State of the Economy

Office of the Chief Economic Adviser

January 2018

State of the Economy

Dr Gary Gillespie

Chief Economist

19 January 2018

State of the Economy

This report outlines recent developments in the global, UK and Scottish economies. Updates are provided on a periodic basis and the data in this edition are correct up to and including 17 January 2018.

To view the report online please visit: https://beta.gov.scot/economy/



Information published by the Office of the Chief Economic Adviser can be followed on Twitter: @ScotGovOCEA.

Feedback and comments on this report are welcome and can be provided using the email address below:

OCEABusiness@gov.scot



Overview

The forthcoming year will be a pivotal year for the Scottish economy as the outlook improves relative to 2017, reflecting a stronger external environment alongside a more positive outlook for oil and gas and related production activities. The latter should help drive productivity growth as the labour market remains tight. However, risks relating to business and consumer confidence remain, which are impacting expenditure and investment in the economy.

Scotland's economic performance has remained resilient into the second half of 2017 despite challenging economic conditions that continue to be dominated by heightened uncertainty as the UK moves closer to leaving the EU.

Economic growth of 0.2 per cent in quarter 3 for Scotland remains notably below its long run trend rate. However, the strengthening in the economy in the first half of 2017 has continued, albeit at a lower rate. This was supported by growth in the Services sector and a welcome return to growth in the Production sector which continues to be supported in part by the low value of Sterling and the pick-up in economic sentiment in the oil and gas sector.

Scotland's labour market has continued to perform strongly. The unemployment rate at 4.1% remains lower than it did last year and close to record lows while the number of people in employment has risen by 59,000 over the past year with 80% of the increase coming from full time employment. This again indicates a tightening in the labour market across Scotland.

With unemployment close to a record low, opportunities for companies to increase output by recruiting more workers will be more constrained in 2018 than over the last two years. As such, we expect businesses to respond by either increasing hours worked per employee, investing in workplace skills to retain staff or using automation to replace/support labour to increase output. The latter will require business investment which will be influenced by economic confidence over the coming year.

The pick-up in global growth over 2017 alongside the low value of Sterling signals that the international context is more supportive for growth, however domestic pressures remain. On the consumption side, the pick-up in inflation continues to weigh on real wage growth while Scottish consumer sentiment remains subdued and weakened further in the final quarter of the year. Alongside this, while business optimism has broadly recovered from 2016, the outlook for business investment plans remains fragile during this particularly uncertain period. This edition of the State of the Economy presents new analysis of the impact that uncertainty from Brexit could have on business investment in Scotland in the short run.

Weaknesses in business investment activity have short term implications for output growth and the labour market. However, it is the longer term challenges for productivity growth which EU exit continues to pose, particularly if business investment is constrained and if tighter immigration leads to restrictions on skills or inward investment to Scotland.



Therefore, the extent to which positive expectations outweigh uncertainty will be crucial to driving short term output growth, which is reflected in the range of independent growth forecasts for 2018.

Independent forecasts for the Scottish economy present a mixed picture and suggest that GDP for 2017 will range from 0.7% to 1.3%, with slightly higher growth in 2018 of between 0.7% and 1.4%. The range of independent forecasts is notably wider than in recent years, reflecting the uncertainty of post EU access conditions in relation to trade, services, investment and skills.



Global Summary

Global economy forecast to accelerate in 2018.

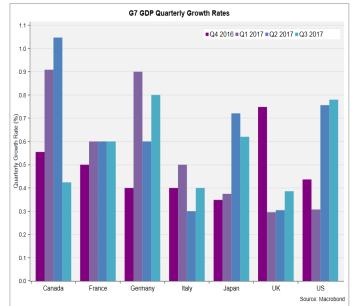
- Global output growth performed more strongly in 2017, supported by recovery in global investment and trade and more stable commodity prices.
- Global PMI data for December 2017 indicates expansion in output at its fastest pace since 2015 with this expected to continue in 2018.
- The stronger outlook for advanced economies is tempered by continued weak productivity growth with firming commodity prices supportive of growth in emerging market and developing economies.
- The IMF raised their latest forecast for global growth to 3.6% in 2017 and 3.7% in 2018 the fastest rate of growth since 2011.

US economic expansion forecast to continue in 2018.

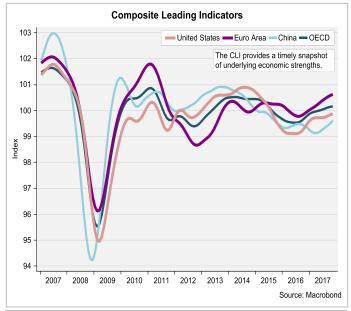
- US GDP growth kept pace in the third quarter of 2017, growing 0.8% driven by strong business investment and moderate household consumption.
- The US labour market continued to tighten in 2017 with wage growth accelerating as a result, although the pace of employment growth eased towards the end of the year.
- US core CPI inflation rose 1.8% over the year to December with expectations of further upward pressure from a tightening labour market and stronger economic activity.
- US GDP growth is forecast to accelerate to 2.2% in 2017 and 2.3% in 2018.

Euro Area growth forecast to ease slightly in 2018.

- Euro Area GDP growth picked-up in 2017, growing 0.6% in Q3 2017 and 2.6% annually.
- The unemployment rate fell to 8.7% in November its lowest rate since January 2009.
- Initial estimates show inflation eased back to 1.4% in December from 1.5% previously, however, further upward pressure is expected from reduced labour market slack.
- Euro Area GDP growth is forecast moderate slightly to 1.9% in 2018.







GDP Growth (%)	Outturn	Projections		Revisions from July 2017 Forecast	
IMF WEO (Oct 2017)	2016	2017	2018	2017	2018
World Output	3.2	3.6	3.7	0.1	0.1
Advanced Economies	1.7	2.2	2.0	0.2	0.1
United States	1.5	2.2	2.3	0.1	0.2
Euro Area	1.8	2.1	1.9	0.2	0.2
United Kingdom	1.8	1.7	1.5	0.0	0.0
Japan	1.0	1.5	0.7	0.2	0.1
Emerging Market & Developing Economies	4.3	4.6	4.9	0.0	0.1
China	6.7	6.8	6.5	0.1	0.1
India	7.1	6.7	7.4	-0.5	-0.3
Brazil	-3.6	0.7	1.5	0.4	0.2
Russia	-0.2	1.8	1.6	0.4	0.2
South Africa	0.3	0.7	1.1	-0.3	-0.1



United Kingdom Summary

GDP growth picked up slightly in Q3 2017.

- UK GDP grew 0.4% in the third quarter of 2017, following two consecutive quarters of 0.3% growth.
- The Service sector grew 0.4% in Q3, driven by strong growth from Business services and finance (0.7%) and Distribution, Hotels and Restaurants (0.5%).
- This was coupled with growth of 1.4% in the Production sector, with Mining and quarrying activity, which includes the whole of the oil and gas industry, growing by 2.9%.
- Construction sector output contracted further by 0.5% in Q3, the second consecutive quarter of decline.

Labour market performing strongly in 2017.

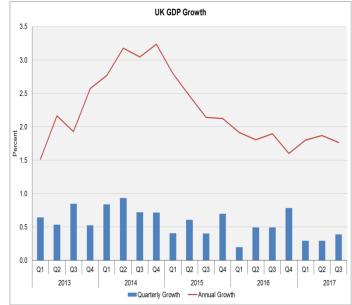
- Latest data for Aug Oct 2017 show that employment in the UK has risen by 325,000 over the past year.
- The unemployment rate has fallen over the recent quarter and year to 4.3%.
- The inactivity rate has fallen over the year to 21.5%, however the number of people not working and not seeking work increased by 115,000 since May-July 2017.
- Nominal earnings growth remains weak at 2.3% while real wages fell 0.4% over the year to August-October 2017.
- UK labour productivity grew 0.9% in Q3 2017, the largest increase in output per hour since Q2 2011.

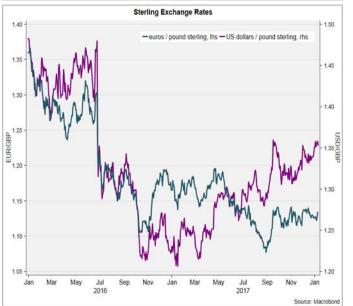
Inflation fell to 3.0% in December 2017.

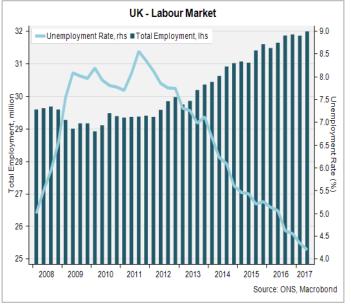
- Consumer Prices Inflation (CPI) fell to 3.0% in December, down from November's 64-month high of 3.1%.
- The lower value of Sterling has pushed up consumer prices over the past year while oil prices have also risen.

Weak productivity growth weighs on outlook.

- The OBR revised down their latest growth forecast for UK GDP to 1.4% in 2018 falling to 1.3% in 2019 and 2020.
- Key factors behind the economic outlook include weak productivity growth, higher inflation, weaker consumption and economic uncertainty weighing on investment.











Scotland Summary

GDP growth picked-up in Q3 2017.

- GDP growth picked-up in Q3 2017 growing 0.2% over the quarter and 0.6% over the year.
- The Service sector grew 0.2% over the quarter and 0.9% over the year. The pace of growth slowed over the quarter with flat growth in Business Services and Finance.
- The Production sector returned to growth in Q3, growing 1.2% over the quarter supported by a pick-up in growth in the Manufacturing and Electricity and Gas Supply sectors.
- Construction sector output fell 2.9% in Q3 2017 as the sector continues to adjust back towards its long-run trend.

Unemployment rate remains below the UK average.

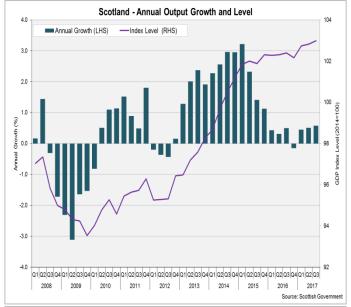
- Scotland's unemployment rate increased slightly in Aug-Oct to 4.1% though remains 1.2 percentage points lower over the year.
- Similarly, the employment rate fell over the latest quarter to 74.9%, however there are 59,000 more people in employment compared to the previous year.
- Scotland's inactivity level and rate have fallen over the past year, however, the number of people economically inactive rose over the latest quarter by 23,000.

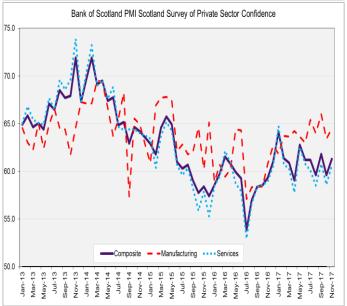
Productivity growth fell in Q2 2017.

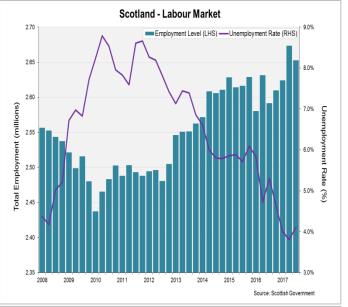
- Trend growth in productivity (output per hour worked) fell
 0.6% in Q2 2017 and fell by 2.2% over the year.
- The recent fall in productivity reflects that growth in hours worked (0.8%) outpaced GVA growth (0.1%).

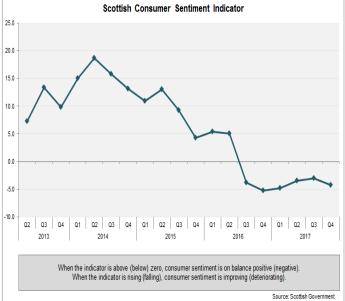
Positive GDP growth forecast for 2017 and 2018.

- Business surveys signal that business optimism, on balance, improved over the year but remains moderate.
- Scottish consumer sentiment weakened in Q4 2017, however the security of household finances are expected to improve over the year.
- Independent GDP growth forecasts for 2017 range between 0.7% and 1.3% and for 2018 between 0.7% and 1.4%.











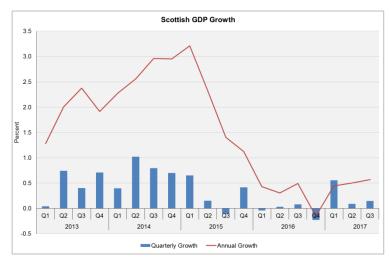
Scottish Economy Update

Gross Domestic Product

Scottish GDP continued to grow going into the second half of 2017 following the pick-up in pace of growth in the first half of the year.

In Q3 2017 the Scottish economy grew 0.2% over the quarter (up from 0.1% in Q2) and 0.6% over the year (up from 0.5%).

Growth in the third quarter and over the past year was driven by the Services sector and a pick-up in growth in the Production sector of



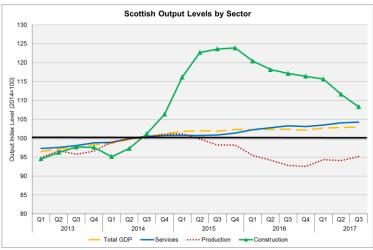
growth in the Production sector offsetting the current cycle of contraction in the Construction sector.

Growth in the Services sector continued to be broad based in Q3 2017, though slightly slower than in recent quarters, growing 0.2% over the quarter and 0.9% over the year. On an annual basis, growth continued to strengthen in the Transport, Storage and Communication sector and Distribution, Hotels and Catering, offsetting slower growth in Business Services and Finance which remained flat over the quarter.

The Production sector grew 2.6% over the past year, driven by an expansion in

Manufacturing and Electricity and Gas Supply industries.

Manufacturing industries output over the past year has been driven by growth in Metals, Metal Products Machinery and and Refined Petroleum. Chemical and Pharmaceutical Products. while there have been contractions in output from Food and Drink and Textiles. Clothing and Leather Products.



Output in the Manufacturing sector continues to be sensitive to activity in the oil and gas industry and its supply chain. Confidence is continuing to slowly return to the industry following efficiency and structural changes in the sector in recent years while the 27% increase in the oil price over the past year has supported turnover. However, the feed through of activity to industries linked to the supply chain remains tentative. Whilst output in such industries grew 1.3% over the latest quarter it is still below its level twelve months ago.

The Construction sector contracted for its seventh consecutive quarter in Q3 2017 as it gradually adjusts back towards more normal levels of output following exceptionally fast growth in 2014-15.

The construction industry business cycle since 2014 has been driven by a number of high value projects, particularly the construction of large transport and industrial infrastructure developments including the Forth Replacement Crossing, Borders railway, M8 missing link and the Shetland Gas Plant. Many of these projects have now been completed, and output in the sector is returning to a more normal level, supported by on-going infrastructure projects such as the Aberdeen bypass and the Edinburgh-Glasgow rail improvements.

As a result of this activity, between 2013 and its peak in 2015, annual construction output in Scotland increased from 8.6% to 10.0% of total output in Great Britain, its highest share since 1993 and substantially above the long term average of 9%. The subsequent retrenchment by the sector meant that by 2017Q3, output in Scotland has reduced back to 8.4% of the GB total. This may signal that the cyclical contraction observed over recent quarters is nearing an end. However, latest UK construction data for the 3-months to November show that output from the sector contracted 2.0% over the period, signalling that there may be further pressures to come in the Scottish sector before turning the corner.

Estimating the short term impact of uncertainty from Brexit on the Scottish economy

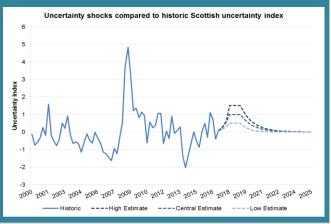
There has been a growing number of reports suggesting that the process of the UK leaving the EU, and the manner and time frame over which the negotiations are concluded, could increase economic uncertainty.

Economic analysis suggests that higher levels of uncertainty can negatively impact business investment and increase credit constraints to firms and consumers. This in turn is likely to impact business investment, borrowing costs, and consumer confidence, leading households to reduce consumption and save more.

Using this analysis, combined with the Scottish Government Global Econometric Model

(SGGEM), the Scottish Government has examined the potential impact that heightened levels of uncertainty could have on the Scottish economy.

As an illustration, the scale of the uncertainty shocks applied are similar to the increase in uncertainty observed at the time of the EU Referendum. The baseline underlying level of uncertainty has an index value of zero. The central estimate scenario



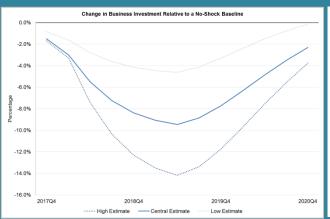
¹ See for example, Baker, J., Carreras, O., Ebell, M., Hurst, I., Kirby, S., Meaning, J., Piggott, R. and Warren, J. (2016). "The Short-Term Economic Impact of Leaving the EU" National Institute Economic Review No. 236 May 2016 and Redl, C. (2017), "The impact of uncertainty shocks in the United Kingdom" Bank of England, Staff Working Paper No. 695.

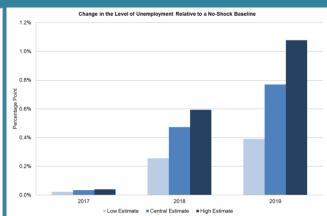


assumes an increase to uncertainty index value 1, which is maintained across 2018 and early 2019. The low and high estimate scenarios assume the same timeline, but with higher and lower magnitudes (peaking at uncertainty index values of 0.5 and 1.5 respectively) so as to offer a degree of sensitivity analysis.

The results show that the potential short term impact of the increase in uncertainty under the central scenario is estimated to potentially:

- Reduce or defer the level of business investment in Scotland by £1 billion by 2019.
- Increase the level of unemployment by around 0.8 percentage points by 2019, equivalent to around 21,000 fewer jobs in Scotland.
- Lower GDP growth by around 0.3 percentage points (cumulative impact over 2018 and 2019), equivalent to around £200 per household in Scotland.





Furthermore, negative consumer confidence adds another layer of uncertainty which could potentially further weaken the economy. This has not been explicitly modelled as the evidence quantifying the link between uncertainty in consumer confidence and actual household consumption and spending is weak.

The overall conclusion however, is that in the short term, business investment, levels of employment and growth in the economy will likely be impacted as a result of heightened levels of uncertainty.

Labour Market

Scotland's labour market continues to perform strongly with headline indicators improving over the past year despite easing back slightly in the second half of 2017.

Latest data for August to October 2017 show that Scotland's unemployment rate increased slightly over the latest quarter to 4.1%, however remains close to its record low of 3.8% achieved earlier in the year and below the UK average of 4.3%.

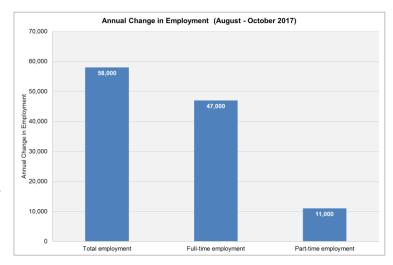
In keeping with this, the employment rate fell slightly over the recent quarter to 74.9%; slightly below the UK average of 75.1%, however remains close to its record high of 75.8% achieved in May to July.



HEADLINE LABOUR MARKET STATISTICS							
RATES	Latest Data	Quarterly Change (% p.t.)	Annual Change (% p.t.)	LEVELS	Latest Data	Quarterly Change	Annual Change
	Scotland				Scotland		
Employment*	74.9%	-0.9	1.7	Total Employment [^]	2,653,000	-21,000	59,000
ILO Unemployment**	4.1%	0.3	-1.2	ILO Unemployment^	114,000	8,000	-32,000
Economic Inactivity*	21.8%	0.7	-0.7	Economic Inactivity^	745,000	23,000	-24,000
	UK				UK		
Employment*	75.1%	-0.2	0.7	Total Employment^	32,080,000	-56,000	325,000
ILO Unemployment**	4.3%	-0.1	-0.6	ILO Unemployment^	1,429,000	-26,000	-182,000
Economic Inactivity*	21.5%	0.3	-0.2	Economic Inactivity^	8,858,000	115,000	-56,000
*Denominator = Working age population (16-64) **Denominator = Total economically active		^All persons ages 16+ ^All persons aged 16-64					
Source: Labour Force Survey (August - October 2017)							

Over the past year, the number of people in employment in Scotland has risen by 59,000, to 2.65 million, with full time employment increasing by 47,000 and part time employment 11,000. The number of people in self-employment has also increased over the past year, rising by 39,000.

Similar to the picture for unemployment and the UK as a whole, the economic inactivity rate in Scotland (those not working and not



seeking or available for work) increased over the past quarter to 21.8%, however remains 24,000 lower over the year as a whole.

With unemployment close to record lows in both Scotland and the UK, opportunities for companies to increase output by taking on more workers will therefore be constrained. As such, we may expect to see companies either looking to increase hours worked (which the rise in full-time employment would imply) or potentially looking to up-skill staff in the years ahead.

The Economic Contribution of EU Migration to Scotland ^{2,3}

This box sets out recent Scottish Government economic modelling which shows the economic contribution of EU migration to Scotland. Further analysis is provided in the Scottish Government's response to the Migration Advisory Committee Call for Evidence on the Role of EEA Workers in the UK Labour Market.

³ Scotland's Place in Europe: People, Jobs and Investment; The Scottish Government, 2018.



² The Contribution of EEA Citizens to Scotland: the Scottish Government's Response to the Migration Advisory Committee Call for Evidence on the Role of EEA Workers in the UK Labour Market - Evidence Annex.

In 2016, 128,000 EU citizens (aged 16+) were in employment in Scotland, making up 5% of total employment. The employment rate for EU citizens in Scotland is 77% which is higher than the overall rate for Scotland.

A dynamic computable general equilibrium model (CGE) of the Scottish economy was used to examine the net additional economic impact of a marginal increase in EU migration into Scotland. By marginal increase we mean a one year increase in labour supply equivalent to a one year inflow of EU migration into Scotland. This approach to modelling migration is similar to the one adopted by PWC in their study of the impact of migrants on London, its workforce and its economy. ^{4,5}

The key findings from the analysis are:

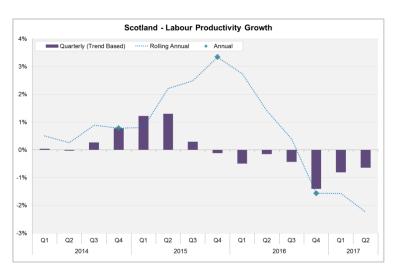
- On average each additional EU citizen working in Scotland contributes a further £34,400 in GDP.
- The total contribution by EU citizens working in Scotland is approximately £4.42 billion per year.
- On average each additional EU citizen working in Scotland contributes £10,400 in government revenue.

Our findings are in line with previous research which finds that migration positively impacts regional economies. The model, however, does not consider complementarities in skills between migrants and native born workers, nor does it account for the positive effects on innovation, productivity and entrepreneurship stemming from migration. Our results, therefore, are likely to understate the full positive impact of EU citizens in the Scottish economy.

Labour Productivity

The disconnect between the strong labour market performance and relatively weak output growth has continued to weigh on productivity growth in Scotland in 2017.

Latest data for Q2 2017 show that labour productivity (the level of output produced per hour worked) fell by 0.6% compared to the previous quarter and 2.2% on a rolling annual basis. The fall in productivity over the quarter



⁵ The Scottish Government CGE model has previously been used to model a wide range of economic policies. Variations of the model have also been used in similar analyses by academic institutions. A general description of the model is available on the Scottish Government website: http://www.gov.scot/Topics/Economy/Publications/Introduction-to-CGE-modelling



⁴ The modelling approach is the same as that adopted by PWC (2017) Facing the facts: The impact of migrants on London, its workforce and its economy.

and year reflects the relative strength of the labour market with growth in average hours worked outpacing growth in output.

Despite the contraction in labour productivity growth in recent quarters, growth has been robust over the longer term, with labour productivity growing 6.6% in Scotland since 2007 compared to UK average growth of 1.1% over the same period.

Business Sentiment

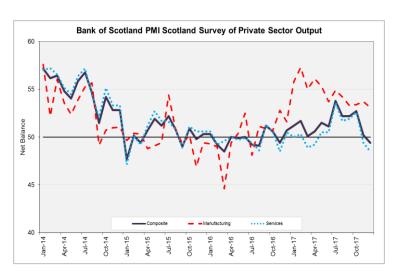
Scottish business surveys have signalled that Scottish private sector activity remained resilient in the final quarter of 2017, with firms across the production and services sectors reporting growth, albeit moderate, in the volume of business activity.⁶

However, the Bank of Scotland Purchasing Managers Index for December further highlighted that conditions remain challenging, reporting its first monthly contraction in private sector output since the end of 2016. While the fall in output reflected a contraction in the Services sector indicator, the pace of growth also slowed in the Manufacturing sector and reflected a fall in new business and orders across both sectors.

On balance, the business surveys signal that the low value of Sterling has continued to support export activity with overall stronger demand for goods and services resulting in growth in turnover and staffing levels. However, firms continue to report facing higher

input costs as a result of the exchange rate which are being passed on, at least in part, to consumers.

Looking ahead, indicators of business optimism suggest that it has, on balance, improved since 2016, though remains moderate amidst on-going uncertainty relating to Brexit and a weaker outlook for the UK domestic economy. Alongside this, there are signals that this weighing on capital



investment spending intentions which has the potential to weigh on expansionary activity in both the short and longer term.

Consumer Sentiment⁷

The latest data from the Scottish Consumer Sentiment Indicator for Q4 2017, showed that consumer sentiment in Scotland remained weak at the end of the year. The composite indicator score decreased by 1.2 points and now stands at -4.3, indicating that more respondents reported a decline in sentiment than an improvement during the quarter.

⁶ Royal Bank of Scotland Scottish Business Monitor; Scottish Engineering Quarterly Review; Bank of Scotland Purchasing Managers Index (3-month average).





Furthermore, the decrease in the indicator score implies that consumer sentiment weakened compared to the previous quarter.

Comparing changes in the current performance indicators over the quarter, sentiment relating to **Economic** Performance and Household Spending decreased despite an improvement in sentiment Household relating to Financial Security. In terms of the expected



performance indicators, expectations of Household Financial Security over the next 12 months decreased while sentiment relating to expected Economic Performance of the Scottish economy improved.

Comparing the Economy Performance indicators to the Household Financial Security indicators, both Economy indicators (current and expected) were negative over the quarter while both Household Financial Security indicators were positive. This indicates that on balance, respondents remain more optimistic about their personal finances than Scotland's economic performance both now and over the next 12 months.

Scottish Consumer Sentiment	Latest Score (Q4 2017)	Change on Previous Quarter	Change on Same Quarter of Previous Year
Overall Indicator Score	-4.3	-1.2	1.0
Economy performance - last 12 months	-11.8	-5.9	5.9
Economy performance - next 12 months	-11.0	0.7	-4.4
Household financial position - last 12 months	0.5	1.3	1.7
Household financial position - next 12 months	4.6	-1.6	0.7
Attitude to household spending - current	-3.7	-0.6	1.2

Scottish Economic Outlook

Independent forecasts for the Scottish economy present a mixed picture and suggest that GDP will grow by between 0.7% and 1.3% in 2017, with slightly higher growth in 2018 of between 0.7% and 1.4%. The range of independent forecasts for the Scottish economy is notably wider than in recent years, however, the forecasts for growth remain below Scotland's long run trend rate of 2%.

Annual Output Growth Forecast (%)8	2016 (outturn)	2017	2018
Scottish Fiscal Commission (Dec 2017)	0.4	0.7	0.7
Fraser of Allander Institute (Dec 2017)	0.4	1.2	1.2
EY ITEM Club (Dec 2017)	0.4	0.8	1.4
PWC (Nov 2017)	0.4	1.3	1.2

The Scottish Fiscal Commission (SFC) produced its first independent economic forecasts to inform the Scottish draft budget in December 2017. The SFCs forecasts are lower than other independent forecasters. In part this can be attributed to the SFCs judgement that Scotland is entering a period of structurally weaker growth driven by a combination of lower productivity, a lower working age population and a re-balancing of the economy away from construction and oil and gas.

What is common across all the forecasts, however, is that the uncertainty surrounding Brexit is raised as a key factor affecting the economic outlook. In the short term, there are signals from some business surveys that while business optimism has improved over the year, business investment intentions are fragile during this period of heightened uncertainty.

The international context of more solid global growth, alongside the weak value of Sterling is broadly supportive of stronger overseas demand for goods and services. However, domestic pressures from weak real wage growth squeezing household finances, on-going weaknesses in Scottish consumer sentiment alongside a weaker outlook for UK growth overall, feature as risks to growth over the coming year.

http://www.ey.com/uk/en/issues/business-environment/financial-markets-and-economy/ey-scottish-item-club-forecast PWC:http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook.html.



⁸ The forecasts for the Scottish economy presented in this report are widely available in the public domain. The choice reflects published forecasters which are known to us and are subject to review. No significance should be attached to the inclusion or exclusion of any particular forecasting organisation. The Scottish Government accepts no responsibility for the accuracy of material published in this comparison.

Scottish Fiscal Commission: http://www.fiscalcommission.scot/publications/scotlands-economic-and-fiscal-forecasts/scotlands-economic-and-fiscal-forecasts-december-2017/

Fraser of Allander Institute: https://www.strath.ac.uk/business/economics/fraserofallanderinstitute/economic_commentary/ EY Scottish ITEM Club: