous quarter (6.9 per cent), but still above the government's full-year target of 'around 6.5 per cent'. China's economy is also set to achieve the first year-on-year acceleration in growth since 2010, following an expansion of 6.7 per cent last year. For instance, the IMF raised its GDP forecast to

[75] IMF (2017). 'World Economic Outlook', October 2017.
[76] Ibid.
[77] Ibid.

6.8 per cent for 2017. Despite these solid growth figures, there is some concern that the economy is currently benefitting from the lagging impact of significant monetary and fiscal stimulus and the recent boom (and possibly bubble) in China's housing market[78]. Consequently, as these influences wane, there is some concern that the rate of growth will therefore slow in the near-term. This is evident in the IMF forecasts for 2018 whereby they expect growth of 6.5 per cent. The IMF cited "a slower rebalancing of activity towards services and consumption, a higher projected debt trajectory, and diminished fiscal space" as the main driving factors behind this slowdown[79].

In contrast to the Chinese economy, **India's** economy grew at its slowest pace for three years in the second quarter of 2017, at just 5.7 per cent. This is the fifth consecutive quarter of economic deceleration, and down from rates of growth of over 9 per cent in 2016. Still the Reserve Bank of India's Monetary Policy Committee, while acknowledging some short-term uncertainty, is projecting a pick-up in growth in the coming months. In a recent statement, the Bank said that 'various structural reforms' introduced recently were likely to augment growth in the medium-term by "improving the business environment, enhancing transparency, and increasing formalisation of the economy"[80].

Emerging Europe is expected to see stronger than anticipated growth in 2017, reflecting rebounding growth in Turkey and **Russia**. The IMF currently expects Russia to grow 1.8 per cent in 2017, helped by stabilizing commodity prices (notably oil), easing fiscal conditions, and improved confidence. However, in the short term, this growth is likely to be constrained to 1.6 per cent in 2018 as a result of "moderate oil prices, adverse demographics, and other structural impediments"[81]. A major risk to Russia's continued growth comes from renewed sanctions levied by the US.

3.5 Risks to the economy

The UK's decision to leave the EU, despite the UK's trading relationship having so far not changed, continues to create uncertainty in the British economy, both in the short and long-term. This could affect London's economy in several areas including the labour market, business confidence which could have a knock-on effect on business investment, as well as inflation due to the depreciation in sterling.

In the longer term, the impact of the vote to leave the EU is very dependent on the trade deals negotiated between the UK and the EU and others. This sits alongside other risk factors such as agreements on research collaboration and funding, the perception of London and the UK as a place to do business, the post-Brexit taxation environment in the UK, and any tightening of the UK's migration regime which could lead to a restriction in London's labour supply.

As well as these downside risks, Brexit also provides risks to the upside. For example, a better-than-expected outcome of the EU negotiations could lead to stronger-than-expected growth for London and the UK. In addition, London may be able to attract business by promoting itself as an even more business-friendly place which could stimulate growth. The UK may also be able to negotiate more favourable trade deals with the EU and other non-EU countries than which

[78] OECD (2017). 'China – economic forecast summary', June 2017.
[79] IMF (2017). 'World Economic Outlook', October 2017.
[80] Reserve Bank of India (2017). 'Fourth Bi-monthly Monetary Policy Statement, 2017-18', October 2017.
[81] IMF (2017). 'World Economic Outlook', October 2017.

currently exist. Consequently, this could lead to higher rates of exports growth and greater levels of investment.

As discussed above, inflation is another downside risk to the economy, standing at 3.0 per cent in October 2017. Although the Bank of England expects this to be short-lived, it currently exceeds earnings growth and, therefore, will at least in the short term cause a fall in households' real earnings. This, in turn, could act as a dampener on consumer spending and have an overall negative effect on the UK economy.

There are also prospects of rising interest rates as monetary policy in the UK returns to more historically 'normal' levels. The Bank of England voted to raise interest rates by 0.25 percentage points at its November Monetary Policy Committee meeting and while this only increases interest rates up to 0.5 per cent, interest rates could soon start to rise further. This could help to bolster the weak pound. It further has the potential to reduce consumer demand and push up borrowing costs. Consequently, this could potentially dampen consumer spending which could have a further negative effect on economic growth, and therefore represents an additional risk to the forecast. Still, if interest rate rises follow the currently expected slow path to 'normality' these should provide a period of continued relatively low interest rates for some time to come which would be supportive to the economy, keeping borrowing costs low, thus still promoting consumption and investment.

As well as these UK-level risks, there are several risks to the international economy which could also affect London and the UK. On the downside, unfavourable US trade policy promoting increased protectionism remains a significant risk to London's economy. That is because the US is currently the largest single country trading partner for London and the UK. In addition, the gradual tightening of US monetary policy (which has continued into 2017 with further rises likely) along with looser rates in other nations may have unexpected knock-on impacts on emerging market economies. For instance, rising interest rates – especially if also accompanied by a fiscal spending boom in the US – could lead to funds flowing out of emerging market economies and into the US leading to destabilising effects on these emerging economies. If this includes economies that London trades or invests with, it could have implications for London's economic growth.

Another downside risk comes from geopolitical uncertainty. An outbreak of violent conflict anywhere in the world has the potential to dampen, or reverse, growth in that region and further afield. The effects of this would be more profound the more integrated the actors are with the global economy, or if they are particularly important partners in global trade. China's economy is of also of concern due to the current size of their debt burden, and the potential effect of a Chinese economic slowdown on their trading partners. The direct impact on the UK and London's economies 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.

While most risks remain on the downside, upside potential also exist. Once such upside 'risk' is if the cyclical recovery in world trade continues, causing a further pick up in global growth for most regions. Thus, if this lasts, it will have the greatest impact on the more open economies, such as the UK.

Further, the continued depreciation of sterling has the potential to benefit London as UK exports become relatively cheaper, thus boosting exports growth. In addition, a cheaper pound may encourage some substitution of comparably more expensive imports towards relatively cheaper domestically produced goods and services. From an international perspective, London could appear a cheaper place to undertake foreign investment and increase the city's attractiveness as a tourist destination for foreigners.

3.6 Conclusion

Economic growth in the UK has been subdued so far in 2017. Still, most economic indicators suggest continued growth and forecasters predict growth will continue over 2017 and into 2018. There are several early indicators of some weakness in the UK economy. Business and consumer surveys have fallen and there has been a worrying fall in real earnings which could impact future household spending. Monetary policy remains loose but is starting to normalise, which may also dampen consumer spending and investment. Inflation also continues to pick up and may rise further before it starts to fall again adding to the existing pressures on real household incomes. Outside the UK, problems faced by the Eurozone (the UK's largest trading partner) have lessened though structural problems remain, and there are additional concerns over the potential effects of US protectionism.

Overall and despite some economic uncertainty, London's economy is expected to continue to grow. Although London's GVA growth has slowed slightly, it remains strong compared to the UK as a whole. The labour market also remains strong, with employment levels high and unemployment continuing to fall. All this has inspired continued confidence in London's economy, with consumer and business surveys remaining positive. However, as with the UK economy, there are also early signs of weakness in London's economy. Some surveys have fallen from levels seen in early 2017, the housing market continues to slow, and public transport usage has declined.

4. Review of independent forecasts

GLA Economics' forecast of four economic indicators is provided in Chapter 5: workforce jobs, real GVA, private consumption (household expenditure) and household income in London. In this chapter the consensus view, as of 17 November 2017, on the first three of these indicators is summarised[82], drawing on forecasts from outside (independent) organisations[83]. 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 Experian Economics (EE) for the historic growth rates and GLA Economics modelling using EE data for the levels data.

Additionally, both the consensus[84] and GLA Economics' own forecasts provide predictions of employment and output growth in six broad sectors:

- Manufacturing
- Construction
- Transportation and storage
- Distribution[85], accommodation and food service activities
- Finance and business services[86]
- Other (public & private) services[87].

It should be noted, that since our spring 2012 forecast GLA Economics has been using the new Standard Industrial Classification (SIC 2007)[88].

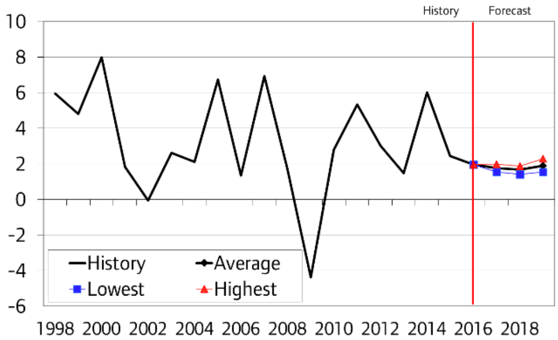
[82] The consensus forecast for GVA and employment is based on the latest available forecast from CE, CEBR, EE and OE, while the consensus forecast for household expenditure is based on the latest available forecast from CE, EE and OE only.
[83] Most forecasters do not yet provide forecasts of household income.
[84] 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.
[85] Distribution is made from the summation of Wholesale and Retail.
[86] 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.
[87] This is made from the summation of Public admin and defence, Education, Health, Arts, entertainment and recreation and Other services.
[88] For more information see Appendix A of: GLA Economics (2012). 'London's Economic Outlook: Spring 2012', June 2012.

Output

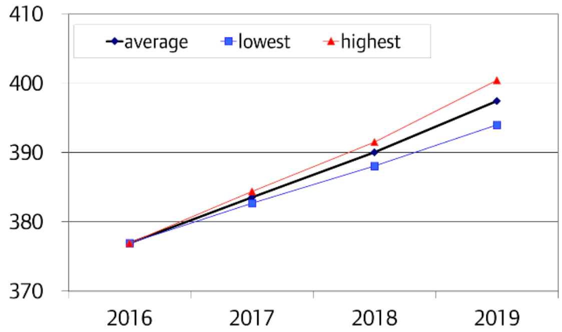
(London GVA, constant prices (base year 2013), £ billion)

The consensus (mean average view) is for real output growth to be 1.8 per cent in 2017, before slowing to 1.7 per cent in 2018, and rising slightly to 1.9 per cent in 2019.

Annual growth (per cent)



Level (constant year 2013, £ billion)



Annual growth (per cent)					Level (constant year 2013, £ billion)			
	2017	2018	2019			2017	2018	2019
Average	1.8	1.7	1.9		Average	385	392	399
Lowest	1.5	1.4	1.5		Lowest	384	390	396
Highest	2.0	1.9	2.3		Highest	386	393	402

History: Annual growth (per cent)

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
5.9	4.8	8.0	1.8	-0.1	2.6	2.1	6.7	1.3	6.9	1.7	-4.4	2.8	5.3	3.0	1.5	6.0	2.4	2.0

History: Level (constant year 2013, £ billion)

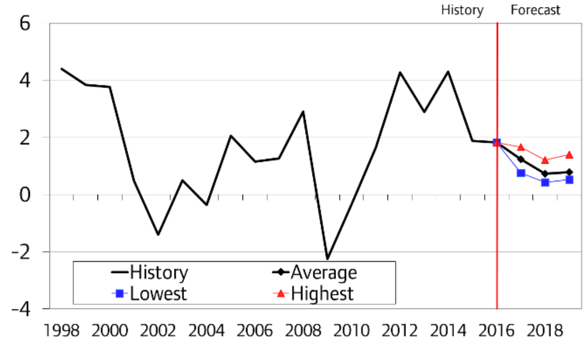
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
209	221	232	251	255	255	262	267	285	289	309	315	301	309	326	335	340	361	370	377

Employment

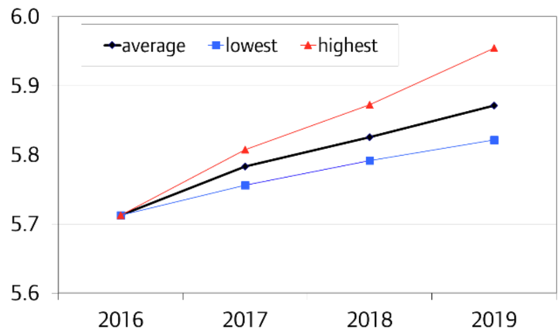
(London workforce jobs)

The consensus view is for the number of workforce jobs to continue to grow. With them increasing by 1.2 per cent in 2017, by 0.7 per cent in 2018, and by 0.8 per cent in 2019.

Annual growth (per cent)



Level (millions)



Annual growth (per cent)					Level (millions)			
	2017	2018	2019			2017	2018	2019
Average	1.2	0.7	0.8		Average	5.78	5.83	5.87
Lowest	0.8	0.4	0.5		Lowest	5.76	5.79	5.82
Highest	1.7	1.2	1.4		Highest	5.81	5.87	5.95

History: Annual growth (per cent)

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
4.4	3.8	3.8	0.5	-1.4	0.5	-0.4	2.1	1.2	1.3	2.9	-2.2	-0.3	1.6	4.3	2.9	4.3	1.9	1.8

History: Level (millions)

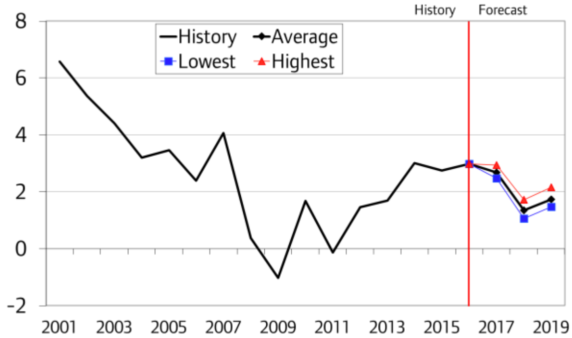
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
4.14	4.32	4.49	4.66	4.68	4.62	4.64	4.62	4.72	4.77	4.83	4.97	4.86	4.84	4.92	5.13	5.28	5.51	5.61	5.71

Household expenditure

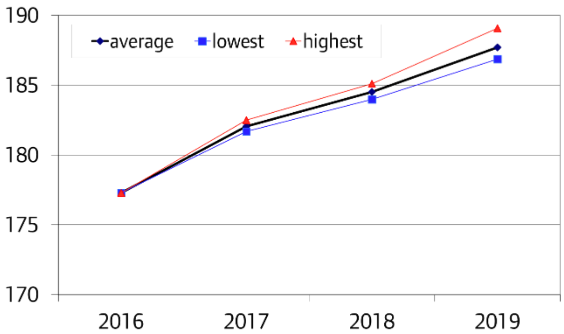
(London household spending, constant year 2013, £ billion)

The consensus view is for positive household expenditure growth of 2.7 per cent in 2017, 1.4 per cent in 2018, and 1.7 per cent in 2019.

Annual growth (per cent)



Level (constant year 2013 £ billion)



Annual growth (per cent)					Level (constant year 2013 £ billion)			
	2017	2018	2019			2017	2018	2019
Average	2.7	1.4	1.7		Average	180	182	185
Lowest	2.5	1.1	1.5		Lowest	180	182	185
Highest	2.9	1.7	2.2		Highest	180	183	187

History: Annual growth (per cent)

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
6.6	5.4	4.4	3.2	3.5	2.4	4.1	0.4	-1.0	1.7	-0.1	1.5	1.7	3.0	2.7	3.0

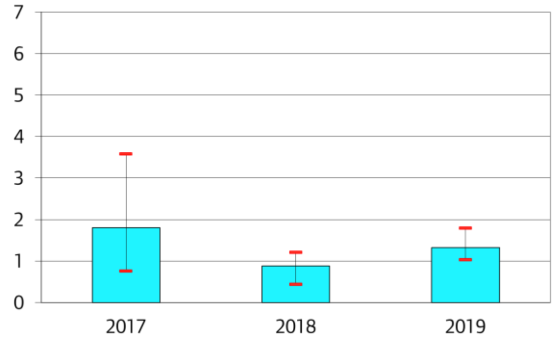
History: Level (constant year 2013, £ billion)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
117	125	132	137	142	147	150	156	157	155	158	158	160	163	168	172	177

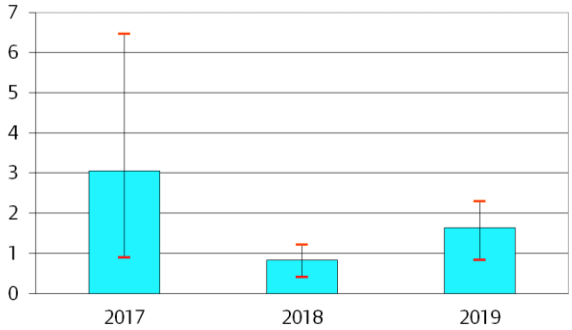
Output growth by sector (per cent annual change)

As the economy continues to grow, it is expected that there will be positive output growth in all sectors for all years and for all sectors.

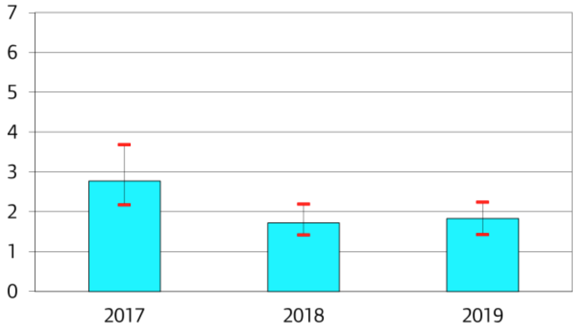
Manufacturing



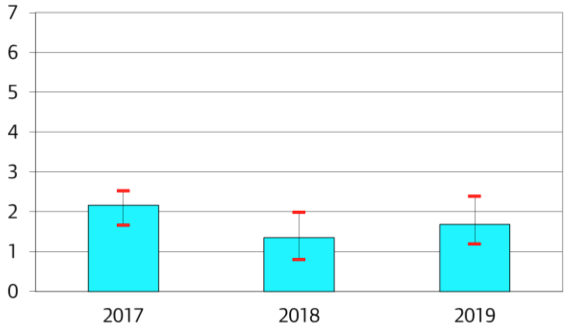
Construction



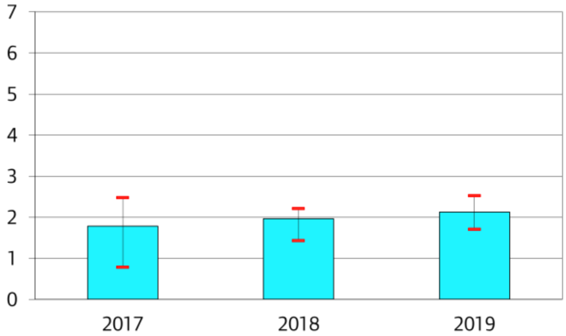
Distribution, accommodation and food service activities



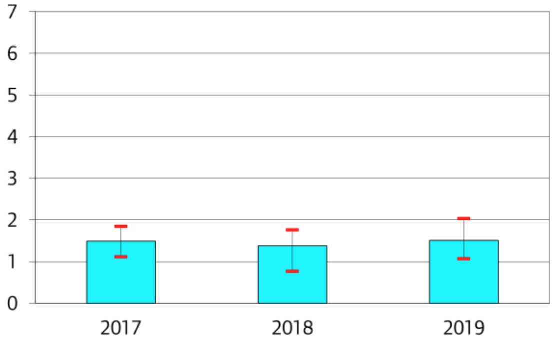
Transportation and storage



Finance and business



Other (public & private) services

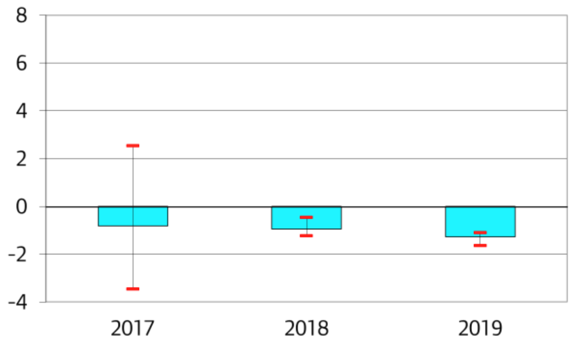


		2017	2018	2019			2017	2018	2019
Manufacturing	*Average*	1.8	0.9	1.3	**Construction**	*Average*	3.0	0.8	1.6
	Lowest	0.8	0.4	1.0		*Lowest*	0.9	0.4	0.8
	Highest	3.6	1.2	1.8		*Highest*	6.5	1.2	2.3
Distribution, accommodation and food service activities	*Average*	2.8	1.7	1.8	**Transportation and storage**	*Average*	2.2	1.3	1.7
	Lowest	2.2	1.4	1.4		*Lowest*	1.7	0.8	1.2
	Highest	3.7	2.2	2.2		*Highest*	2.5	2.0	2.4
Finance and business	*Average*	1.8	2.0	2.1	**Other (public & private) services**	*Average*	1.5	1.4	1.5
	Lowest	0.8	1.4	1.7		*Lowest*	1.1	0.8	1.1
	Highest	2.5	2.2	2.5		*Highest*	1.8	1.8	2.0

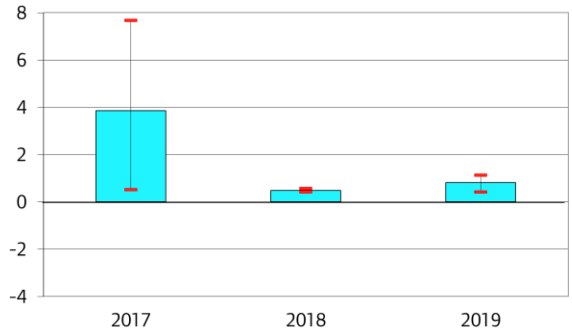
Employment growth by sector (per cent annual change)

Forecasts of employment growth are mixed across the sectors. Most sectors are forecast to see an increase in employment over the next couple of years. The exception is Manufacturing which is predicted to see a reduction in the number of jobs in all forecast years. Employment growth is forecast to be generally muted for Transport and storage in 2018 and 2019.

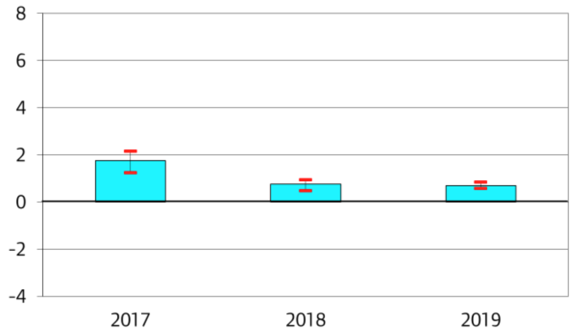
Manufacturing



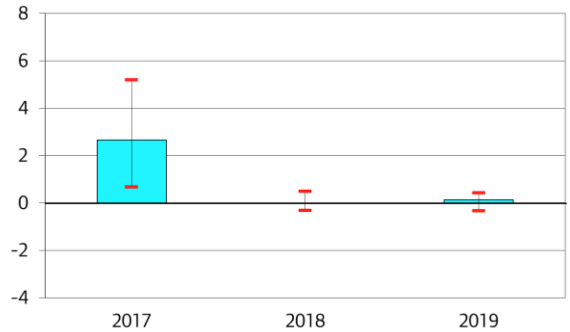
Construction



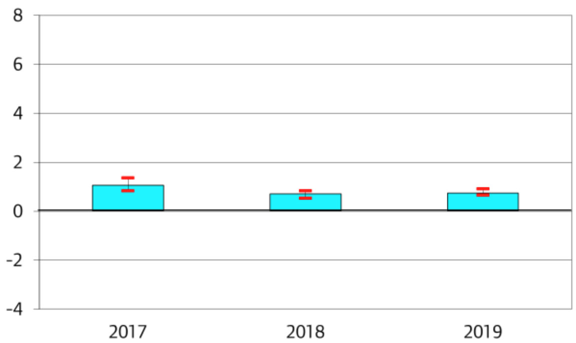
Distribution, accommodation and food service activities



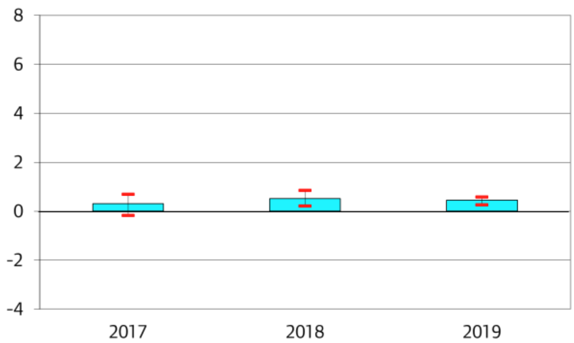
Transportation and storage



Finance and business



Other (public & private) services



		2017	2018	2019			2017	2018	2019
Manufacturing	*Average*	-0.8	-0.9	-1.3	**Construction**	*Average*	3.9	0.5	0.8
	Lowest	-3.5	-1.2	-1.6		*Lowest*	0.5	0.4	0.4
	Highest	2.5	-0.5	-1.1		*Highest*	7.7	0.6	1.1
Distribution, accommodation and food service activities	*Average*	1.8	0.8	0.7	**Transportation and storage**	*Average*	2.6	0.0	0.1
	Lowest	1.2	0.5	0.6		*Lowest*	0.7	-0.3	-0.3
	Highest	2.1	0.9	0.8		*Highest*	5.2	0.5	0.4
Finance and business	*Average*	1.1	0.7	0.7	**Other (public & private) services**	*Average*	0.3	0.5	0.4
	Lowest	0.8	0.5	0.7		*Lowest*	-0.2	0.2	0.3
	Highest	1.4	0.8	0.9		*Highest*	0.7	0.9	0.6

5. The GLA Economics forecast

5.1 The background

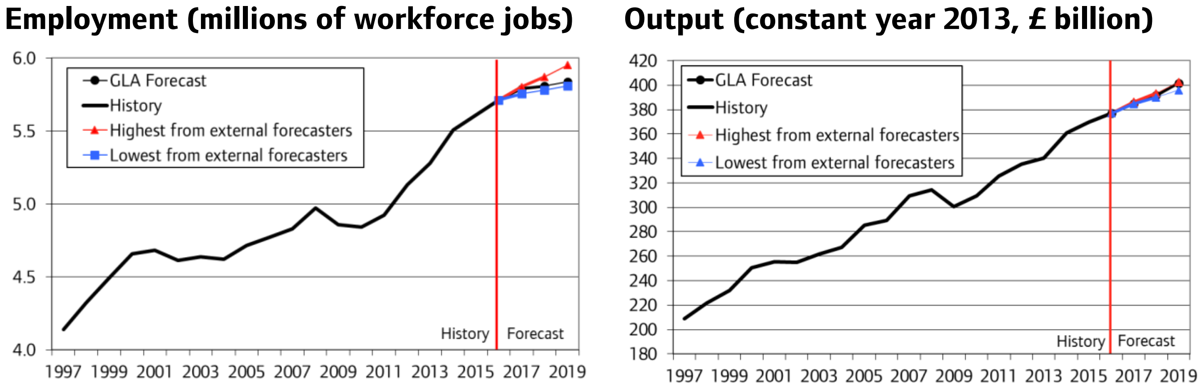
It is necessary to distinguish carefully between the GLA's long-term employment projections and this forecast, which contains the GLA's medium-term planning projections. Trend projections, by definition, do not incorporate cyclical variations. The actual course of output and employment will vary around 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 Experian Economics (EE) for the historic growth rates and GLA Economics modelling using EE data for the levels data.

5.2 Results

Since 2010, London's economic output has been growing every year and this expansion is expected to continue during the 2017-2019 forecast period. Employment is also predicted to rise between 2017 and 2019.

Household income and spending is also expected to grow throughout the forecast period. Although the rates of growth are predicted to slow in 2017 and 2018, it is expected that these will pick up again in 2019.

Figure 5.1: Trend and forecast employment and output



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

Table 5.1: Forecast and historical growth rates

(Annual % change)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
GVA	5.3	3.0	1.5	6.0	2.4	2.0	2.1	1.8	2.6
Workforce jobs	1.6	4.3	2.9	4.3	1.9	1.8	1.4	0.3	0.5
Household spending	-0.1	1.5	1.7	3.0	2.7	3.0	1.3	0.7	1.9
Household income	-1.7	3.3	1.3	3.6	4.2	2.2	1.0	0.9	1.8

Table 5.2: Forecast and historical levels

(constant year 2013, £ billion except jobs)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
GVA	325.7	335.4	340.4	360.9	369.7	376.9	385.0	391.8	401.8
Workforce jobs (millions)	4.92	5.13	5.28	5.51	5.61	5.71	5.79	5.81	5.84
Household spending	157.7	160.0	162.7	167.6	172.2	177.3	179.7	180.9	184.4
Household income	187.5	193.6	196.1	203.1	211.6	216.2	218.4	220.4	224.4

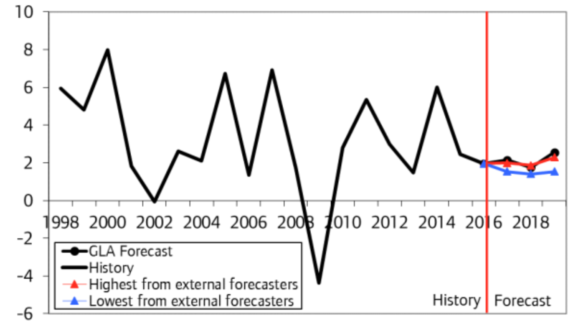
Output

(London GVA, constant year 2013, £ billion)

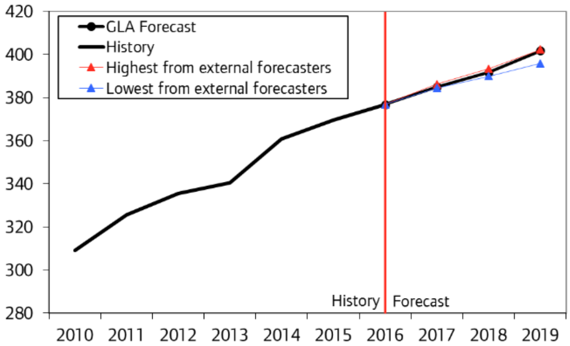
London's real GVA is forecast to grow between 2017 and 2019. Forecast growth rates are 2.1 per cent in 2017, 1.8 per cent in 2018 and 2.6 per cent in 2019.

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

Annual growth (per cent)



Level (constant year 2013, £ billion)



Growth (annual per cent)						Level (constant year 2013, £ billion)				
	2016	2017	2018	2019			2016	2017	2018	2019
GLA	2.0	2.1	1.8	2.6		GLA	377	385	392	402
Consensus		1.8	1.7	1.9		Consensus		385	392	399

History: Annual growth (per cent)

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
5.9	4.8	8.0	1.8	-0.1	2.6	2.1	6.7	1.3	6.9	1.7	-4.4	2.8	5.3	3.0	1.5	6.0	2.4	2.0

History: Level (constant year 2013, £ billion)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
209.0	221.4	232.1	250.7	255.3	255.1	261.8	267.3	285.4	289.2	309.2	314.5	300.8	309.2	325.7	335.4	340.4	360.9	369.7	376.9

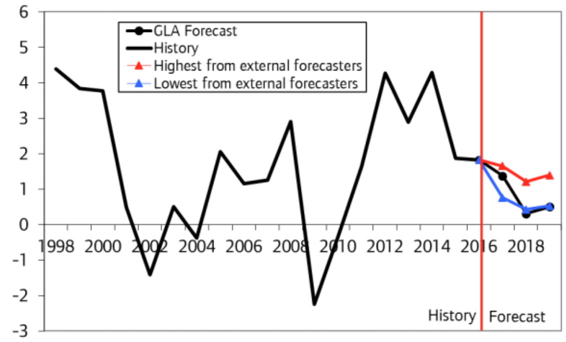
Employment

(London workforce jobs)

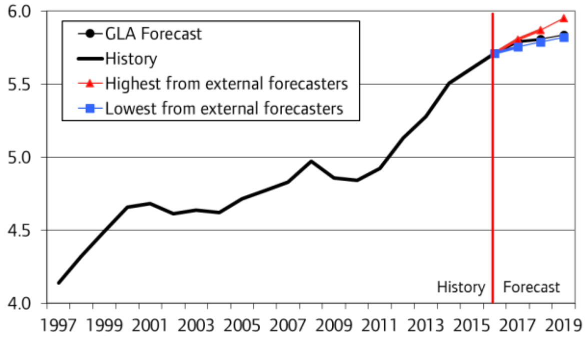
London's employment is forecast to rise between 2017 and 2019. The rates of growth are predicted at 1.4 per cent in 2017, 0.3 per cent in 2018, and 0.5 per cent in 2019.

GLA Economics' forecast for employment growth is higher than the consensus average forecast for 2017, but is lower for both 2018 and 2019.

Annual growth (per cent)



Level (millions of workforce jobs)



Growth (annual per cent)						Level (millions of workforce jobs)				
	2016	2017	2018	2019			2016	2017	2018	2019
GLA	1.8	1.4	0.3	0.5		GLA	5.71	5.79	5.81	5.84
Consensus		1.2	0.7	0.8		Consensus		5.78	5.83	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	2016
4.4	3.8	3.8	0.5	-1.4	0.5	-0.4	2.1	1.2	1.3	2.9	-2.2	-0.3	1.6	4.3	2.9	4.3	1.9	1.8

History: Level (millions)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
4.14	4.32	4.49	4.66	4.68	4.62	4.64	4.62	4.72	4.77	4.83	4.97	4.86	4.84	4.92	5.13	5.28	5.51	5.61	5.71

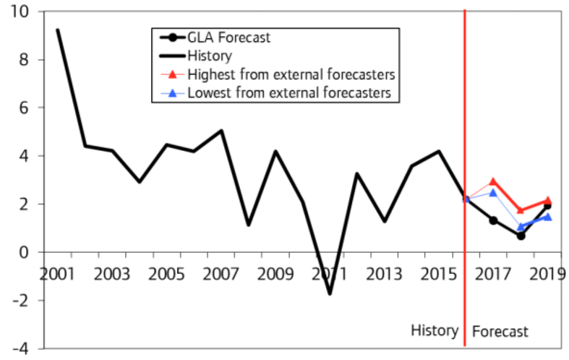
Household expenditure

(London household spending, constant year 2013, £ billion)

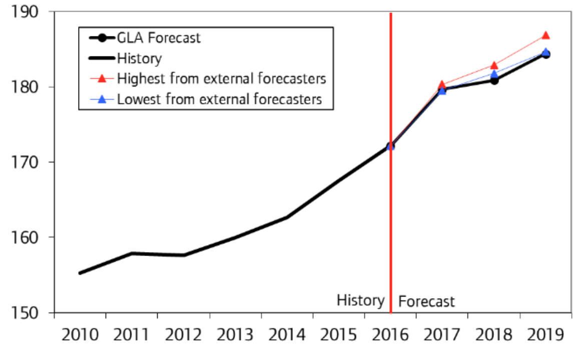
Growth in London's household spending is forecast to be positive over the forecast period.

GLA Economics' household spending growth forecast is lower than the consensus average in both 2017 and 2018, but is higher than the consensus average in 2019.

Annual growth (per cent)



Level (constant year 2013, £ billion)



Growth (annual per cent)						Level (constant year 2013, £ billion)				
	2016	2017	2018	2019			2016	2017	2018	2019
GLA	3.0	1.3	0.7	1.9		GLA	177	180	181	184
Consensus		2.7	1.4	1.7		Consensus		180	182	188

History: Annual growth (per cent)

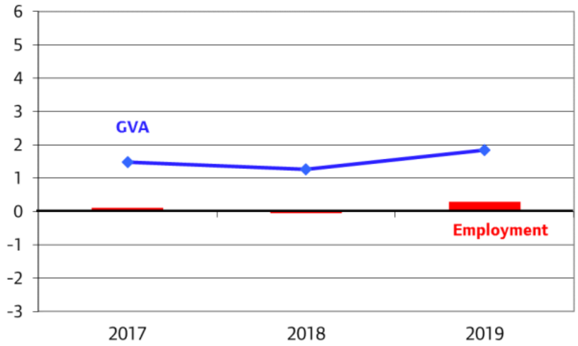
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
6.6	5.4	4.4	3.2	3.5	2.4	4.1	0.4	-1.0	1.7	-0.1	1.5	1.7	3.0	2.7	3.0

History: Level (constant year 2013, £ billion)

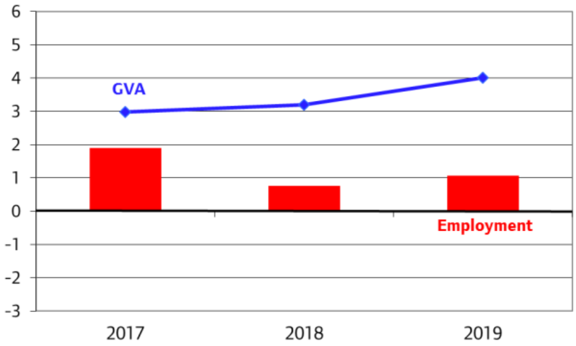
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
117.1	124.8	131.6	137.4	141.8	146.7	150.2	156.3	156.9	155.3	157.9	157.7	160.0	162.7	167.6	172.2	177.3

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

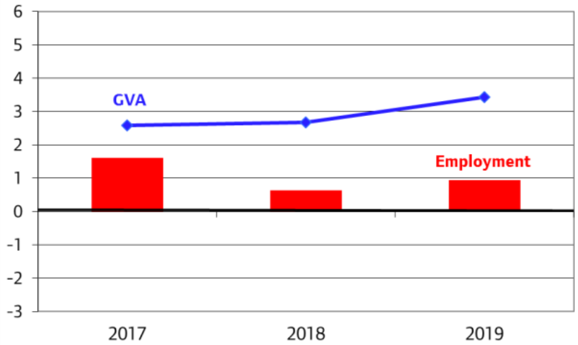
Financial services



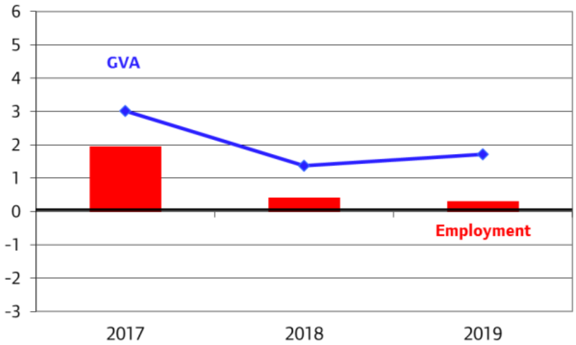
Business services



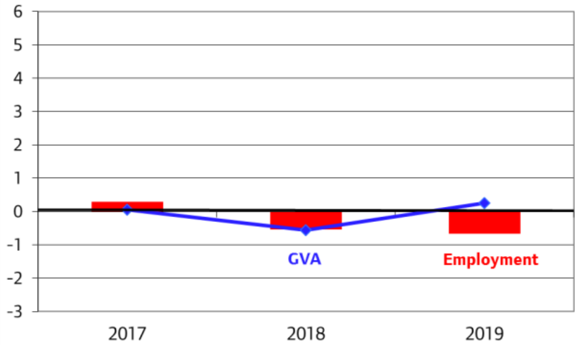
Finance and business (combined)



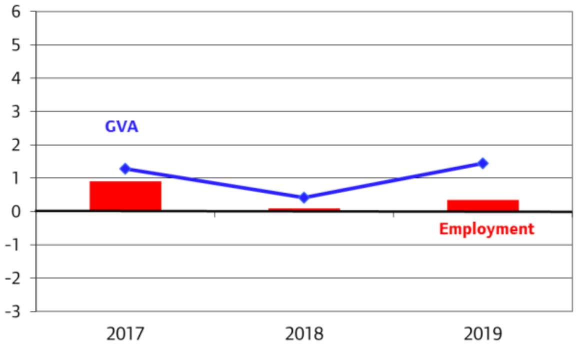
Distribution, accommodation and food service activities



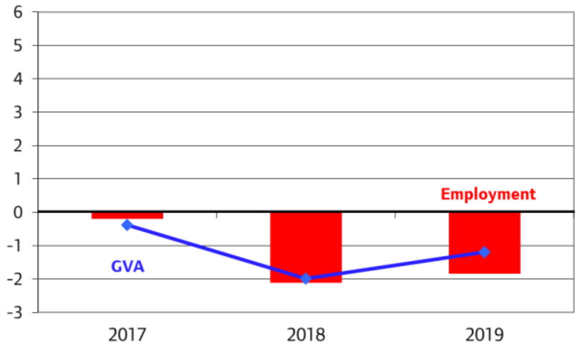
Transportation and storage



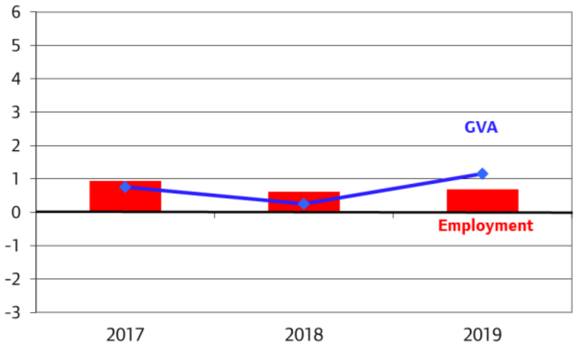
Other (public & private) services



Manufacturing



Construction



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

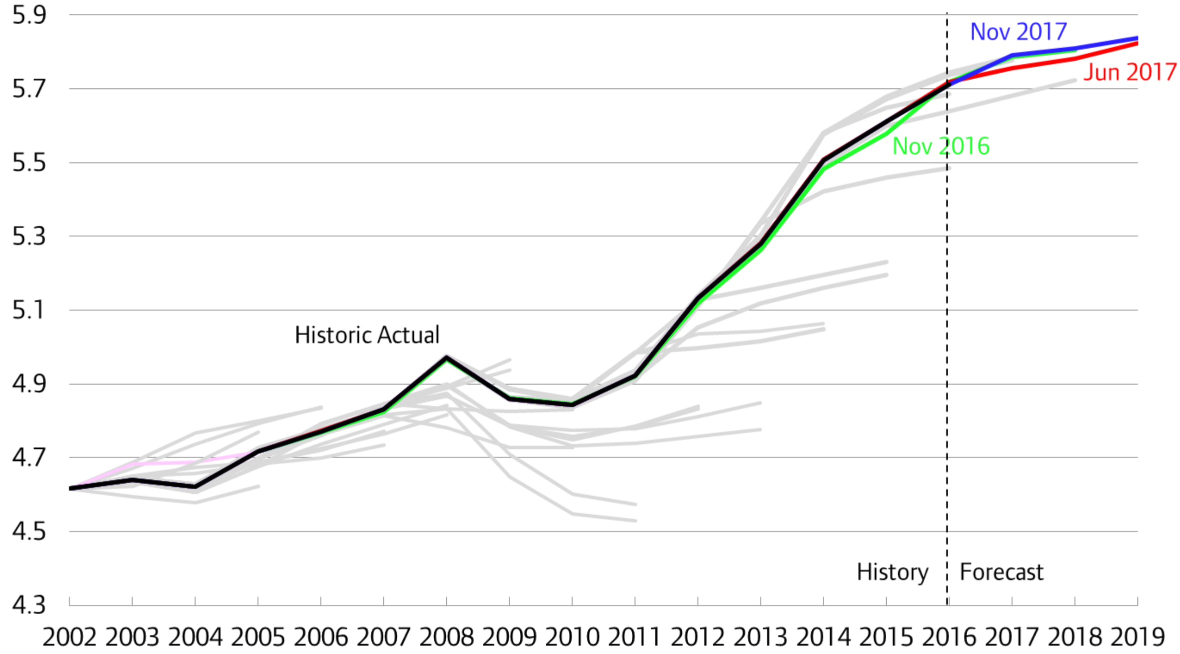
	2017	2018	2019
Financial services			
Output	1.5	1.3	1.8
Employment	0.1	-0.1	0.3
Business services			
Output	3.0	3.2	4.0
Employment	1.9	0.8	1.1
Financial and business services combined			
Output	2.6	2.7	3.4
Employment	1.6	0.6	0.9
Distribution, accommodation and food service activities			
Output	3.0	1.4	1.7
Employment	1.9	0.4	0.3
Transportation and storage			
Output	0.1	-0.6	0.3
Employment	0.3	-0.5	-0.7
Other (public & private) services			
Output	1.3	0.4	1.5
Employment	0.9	0.1	0.4
Manufacturing			
Output	-0.4	-2.0	-1.2
Employment	-0.2	-2.1	-1.8
Construction			
Output	0.8	0.3	1.2
Employment	0.9	0.6	0.7
(Memo: non-manufacturing)			
Output	2.2	1.8	2.6
Employment	1.4	0.4	0.6

5.3 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 comparisons in Figures 5.2 and 5.3.

Overall, the most recent forecast for London's workforce jobs growth is higher than the June 2017 forecast for 2017, but marginally lower for 2018 and 2019. That said, in terms of the actual number of jobs, the latest forecast points to a higher estimate than in June.

Figure 5.2: Employment – latest forecast growth rates compared with previous forecasts
(millions of workforce jobs)



Note: the grey lines show levels of employment given historic GLA Economic forecasts of employment growth rates. The last three GLA Economics forecasts are also shown (and labelled) in colour. Source: Various London's Economic Outlooks

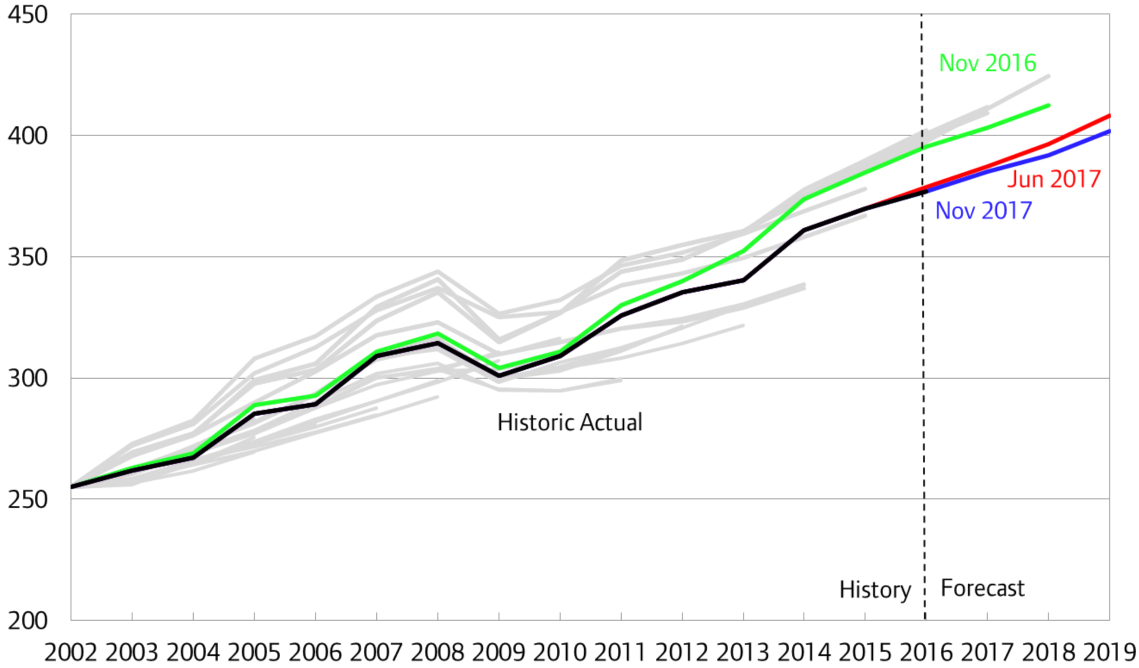
Table 5.3: Comparisons with previous published forecasts
(London workforce jobs, per cent annual growth)

Forecast	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Nov 2017	**0.5%**	**-0.4%**	**2.1%**	**1.2%**	**1.3%**	**2.9%**	**-2.2%**	**-0.3%**	**1.6%**	**4.3%**	**2.9%**	**4.3%**	**1.9%**	**1.8%**	**1.4%**	**0.3%**	**0.5%**
Jun 2017															0.7%	0.5%	0.7%
Nov 2016														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%				
Jul 2013											0.6%	0.7%	0.7%				
Nov 2012										1.0%	0.2%	0.4%					
Jun 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%							
Jun 2010								-0.8%	0.8%	1.1%							
Oct 2009							-3.4%	-2.3%	-0.6%								
Apr 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%										
Apr 2007					1.2%	1.4%	1.5%										
Oct 2006				1.3%	1.1%	1.1%											
Apr 2006				0.8%	0.8%	1.1%											
Oct 2005			0.6%	0.4%	0.8%												
Apr 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%														
Jul 2003	-0.5%	-0.4%	0.9%														
Jan 2003	0.2%	1.4%	1.8%														

Source: Various London's Economic Outlooks

Meanwhile, the most recent forecast for London's GVA growth is lower than the June 2017 forecast for all three years. This is also evident in terms of the actual forecast size of London's economy.

Figure 5.3: Output – latest forecast growth rates compared with previous forecasts
(constant year 2013, £ billion)



Note: the grey lines show levels of GVA given historic GLA Economic forecasts of GVA growth rates. The last three GLA Economics forecasts are also shown (and labelled) in colour. Source: Various London's Economic Outlooks

Table 5.4: 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	2019
Nov 2017	**2.6%**	**2.1%**	**6.7%**	**1.3%**	**6.9%**	**1.7%**	**-4.4%**	**2.8%**	**5.3%**	**3.0%**	**1.5%**	**6.0%**	**2.4%**	**2.0%**	**2.1%**	**1.8%**	**2.6%**
Jun 2017															2.3%	2.4%	2.9%
Nov 2016														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%				
Jul 2013											1.9%	2.4%	2.5%				
Nov 2012										0.9%	1.8%	2.4%					
Jun 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%							
Jun 2010								1.0%	2.8%	3.3%							
Oct 2009							-3.5%	-0.2%	1.5%								
Apr 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%										
Apr 2007					2.6%	2.8%	3.0%										
Oct 2006				3.1%	3.0%	3.0%											
Apr 2006				2.7%	2.6%	2.8%											
Oct 2005			2.0%	2.3%	2.6%												
Apr 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%														
Jul 2003	1.1%	2.6%	4.1%														
Jan 2003	2.4%	4.1%	4.0%														

Source: Various London's Economic Outlooks

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 2015 from the ONS[89]. So far only experimental official estimates of real regional GVA[90] are available because of the difficulties in producing authoritative regional price deflators, although the ONS has produced experimental regional price indexes for the years 2010-2017[91]. 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.

[89] ONS Regional GVA (income approach)
[90] ONS Regional GVA (production approach)
[91] ONS (2017). 'Feasibility study into producing CPIH consistent inflation rates for UK regions', November 2017.

Appendix B: Glossary of acronyms

ADB	Asian Development Bank
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
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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