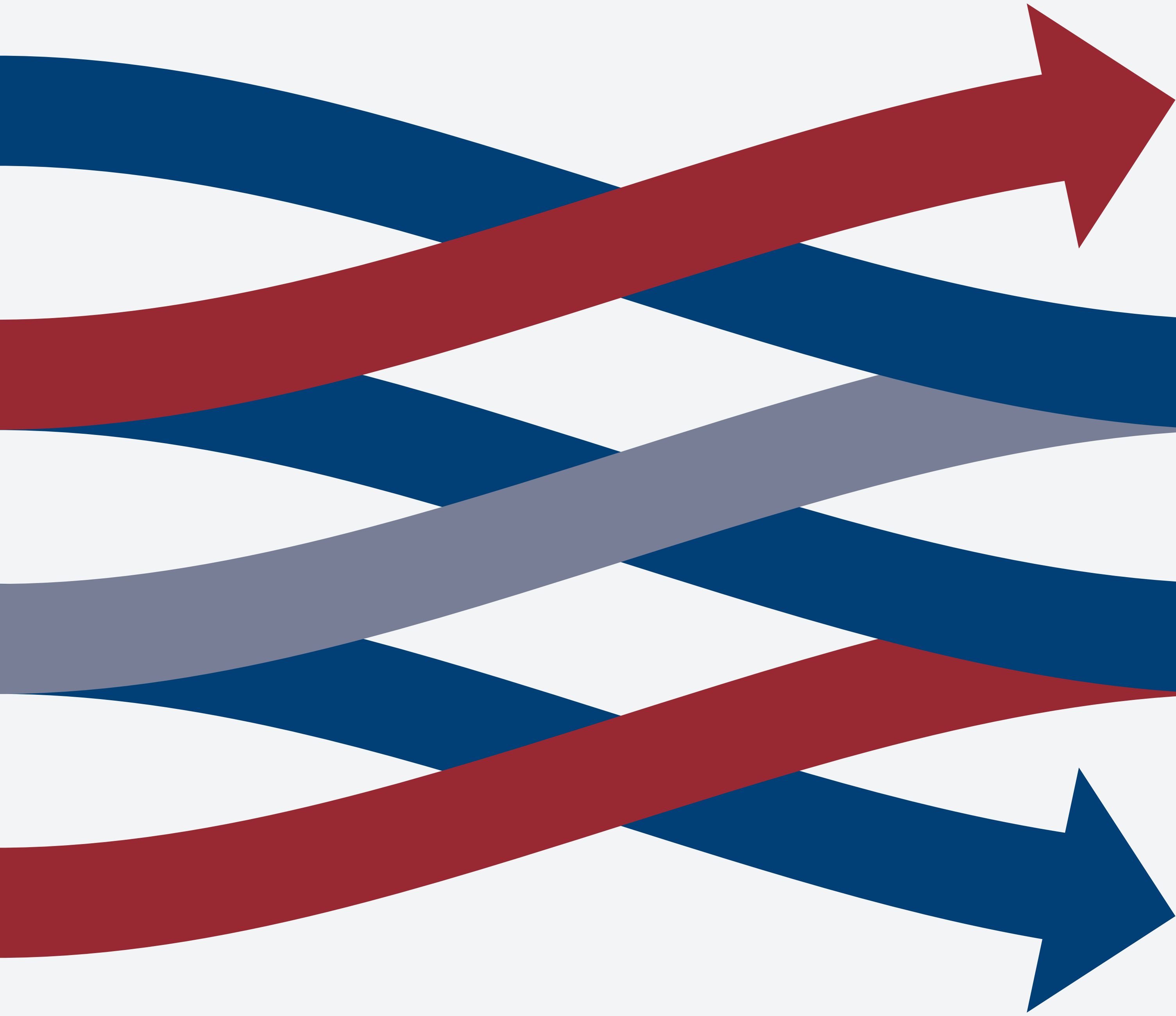
# The Economy after Brexit

Economists for Brexit

press@economistsforbrexit.co.uk
www.economistsforbrexit.co.uk



# CONTENTS

## Introduction



## Briefing Notes

# INTRODUCTION

A lot of economic nonsense has been talked so far in the Brexit debate. Most of it has come from the Project Fear campaign launched by No 10 Downing Street and Remain. But muddled statements can be found on all sides of the debate. Listening to this outpouring, many members of the public are naturally confused and reasonably demand some economic logic and clarity: they want 'the facts'. Unfortunately, as all economists know, the 'facts' do not speak for themselves nor can they directly address the arguments on both sides. However, economic logic, clarity for the non-economist and an evidence base can be provided in setting out these arguments. This is what we – Economists for Brexit – are attempting to provide in these Briefing Notes.

Economists for Brexit is a group of independent professional economists who – like many people – are convinced of the strong political case for leaving the EU on the grounds of regaining democratic control of economic and other policies by the British people. However, as economists, our professional focus here is only on the economics of the Brexit decision – a subject we believe has been served poorly in the debate so far. In fact, democratic control of economic decisions is as important an economic as it is a political argument. Democratic governments can be ejected and learn when the people reject their policies, whereas the EU 'government' cannot be ejected, and is unresponsive to its failures and to criticism from the public – most of all UK public opinion. It has made many mistakes in economic policy, whether in launching the ill-fated euro, in dealing with the eurozone crisis, responding to migration, regulating businesses, or in choosing its overall socio-economic priorities; and it shows little, if any, sign of self-correction.

### Briefing Notes

In these Briefing Notes on the economics of Brexit, we explain why we can forecast that Brexit will bring measurable net economic advantages to the UK while also restoring its democratic self-government. Though we agree there may be some short-term uncertainty, we also explain how any such uncertainty following a Brexit debate (where many false negative arguments will have been made) can be handled. This will allow the British people to enjoy the long term benefits of becoming a self-governing country once again with the political freedom we have always demanded. We will explain what the economics of the UK is likely to look like after Brexit.

The following Briefing Notes take a simple form. Each economist has been asked to explain a particular topic in plain language at a length no greater than a newspaper article. To this they have been asked to append some references, or further reading, where necessary that provide extended support to their necessarily brief argument. We have focused on eight economic areas that are key to this debate.

1. The **Overview** briefing note by **Roger Bootle** highlights that the EU's poor recent economic performance looks set to continue and largely reflects the poor decisions it continues to make.

2. The **Regulation** piece by **Professor Tim Congdon** stresses that the EU has led to a sharp increase in regulation, which in turn has been a major contributor to the region's poor economic growth.

3. The focus on **Trade** by **Professor Patrick Minford** highlights that the UK has everything to gain from a change in its trading relationship with the EU. The EU has created an economic bloc of 28 countries around which it has erected tariff and non-tariff barriers. While globalisation has helped reduce the significance of these barriers, they remain there to protect agriculture and manufacturing within the EU. The gains to the UK from leaving this protectionist area and trading under World Trade Organisation (WTO) rules at world prices would be significant: growth would be higher and the prices we pay in the UK lower. The service sector would benefit.

4. The message on **Jobs and Investment**, by **Ryan Bourne**, is simple but clear. Outside the EU, the UK would have a healthy labour market; jobs and investment would expand in an environment of higher growth.

5. **Neil MacKinnon** focuses on **Immigration**. The EU's freedom of movement rules prevent the UK from controlling immigration from the EU, much of it of unskilled workers. To control total migration, the UK must restrict non-EU immigration unreasonably. It is only if it is outside the EU that the UK will be able to obtain the mix of immigrants with the skills it needs within a reasonable total.

6. **Gerard Lyons** explains that, outside the EU, **the City of London** will retain its role as the world's leading financial centre. Within the EU, our major industry, the financial sector, has faced a difficult time in recent years, as the UK has seen a declining ability to influence the regulatory environment for the financial sector. In future, if it remains within the EU, the City will remain exposed to future tensions between the eurozone and the non-eurozone countries.

7. The UK is a large net contributor to the **EU Budget**, as **Warwick Lightfoot** explains, and would benefit from being able to spend better its large budget contribution were we to leave the EU.

8. There are a number of groups that receive **EU funding**, without appearing to realise that this money comes from the UK in the first place, as **Professor Kent Matthews** outlines. He confronts head on the misplaced fears of University Vice Chancellors and the science profession, among others.

Finally, we provide a post-Brexit economic forecast. It points to a significant supply improvement to the economy. Outside the EU, the UK would gain from a boost to business competitiveness, productivity and growth from the elimination of the trading, regulatory and budget net costs identified in these notes. With the intended future centralisation of the EU to deal with the euro crisis, the relative gain to the UK from being outside the EU could rise as areas of centralised action increase. With Brexit, the short-term growth outlook is similar to today, the longer-term growth outlook is stronger.

## Important Themes

In addition to the above key points, we would stress a number of important themes that arise from the points made in the Briefing Notes and the post-Brexit economic forecast:

- The UK does not need a trade deal to trade! The UK already trades heavily with many countries across the globe with which it has no trade deal. We successfully trade with these countries under the rules of the WTO and we can continue to do likewise with EU countries in future. The same is currently the case for the United States, Japan, China, and most of the world.

  - It is important that people understand the issues surrounding trade and the single market - rather than being obstacles to Brexit, a correct analysis of the issues shows they reinforce the case for Brexit. The EU is a customs union that protects certain industries, notably agriculture and manufacturing, forcing higher prices upon EU consumers. Leaving the walled garden of the EU and trading on a free trade basis under WTO prices will decrease prices, provide a boost to GDP, and free the UK from having to comply with such EU policies as the free movement of people.

  - Outside the EU, using (only some) of the money saved from our current EU contributions, we can provide our own support to help particular industries - e.g. volume cars - make the transition from EU protection to free trade. This could, for example, include direct payments to farmers in place of the Common Agricultural Policy and to science projects currently funded by the EU (using money that comes from the UK in the first place).

- The EU's second main power after trade is that it sets the rules of the Single Market using Qualified Majority Voting. The resulting one-size-fits-all regulatory regime imposes, for example, the Social Chapter, an interventionist climate change agenda, an anti-finance agenda, and corporatist support of big EU businesses.

- All of the contributors believe Brexit will result in a better economic outcome than remaining in the EU. We are more confident about the ability of the UK to achieve longer term economic success with Brexit than within an EU that is unlikely to reform and looks set to centralise further.

  - An underlying message is that both workers' and business opportunities will be improved by solid economic performance.

- The UK needs to distance itself from the poor economic performance of the EU and the challenges set to confront the eurozone that will reinforce the need for the EU to centralise further.

- It is a fallacy to say that jobs and investment will be lost as a result of Brexit. In fact Brexit, as described above, constitutes a major economic reform, similar to the many market reforms introduced by UK governments since the early 1980s and recently. Such a reform would benefit industries where we perform best and would remove subsidies from some others: jobs and investment (including foreign direct investment) will expand in the first at the expense of the latter. Overall, as our pre- and post-Brexit forecasts show, jobs and investment will expand as UK output rises, helped by the boost to spending power from lower prices.

  - Overall, the economic figures suggest the UK will gain. In any industry there may be firms that think they will benefit from Remain. But their interests, as with other vested interests, are theirs, not the UK's. Therefore, the views of business are likely to vary by size of firm, by the sector they are in, and by their business model.

  - There may also be particular EU markets where EU regulations post-Brexit will disadvantage UK firms. If so, UK firms can move into other markets, just as occurs in any traded industry when a trade partner decides to become protectionist. The UK will sell its services at world prices as before.

- Just as it is a fallacy to say there will be a loss of jobs and investment, it is a fallacy to say there will be 'chaos' post Brexit, if by trading under WTO free-trade rules we free ourselves from having to negotiate trade deals with the EU. Under such an approach, any uncertainty post Brexit is likely be a temporary phenomenon.

- Until Brexit has happened and been calmly explained, as we attempt to do here, there could be swings in market prices of government bonds, equities and sterling. But these swings are routine in economies undergoing change and are self-stabilising. In a low inflation, low interest rate environment, where financial markets are potentially volatile, a fall in sterling will help stabilise the economy. Post Brexit, short-term growth will be little different from now and long-term growth better.

We hope these Briefing Notes will be helpful in understanding the economics underlying the Brexit decision and will dispel some of the exaggerated claims and threats whipped up by Project Fear.

Gerard Lyons and Patrick Minford, editors and co-chairs, Economists for Brexit:

| | | | |
|---|---|---|---|
| Gerard Lyons | Patrick Minford | Roger Bootle | Ryan Bourne |
| Tim Congdon | Warwick Lightfoot | Kent Matthews | Neil McKinnon |



NEXT PAGE
*CVs of Authors*

# CVS OF AUTHORS

**Roger Bootle** is Chairman of Capital Economics, Europe's largest macroeconomics consultancy, which he founded in 1999. Roger was educated at Merton and Nuffield Colleges Oxford and subsequently taught Economics at St Anne's College Oxford. He is a Specialist Adviser to the House of Commons Treasury Committee and an Honorary Fellow of the Institute of Actuaries. He was formerly Group Chief Economist of HSBC. In 2012 Roger and a group of economists from Capital Economics won the Wolfson Prize. Roger is the author of several books including The Trouble with Europe (2014, 2015 and 2016) and The Death of Inflation, published in 1996. He is a well-known broadcaster on radio and television and writes a regular weekly column for the Daily Telegraph. In 2012 he was named Economics Commentator of the Year.

**Ryan Bourne** is Head of Public Policy at the Institute of Economic Affairs and a weekly columnist for City AM. He has previously worked at both the Centre for Policy Studies and Frontier Economics, and has written widely on a range of economic issues. He has both MA (Cantab) and MPhil qualifications in economics from the University of Cambridge.

**Professor Tim Congdon** is an economist and businessman, who is well-known as a strong advocate of sound money and free markets in the UK's public policy debates. He was a member of the Treasury Panel of Independent Forecasters (the so-called "wise men") between 1992 and 1997, which advised the Chancellor of the Exchequer on economic policy. He was awarded the CBE for services to economic debate in 1997. Tim founded Lombard Street Research, one of the City of London's leading economic research consultancies, in 1989. He has been a visiting professor at the Cardiff Business School and Cass Business School). His main current interest is establishing the Institute of International Monetary Research, at the University of Buckingham. The Institute's purpose is to analyze linkages between the banking system and the quantity of money on the one hand, and macroeconomic outcomes on the other. Tim's latest book is Money in a Free Society (New York: Encounter Books, 2011).

**Warwick Lightfoot** is an economist with interests in monetary economics, public finance and labour markets. He is the former economics editor of The European and his articles on economics and public policy have appeared in publications that range from The Financial Times and Wall Street Journal to The Spectator and Times Literary Supplement. He is the author of Sorry We Have No Money: Britain's Economic Problem; Margaret Thatcher: the economics of creative destruction; Unfinished business: the case for a more liberal labour market and America's Exceptional Economic Problem that will be published shortly. He was Special Adviser to the Secretary of State for Employment 1987-89 and Special Adviser to the Chancellor of the Exchequer 1989-92

**Dr Gerard Lyons** has been Chief Economic Advisor to Boris Johnson, the Mayor of London, since January 2013. He is on the Board of CityUK and on the Advisory Board of Open Europe. Before that he spent 27 years in the City at Chase Manhattan, Swiss Bank, DKB and Standard Chartered. He has testified to Committees of the US Congress and Senate and to UK Parliamentary Committees, and he has spoken at the EU-China Summit in Beijing. His publications include The Europe Report: a Win-Win Situation (2014), London: The Global Powerhouse (2016) and The Consolations of Economics, which was a Daily Telegraph Book of the Year and released in paperback by Faber & Faber ( 2015). His ebook, The UK Referendum: An Easy Guide to Leaving the EU is available for download from Amazon.

**Neil MacKinnon** is the global macro strategist at VTB Capital and has worked as an economist and strategic adviser at a number of financial institutions in the City over the last 20 years or so including Nomura Securities, Chase Investment Bank, Yamaichi International, and Citibank. He started his career as an economist at HM Treasury and is a graduate of the Universities of Liverpool and Southampton.

**Professor Kent Matthews** is the Sir Julian Hodge Professor of Banking and Finance at Cardiff University. He was previously Professor of Banking and Finance at Liverpool John Moores University. He took degrees at the London School of Economics, Birkbeck, and Liverpool University. He has held research and academic positions at the LSE, National Institute of Economic and Social Research, University of Liverpool, Western University (Canada), Bank of England and Lombard Street Research. He has held visiting positions at Katholieke Universiteit Leuven (Belgium), Humbolt University (Berlin), Clemson University (S. Carolina), Fudan University (Shanghai) and Hong Kong Monetary Authority. His research has been in the area of macroeconomic modelling, forecasting, the shadow economy, and the efficiency and competitiveness of banking markets. He is the author of 6 books, and 75 papers published in peer reviewed journals, and book chapters.

**Professor Patrick Minford** is Professor of Applied Economics at Cardiff University where he directs the Julian Hodge Institute of Applied Macroeconomics. His main research interest is in macroeconomic modelling and forecasting. Between 1967 and 1976 he held a variety of economic positions, including spells in East Africa, industry, HM Treasury and its delegation in Washington DC. From 1976 to 1997, he was the Edward Gonner Professor of Applied Economics at Liverpool University where he founded and directed the Liverpool Research Group in Macroeconomics, which built the 'Liverpool Model' of the UK economy that was influential in forecasting and policy analysis during the 1980s. During the 1990s he also undertook part-time roles in the UK administration: he was a Member of the Monopolies and Mergers Commission from 1990 to 1996, and one of the HM Treasury's Panel of Forecasters ('Wise Men/Persons') from 1993 to 1996. He was made a CBE in 1996. His published work includes books, journal articles, and op-ed pieces in the area of macroeconomics and related policy issues.



NEXT PAGE
*An Overview: The overall balance of advantages and disadvantages of leaving or staying in the EU*

# An Overview: The overall balance of advantages and disadvantages of leaving or staying in the EU

Roger Bootle

There have been umpteen studies of the immediate net cost or benefit of staying in the EU. Important though such analyses are, we also need to look at how such a balance of costs and benefits is likely to evolve over future decades.

This issue turns on the quality of governance in the EU. It is not widely recognised that the EU is a comparative economic failure. Not in its initial years, of course, when its members grew strongly, thanks to recovery from the war and the transfer of large numbers of people from agriculture to industry. But, over the last two decades, the EU's record has been poor against that of other developed countries, such as the US, Australia and Canada. Within Europe, it has done badly compared to Norway and the UK (Bootle, 2015). Of course, it has performed even more poorly against the emerging markets – which arguably may be an inappropriate comparison, but we must remember these markets will be the source of the world's future growth.

Why is this? Over the last decade and a half, the answer is mostly "the euro", which has been an unmitigated disaster. But the EU's poor performance predates the euro. The reason for this earlier underperformance, which has carried through to the post-euro world, is a series of bad decisions that have reduced efficiency.

First, there is the excessive regulatory zeal, which has placed countless unnecessary burdens on business. Second, there is the widely acknowledged misuse and misdirection of the EU's funds. But perhaps the most important source of loss has been the absorption of time and attention of politicians, officials and business leaders obsessed with barmy and unnecessary plans for the harmonisation, integration and Europeanisation of something or another. While leaders of rapidly growing countries of Asia were busying themselves with the fundamentals of economic growth, in Europe their equivalents were obsessed with unnecessary and damaging integrations.

The euro was an unforced error.  But it was not a one-off. It followed a host of other smaller bad decisions. The big one – the Common Agricultural Policy –has been a huge waste of resources.

Why does the EU make bad decisions? The EU's institutions do not work and its essential ethos – the drive towards "ever closer union" - is misguided. The EU operates through an unelected Commission, supported by an army of bureaucrats, and the European Council that is dominated by horse-trading amongst individual country interests. In practice, things used to be run by the dominant pair, France and Germany. More recently, France has faded and Germany now dominates. Meanwhile, the European Parliament is a weak institution with little democratic legitimacy and limited powers.

I do not know what the predominant issues of the next few decades will be. But, I do know this: on the basis of its record, the EU is likely to continue making cack-handed decisions about them, whatever they are.

But, aren't the poor decisions the EU makes likely to be outweighed by the benefits of the "Single Market"? Unfortunately, these benefits have been greatly oversold (see Burrage 2014 and 2016.). People talk about Britain "having access" to the Single Market, as though it were some sort of a room, with a door through which you may or may not be admitted, depending upon your EU membership. But this is nonsense. All countries in the world have access to the EU Single Market. It is simply that, in order to sell goods into it, they have to agree to meet its standards. But that is true wherever you try to sell goods. As it happens, plenty of countries around the world have had great success selling into the Single Market without themselves being members of it. The United States is the largest exporter to the EU (exporting more to the EU than does the UK), followed by China. As for the importance of being able to influence EU rules, neither of these other countries has any influence on them. Nor do they have a single Member of the European Parliament (MEP) or a representative at any European meeting.

By contrast, the downside of belonging to the Single Market is you must apply all its rules and regulations throughout the whole economy. In the UK's case, only 12% of our GDP is directly accounted for by exports to the EU. But this means that 88% is not. Yet that 88% also must obey all the EU's rules.

Moreover, whatever advantages that potentially might accrue from Single Market membership are set to fade. The EU is falling rapidly in relative importance as it is outgrown by the rest of the world. Conversely, the relative cost burden from EU regulations being imposed on the whole economy are set to rise.

This is a club of which we should not want to be a member.

**References**

Bootle, R, 2015. *The Trouble with Europe*. 2nd ed. London: Nicholas Brealey Publishing.

Burrage, M, 2014. *Where's the Insider Advantage?* London: Civitas.

Burrage, M, 2016. *Myth and Paradox: How the trade benefits of EU membership have been mis-sold.* London: Civitas.



NEXT PAGE
*Too Much Regulation*

# Too Much Regulation

Tim Congdon

Over the last 60 years, Europe's politicians have promoted greater political and economic integration amongst their nations, in line with the "ever closer union" commitment in the 1957 Treaty of Rome. But they have been markedly reluctant to pool control over taxation or public expenditure. The power of the purse remains very much at the national level. As a result, the consequence of integration has been a sharp increase in regulation, which takes the form predominantly of Directives and Regulations initiated by the European Commission. These Directives and Regulations constitute the so-called *acquis communautaire*, a body of law or quasi-law that is now 170,000 pages long. The enforcement of this vast number of injunctions and prohibitions is costly for European business, particularly in small- and medium-sized companies. In Britain, as elsewhere in the EU, much regulation is deeply resented.

Four areas of regulation can be highlighted. First, European governments have been more emphatic than the global average about the dangers of global warming (Robinson, 2008). The EU has therefore adopted the renewables agenda with greater zeal than most of the world's nations and forced member states to replace low-cost by high-cost energy sources. Coal-fired power stations have been closed down, offshore wind farms built and so on. In an article in the *Financial Times* in January 2014, Lakshi Mittal, the Indian entrepreneur with interests in steel and heavy industry in many countries, warned that EU's energy policies had undermined the competitiveness of its manufacturing industries. The recent problems of Tata Steel bear this out.

Second, the EU has pressed for social legislation (such as the 2003 Working Time Directive and the 2004 Gender Equality Directive) that adds to companies' costs and reduces employment. Open Europe, a think tank that regards itself as neutral in the referendum debate, estimated in 2011 that EU social legislation by itself made the UK worse off by £15 billion, about 1 per cent of national output (Booth et al, 2011).

Third, control over financial regulation passed from UK authorities to EU bodies connected to the Commission as a result of the 2009 Lisbon Treaty. Since then, several new interferences – including the cap on bankers' bonuses and an outright attack on financial derivatives businesses – have damaged the City of London and reduced its growth. For 40 years to 2008, the City had been the most dynamic and successful part of the UK economy.

Finally, literally thousands of regulations to ban substances and manage processes have emanated from EU institutions since 1973 - and particularly since the drive for "the single market" began in 1992. They have affected activities that range from fine art auctions to herbal medicines, and have disturbed established and profitable businesses. Often the only aim has been to impose on the UK a standard already existing in France or Germany, even though the UK had previously been happy with its own arrangements (Congdon, 2013).

The burden of regulation has been so severe that it has reduced productivity (output per person employed), as well as the number of people with jobs. With the *acquis communautaire* adding thousands of pages every year, the damage to productivity has increased over time. As productivity growth is the ultimate driver of higher living standards, all Europeans – including of course the British – are worse off than they would have been if they had kept regulation at a national level.

The table below shows the rate of change in real GDP in high-income countries in the five years to 2016, according to the International Monetary Fund. It is obvious that the economies of EU member states are falling behind those of other high-income countries, falling behind consistently, and by a significant amount. Too much regulation must be the main explanation.

**Table 1. The EU's economic decline, relative to other high-income societies**
Table shows % rate of change in constant-price GDP, according to the IMF

| | 2012 | 2013 | 2014 | 2015 | 2016 | Cumulatively, over five years to 2016 |
|---|---|---|---|---|---|---|
| USA | 2.2 | 1.5 | 2.4 | 2.6 | 2.8 | 12.0 |
| Japan | 1.7 | 1.6 | -0.1 | 0.6 | 1.0 | 4.9 |
| Canada | 1.9 | 2.0 | 2.4 | 1.0 | 1.7 | 9.3 |
| Australia | 3.6 | 2.1 | 2.7 | 2.4 | 2.9 | 14.5 |
| Hong Kong | 1.7 | 3.1 | 2.5 | 2.5 | 2.7 | 13.1 |
| Singapore | 3.4 | 4.4 | 2.9 | 2.2 | 2.9 | 16.9 |
| | | | | | | |
| Euro area | -0.8 | -0.3 | 0.9 | 1.5 | 1.6 | 2.9 |
| European Union | -0.4 | 0.2 | 1.5 | 1.9 | 1.9 | 5.2 |

**References:**

Robinson, Colin (2008) *Climate Change Policy: Challenging the Activists* London: Institute of Economic Affairs.

Booth, Stephen, Mats Persson and Vincenzo Scarpetta (2011) *Repatriating EU Social Policy* London: Open Europe.

Congdon, Tim (2013) *How much does the European Union cost Britain?* Report for the UK Independence Party, 2013 issue in an annual series, pp. 23 – 6. The reports are available from www.timcongdon4ukip.com.



NEXT PAGE
*Brexit and Trade: What are the options?*

# Brexit and Trade: what are the options?

Patrick Minford

There is much confusion about what 'being out of the EU' would look like in terms of trade. Remain regards this confusion as a major weakness of Leave: 'Leave cannot tell us what Brexit would be like', they say, 'and so this would be a major uncertainty.'

In fact, matters are or should be quite clear. The EU is a protectionist customs union that erects a sizeable wall of tariffs and other trade barriers around its 'single market' in agriculture and manufactured products. In services there is no unified EU trade barrier or other commercial policy but rather a few EU regulations of little effect plus a mass of national barriers of one sort or another. The effect of EU trade policy is therefore to leave services alone but to raise prices inside the protective wall (which includes us) for both agriculture and manufacturing. Estimates - based on my own research (Minford et al, 2015) and that of others who have tried to quantify the elusive effect of non-tariff barriers - are that currently both agriculture and manufactures have prices about 20 % higher than world prices. For purposes of projecting the future I will assume they fall somehow to a more modest 10 % by say 2020.

The size of these barriers tells us that almost any trade arrangement we might make with the EU which dilutes this state of affairs in the direction of true free trade, will be better for the UK economically than being in the EU as now.

What would be the effect of simply 'walking away' from the EU? Think of it as abolishing the 1972 European Communities Act, not negotiating any new agreements with the EU or anyone else, and putting up no UK trade barriers at all. Detailed model calculations (Minford et al, 2015) show we would receive a welfare gain of 4% of GDP, with consumer prices falling 8% and our competitive services sector expanding to take the place of diminished manufacturing output. The calculations assume agriculture, already a tiny 1% of GDP, will be supported by direct grants from the Treasury ('deficiency payments') to remain at about the same size.

What other trade agreements do we need? My advice would be: none. We already sell all our non-EU exports and all our exports of services around the world under WTO rules, about 70% of all our exports. Now the other 30%, to the EU, would join in. All our exports, like our imports, would be traded at world prices. These prices would hardly be affected by any other small country's trade policies; furthermore, with the UK being less than 3% of world GDP, we would be a small supplier in any of these world markets for goods and services. This means, if we were to negotiate a preferential agreement with any other small country, the extra demand we obtain would have no effect on the world price and so none too on our supply; all that would happen is some of our supply would be diverted to the preferential market. Harmless but pointless. By the way, most of the EU's much vaunted trade agreements with the rest of the world are of this type – i.e. mostly with small countries and ex-EU-colonies to boot. Whether we keep them or drop them really does not matter.

But what about a trade agreement with a large country or country-bloc? Well, notice that the only one we have is with the EU: and that one is very damaging. Although we get preferential entry for what we make, we pay a big cost for that in higher prices for imports. So watch your back if you want to negotiate one of these with a USA or a China. Why bother? We already trade with these big blocs successfully at world prices; think of our financial markets or our international law firms or our universities. Or think of the sales of Jaguar Landrover or JCB. Which of these really needs a trade agreement, with all that bureaucratic involvement?

Thus, the best outcome for us as a nation is trading on the basis of WTO free market prices without so-called free trade agreements negotiated with any country. To those who scoff that the British people will not put up with free trade, I simply say woe betide the industrial interest that tries to persuade them to part with such a fall in the cost of living; this would be worse than the aristocrats of Peel's time trying to stop the repeal of the Corn Laws.

Naturally, however, free trade will be unpopular with powerful industrial interests that currently benefit from protection: many of them have already been vocal in the debate, as one would expect. It also will be unpopular with foreign industries in the EU hitherto selling us goods at higher than world prices. Hence there is bound to be, from the point of view of political realism, pressure to make some arrangements that bring these interests, if not on board, at least to the point of non-resistance. This is where some 'free trade agreement' with the EU might come in. The most likely form it might take is an agreement to keep existing arrangements in place for certain of the most affected sectors for some transitional period, with gradual movement towards full free trade. Such a (non-) free trade agreement with the EU would reduce our gains from leaving the customs union in the short run but would leave them intact in the long run.

Note that in many areas we could provide direct subsidies with only part of the money we save from not being a member of the EU. For agriculture in particular there would be an immediate end to the CAP with its huge transfers to foreign farmers but its replacement with an evolving system of deficiency payments provided by the UK government.

In sum, trading is one of the oldest human activities (Ridley, 2016) and 70% of our trade is already carried out in world markets. Our EU trade is subject to EU protectionism (our only trade agreement) and this costs us substantial resources. If and when we leave the EU we will be better off by some 4% of GDP if we just walk away. In practice, we may have to have negotiations on transitional arrangements to satisfy some of the vested interests that lose out. However, one thing we do not have to do, and should not do, is enter into any other trade agreements. The WTO rules are there to police the world market in which the UK can best thrive.

* The WTO, of which we have been a member since it began, is a powerful set of courts set up to mediate between nations bringing complaints about unfair trade practices; its rules are sensible and clear. You have to treat all trade without discrimination if you want to use trade barriers (the 'most favoured nation' principle); you are allowed to give single countries 'preference' under a registered regional trade agreement. What these rules do is to enable a 'world market' to work in which all countries' demands are equated by the 'world price' with all countries' supplies. Think of it as a 'business-to-business' market located at the borders of all countries where businesses unsentimentally pay for traded commodities such as laptops, TVs, fridges and so on. Traded goods then are taken by distribution and marketing chains to the end-consumer; these chains cope with the idiosyncracies of the local consumer market, so that there is a distribution 'margin' between border and retail, and this will create differential prices at the retail level.

**References and further reading:**

S.C. Bradford (2003), *Paying the price: final goods protection in OECD countries,* Review of Economics and Statistics, 85(1), 24-37.

S.C. Bradford and R.Z. Lawrence (2004), *Has globalisation gone far enough? The cost of fragmented markets,* Washington DC, The Institute for International Economics.

Patrick Minford, with Sakshi Gupta, Vo Phuong Mai Le, Vidya Mahambare and Yongdeng Xu (2015) Should Britain leave the EU? An economic analysis of a troubled relationship, Edward Elgar in association with the IEA, second edition, pp. 197.

Patrick Minford (2016), *Understanding trade agreements with the EU and other countries,* Cardiff working papers in economics, Cardiff Business School, available at www.patrickminford.net/wp/E2016_1.pdf

Matt Ridley (2016), *Trade treaties are old hat. Let's move on,* The Times, Monday March 14, 2016.

# Jobs and Investment

Ryan Bourne

Being a European Union member is neither necessary nor sufficient for a healthy labour market. Three economies with some of the lowest rates of unemployment in Europe – Iceland (3.2%), Norway (4.5%) and Switzerland (3.7%) - are all outside the EU. Conversely, Greece (24.6%), Portugal (12.2%) and Spain (20.5%) are all EU members; indeed, the EU's average unemployment rate is 10.3%. Britain's relative labour market success (5.1% unemployment) is owed to domestic UK skill levels and sensible policy decisions - labour market regulations, welfare, taxation - often in spite of EU intervention.

The idea that a large number of jobs are 'linked to EU membership' itself is a product of faulty economic thinking. Various studies have shown, at any point, around 3-4 million jobs are associated (directly and indirectly) with exports from UK businesses to customers in other EU countries (Ardy et al, 2000; CEBR, 2014). But this is not the same as saying this number of jobs is dependent on EU membership and would be lost as a result of Brexit.

Quite simply, trade does not necessitate membership of a political union. There is no scenario under which trade would collapse between EU consumers and businesses after Brexit. As Roger Bootle points out, the United States, with no privileged access, is the largest exporter into the EU. We may end up with different trade arrangements and these can affect the overall structure of an economy. But, particularly in the medium term, there is no evidence the number or quality of jobs will decline.

There is currently considerable debate about the type of UK-EU trading arrangement that would serve us best post-Brexit. At one extreme, the UK could 'walk away' from the current EU customs union and simply trade at world prices under the WTO: the unilateral free trade option. At the other extreme the UK might sign a deal leaving trade arrangements much as they are now, at least for a transitional period. Most of the debate so far has centred around which model (eg, Norwegian, Canadian, etc) is least bad. For example, if the UK remained a member of the single market on exit as part of the EEA in some transitional arrangement, in the short run, the impact of trade on the labour market would be largely indistinguishable from a 'Remain' counterfactual and the structure of the economy would remain much the same. The difficulty with this kind of scenario is it implies a negotiation with the EU with uncertain outcomes and of uncertain time-duration. A further difficulty is avoiding some kind of continuing entanglement with the EU – including e.g. free movement of peole.

In the Briefing Note on Trade we explain that the former scenario – unilateral free trade under WTO rules - is the best option for UK interests, reducing consumer prices some 8%, increasing GDP by 4%, and avoiding the continuation of EU rules and regulations. If the UK exited the EU customs union and traded at world prices under the WTO, there would be a change to the structure of the economy, but there would be no adverse impact on overall employment. Industries currently enjoying high preferential prices as a result of the current customs union would have to adjust to lower world prices. Any jobs lost in these sectors though would be replaced with faster job growth in other sectors in which the UK had a comparative advantage.

The UK labour market is highly dynamic and would adjust to these changed trade arrangements quickly: prior to the financial crisis 4 million jobs were being created and 3.7 million destroyed on average each year (Butcher and Shaw, 2013). Furthermore, assistance could be given by the UK government to disadvantaged industries (e.g. volume cars, agriculture) to manage their transition. The funds for such assistance would come from the funds we currently pay each year to the EU. After all, since the UK is a net contributor to the EU, the subsidies and grants received from the EU are, in fact, provided by the UK taxpayer.

Investment decisions would change according to the arrangements we have in the post Brexit scenario. One of the claims made by Remain is that Brexit would reduce FDI. However, as we have just seen, FDI is simply one element in investment generated by good returns on capital. Foreign Direct Investment (FDI), currently going into EU-protected sectors, is likely to be diverted to the newly expanding sectors. After Brexit, returns would rise in industries that were previously unprotected by the EU, such as services; they would fall in industries losing their protection. Overall, as our post Brexit forecast makes clear, growth and investment would rise in the long term, and so we can reasonably project that FDI would rise with it.

We should aim not to maximize the number of jobs through protecting existing sectors or to protect FDI flows into certain industries (as many imply), but should provide a framework through which we produce goods and services in which we have a comparative advantage and where innovation can take place. This enhances productivity – the only sustainable way to enjoy enhanced prosperity.

In this regard, a Brexit provides a range of opportunities to enhance the growth potential of the UK economy further, leading to larger numbers of high productivity jobs. As we explain generally in these notes, Brexit is a major supply-side reform to the UK economy and is projected to raise UK output, employment and productivity overall. This is because our industrial structure would be guided again by comparative advantage; we would be able to shape or repeal both product and process regulations (such as employment law) to suit our domestic circumstances; trade with fast-growing non-EU countries will be encouraged; immigration policy will be redirected towards non-discriminatory admission of those most needed by the economy; and the 1% of GDP paid to the EU budget would be better used.

**References:**

Ardy, B., Begg, I. and Hodson, D. (2000) *UK Jobs Dependent on the EU.* Britain in Europe.

Butcher, B. and Shaw, P. (2013) *Job creation and destruction in the UK.* National Institute Economic Review, no. 225. August 2013.

CEBR (2014) *UK jobs supported by exports to the EU.* CEBR analysis of jobs associated with demand from the European Union. London: Centre for Economics and Business Research.

# Immigration

Neil MacKinnon

The contentious issue of immigration has its roots in the decision of Prime Minister Tony Blair to allow uncontrolled immigration into the UK in the early years of the Labour government (2004). Recently, immigration has become a more contentious and controversial topic throughout the EU in the light of the migrant crisis. German Chancellor Angela Merkel's "open-door" policy on migrants has proved contentious with many. As far as voters are concerned, it is shaping attitudes towards the EU in an unfavourable way.

The rise of anti-euro, anti-austerity parties throughout the EU in recent years has been well-documented and highlights a growing gap between the EU's creditors and debtors and between "north" and "south". Now the migrant crisis, perhaps the greatest challenge facing the EU in its history, adds to those political uncertainties and threatens an upheaval of the political status quo in the EU, especially ahead of the French and German national elections in 2017.

The EU deal with Turkey is controversial and can only add fuel to the debate which, at its heart, is the ability of a country to control its own borders. The Schengen agreement, which had dismantled internal border controls between 26 of the 28 EU countries, and was a symbol of the EU's ambition to become a super-state, is now under serious threat. The migrant crisis has exposed this vulnerability and not surprisingly resulted in some EU countries closing their borders. The distinction between migrants and refugees has become blurred through the EU's mishandling of the situation.

Immigrants can be seen as people moving from another EU state or those coming from outside the EU. Immigration data also includes nationals returning home. The latest comparable EU wide data relates to the start of 2014. Then, the largest number of immigrants were found in Germany (7.0 million), U.K. (5.1 million) and Italy (4.9 million). The largest number of non-EU immigrants were found in Germany, Italy, France, Spain and the UK (2.4 million). The highest number of immigrants from another EU state were in Germany, followed by the UK (2.6 million), followed by Spain. In terms of actual numbers, it is these countries that see the biggest inflows. In relation to the size of the overall population, the highest recipient is Luxembourg, at 45%. In the larger economies, immigration is 8.7% of the total population in Germany and 7.8% in the UK.

Migration Watch estimates that net migration plus births to foreign born parents has accounted for 85% of UK population growth since 2000. If net migration continues at recent levels, the UK's population is expected to rise by 8 million over the next 15 years (see the latest migration statistics here). In mid-2015, the UK population was estimated at around 65 million with net migration averaging 242 thousand over the previous 10 years. In the period 1995-2011, it is estimated the cost of immigration to the Exchequer amounted to over £100 billion (see other updates on fiscal costs here).

Drawing clear-cut conclusions on the economics of migration can sometimes be difficult, but most economists would argue that free mobility of labour - like free trade - is a positive for the economy. Indeed, controlled immigration can have net economic benefits.

But uncontrolled and unrestricted waves of immigration may have adverse political, social and economic consequences. It goes without saying that this creates the potential for social division, as well as pressure on the UK's infrastructure and ability of public services to handle fiscal provision for migrants. Not all migrants will be skilled or professional labour and indeed some unskilled migrants may be "unemployable". The assumption in many studies on the economic effects of migration is (wrongly) that migrants have the same economic characteristics as UK nationals in terms of productivity, employment, earnings etc.

A Bank of England report published in December 2015 found that increasing migration put downward pressure on wages, particularly in sectors already experiencing low wages (there was little difference in the impact on wages between migrants that were from the EU or non-EU). In the semi/unskilled services sector, the study found that a 10% point rise in the proportion of immigrants was associated with a 2% reduction in pay levels. The counter-argument is that a restriction in labour supply through a restriction of immigration will force wages up though so far the evidence to support this is thin.

The G20, in its recent Staff Analysis, observed that the impact of "refugees" on medium to long-term growth and on the public finances depends on "how effectively they can be integrated into national labour markets". A "slow integration" scenario using the IMF's EUROMOD model showed increasing government debt-to-GDP levels at a time when there are many Eurozone economies that already have debt-GDP ratios above 100%.

The House of Lords Select Committee on Economic Affairs found that the net impact of immigration on the UK economy was minimal, in terms of GDP per head. Professor Rowthorn highlighted this in his December 2015 study with unskilled workers "likely to have suffered some reduction in their wages due to competition from immigrants." The Committee made the point that "the issue is not whether immigration is needed but what level and type of immigration is desirable".

In this context, net immigration from the EU - which we expect to remain positive - cannot be controlled. As a member of the EU, the UK cannot prevent anyone from another member state deciding to move to the UK and live here. If the UK government tries to limit the number of overseas citizens coming to live and work in the UK, it can only attempt to do so by limiting inflows from non-EU countries. For instance, non-EU students who study in the UK find it hard to get a visa to work upon completion of their studies. The migrant crisis has exposed the EU's dysfunctionality in terms of its inability to respond with a coherent policy on immigration. The Schengen system of passport free travel is now effectively dead.

Therefore, as far as the Brexit debate is concerned, our thesis is that we must take back control of our own borders for political, economic and security reasons and take back responsibility for setting UK immigration policy.

The recent negotiations between PM David Cameron and the EU focused on the payment and eligibility for migrant benefits. Proposed curbs still have to be agreed by the European Parliament but the so-called "emergency brake" might actually have little effect. Unfortunately, the debate over immigration as a key public policy issue has not been helped by a lack of transparency and honesty that has plagued government attitudes to immigration in recent years. Brexit campaigners are not talking about stopping migration altogether but rather about bringing back control from the EU on migration policy (and having the ability to impose selection criteria rather retain existing work and residency rights for EU citizens) and taking control of its own borders, consistently with its economic interests in the longer term.

**References:**

*The Refugee Surge in Europe: Economic Challenges,* IMF Staff Discussion Note, January 2016

Group of Twenty *Global Prospects and Policy Challenges,* 26-27 February 2016

The House of Lords Select Committee on Economic Affairs *The Economic Impact of Immigration,* April 2008

*The Costs and Benefits of Large-Scale Immigration*, Professor Robert Rowthorne, Civitas, December 2015

*The impact of immigration on occupational wages: evidence from Britain,* Stephen Nickell and Jumana Saleheen, Bank of England Staff Working Paper No 574, December 2015.

*The impact of in-work benefit restrictions on EU migrants to the UK*, MigrationWatch UK, 23 February 2016

*Project unclear: Uncertainty, Brexit and migration,* www.migration observatory.ox.ac.uk, 10 March 2016

http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Non-national_population_by_group_of_citizenship,_1_January_2014_(¹)_YB15.png

# The City and the Financial Sector

Gerard Lyons

What about The City and the UK financial services industry? How will this be impacted by remaining in the EU or by Brexit?

First, it is important to stress that the City will still face a hard time if we remain in the EU as the UK did not achieve a veto to protect it from greater control by the eurozone and from decisions of the European Court of Justice. In recent years, there has been increased tension between the eurozone and non-eurozone members, with the European Court of Justice (ECJ) having to decide on areas of contention.

There has been a trend in which the UK has witnessed a declining ability to influence the regulatory environment for the financial sector, in areas such as the bank bonus tax, the financial transactions tax and the ban on short selling. In view of this, in early 2015, there was a concerted political effort to ensure the ECJ decided in favour of the EU on the issue of allowing euro clearing to take place outside of the eurozone and in London. While this was a significant victory, remaining in the EU does not resolve the issue. In the future it is likely that the eurozone will centralise further, ensuring that the ECJ will have to decide again in the future on areas of contention. Protecting the City was considered one of the most important aspects of the Prime Minister's renegotiation, but the legal opinion is that water tight protection was not achieved.

The fact that Lord Hill is the European Commissioner with responsibility for financial issues does not alter the substance of this. Some organisations, like TheCityUK favour remaining in the EU, but even they produced a report during 2015 citing 25 areas where the EU needs to reform. So even those favouring Remain recognise the need for reform. You have to seriously ask yourself, whether such necessary reform will really occur?

According to the 2014 UK Government competency review on the financial services, "Over the last ten years, there has been a roughly ten-fold increase in the volume of EU law on financial services." The same competency review also highlighted the extent of EU intrusion into retail markets. The following example from the UK pensions funds industry provides a clear example: around 61% of defined benefit schemes in the EU are in the UK and 24% in the Netherlands. The National Association of Pension Funds commented that, 'It seems wholly inappropriate that the 20 plus Member States with less than 1% of defined benefit liabilities should collectively have a greater say in relation to supervision and funding requirements for those liabilities than the UK and Netherlands."

Not withstanding  this, it is hard to imagine London not being the main financial centre in Europe, regardless of whether the UK is in or out of the EU.

At the time of the sterling/euro debate, the fear was that if the UK did not join the euro, then London would lose out to one of its perceived rivals of Amsterdam, Frankfurt or Paris. Now, it is hard to imagine any of these being seen seriously as a rival to the City, even though Paris is sometimes mentioned. Rather, in recent years, global finance has become concentrated in a few centres across the globe. As a result London's rivals now are seen as being New York, Singapore or Hong Kong.

The current consensus thinking is that London might suffer in two ways from Brexit:

- One is the loss of passporting rights, with the impact of this varying depending upon a firm's particular business model. However, because the single market in financial services has not worked particularly well, the business model of many firms is that they already have local representation for the retail sector in many parts of the EU. In wholesale markets, some non-EU firms have indicated that although some corporate restructuring may be needed, the vast bulk of activity will still take place in London.
- The second is that the ECJ decision on euro clearing would be reversed, and that this business would move to somewhere in the eurozone, perhaps to Luxembourg or Paris. While this threat has to be taken seriously, the overall impact may be marginal. Furthermore, the business and policy environment can change, as it does frequently in finance - usually in the direction of greater concentration.

London is much more competitive than any other financial centre in Europe, with its concentration of skills, knowledge and expertise. In fact, the biggest current concern for many in the City is the high cost of housing in London.

More regulation is being set at an international level, which is important as London's competition is global. Post-Brexit, there would be increased independence for the City but it would still be subject to UK regulation based on
internationally agreed policies set by bodies such as the Financial Stability Board (FSB), the Committee On Payments and Market Infrastructure (CPMI) and the International Organisation of Securities Commissions (IOSCO). The important point is that once the UK left the EU it could regain its traditional role of influence on such standards bodies as it did before joining the EU.

London remains responsive to new ideas and has managed to position itself well in growing markets such as Islamic finance, sovereign wealth, the offshore Chinese currency market, carbon markets and dispute resolution. Even the increase in global regulation is a growth area for London. London's position is truly impressive and highlights its global reach.

In addition, UK authorities could attempt to change the terms of the debate, being more proactive in forcing a new agenda rather than passively waiting to see what comes out of, say, the Article 50 negotiation. In some respects, we could learn from the Americans. Their dominance means they have securities regulation that forces firms and individuals to have a US presence or qualifications to do business there. The extent to which London dominates European finance means we could seek such an 'a la carte' menu here. With the European Union needing to develop their capital markets, this has to play into London's hands. This could all be part of any post-Brexit negotiation.

Finally, the infrastructure of the financial industry is not easily replicated, which explains that while there are other financial centres across Western Europe, such as in Dublin, Luxembourg or Geneva, they are in specialised areas. For example, 2.2 million work in the financial industry across the country - not just in the Square Mile. The areas these people work in combine retail, back office and other business areas such as asset management: all of which should ensure their resilience in the face of Brexit. Recent research from Deloitte, for instance, shows that in terms of people working in all skilled sectors, London leads globally, with no major competitor within Western Europe.

**References:**

The CityUK, June 2015, *EU Reform: Detailed proposals for a more competitive Europe.*

Mayor of London, August 2014, *The European Report: A Win-Wim Situation.*

UK Government, Summer 2014, *Review of the Balance of Competencies between the United Kingdom and the European Union.* The Single Market: Financial Services and the Free Movement of Capital.

Deloitte LLP, March 2016. *Global cities, global talent: London's rising soft power.*

# The UK’s EU Expenditure

Warwick Lightfoot

The UK is the third largest net contributor (gross contribution less the “Thatcher rebate” less receipts from the EU) to the EU budget behind Germany and France. Of the 28 EU members, nine, including the UK are net contributors to the EU budget, and nineteen are net recipients.

Contributions to the EU budget vary slightly from year to year, depending upon economic performance and currency movements. The gross UK contribution is around £17.8 billion to £20 billion and the net contribution is between £8 billion to £10 billion. The UK’s real (that is taking out the impact of inflation) net contribution to the EU budget, in 2014 prices, has risen from under £4 billion in 1978 to around £8 billion in 2015. The peak was closer to £10 billion in 2014. In the context of Total Managed Expenditure of £772 billion and UK money GDP of around £1,943 billion, the net contribution is modest but would represent 2 p on the basic rate of income tax.

Some argue that we should look at the gross figure because, were the UK to leave, the government would then be able to decide how to allocate all of this money. It is not clear that the EU allocates this money in an efficient way. However, most economists would tend to look at the net contribution, after the UK receives back some of its own money.

Even though the UK is a net contributor to the EU, there are areas and sectors of the UK that receive funds and, consequently, may be nervous of the potential loss of them if the UK were to leave the EU. However, such concerns overlook the fact that we give the EU the money in the first place. Therefore, some of the money we save from the EU can be redirected to these areas, if the government so chooses. Thus, in a Brexit scenario, much of the spending the UK receives back from farm policy, social funds and grants to science would have to be maintained. In which case, these areas would suffer no loss in income, and would have nothing to fear.

But, there undoubtedly would be opportunities for conventional efficiency savings, improved auditing and scope to tailor spending programmes specifically to the particular circumstances of UK economic and social policy. The UK contribution to the EU budget and the receipts that are returned to it represent spending that is expensive, poorly directed, defectively audited and allocated through a process of fiscal churning.

## The Fontainebleau Rebate

The UK’s contribution would be much greater, if it was not partially mitigated by the Fontainebleau Rebate, which was negotiated by Mrs Thatcher in 1984. It is calculated according to a formula which used to mean that the UK’s net contribution was reduced by 66 per cent, relative to what it would be without the abatement. The latest edition of HM Treasury’s European Union Finances, published

December 2015, Cm 9167 estimated The Fontainebleau Rebate will reduce the UK's gross budget contribution in 2015 by £4,861 million from £17,779 million, to a net contribution of £8,473 million after £4,445 receipts from the EU (the portion of our own money being returned). The value of the rebate varies from year to year. It was worth between £3 billion and £5 billion to the UK between 2009 and 2015.

Because of the manner in which the Fontainebleau Abatement operates, marginal spending on EU programmes that benefit the UK comes at a net high cost to the UK taxpayer. For example, based on the figures for 2015 above, the UK taxpayer must commit £17.8 billion (gross) or £8.5 billion (net) in order to receive £4.4 billion of receipts from the EU – a benefit/cost ratio of either 0.25 or 0.52, depending on whether the EU receipts are compared to the gross or net expenditure.

The UK's Fontainebleau Rebate arrangement has reduced the UK's very high net contribution to the EU budget. It is a source of undiminished irritation to other member state governments, led by France, and to the EU Commission; and is periodically challenged by them. Any change to the rebate requires unanimity in the Council, which means that the UK must agree to any changes. At each major budget renegotiation and treaty change there is intense pressure for the rebate to be reviewed, reduced or eliminated. Mr Blair agreed to a significant reduction in the value of the rebate. As a result certain elements from the EU Budget are excluded from the deduction. These include EU overseas aid, and from 2009 non-agricultural expenditure in new Member States. The effect of these changes was phased in up to 2011, and largely accounts for the sharp increase in the UK's recent net contribution.

## Common Agricultural Policy

The inefficiency of EU spending is highlighted by the Common Agricultural Policy (CAP). Although agriculture accounts for only around 3% of the EU economy, the CAP still continues to represent almost 40% of the EU budget. It is a poorly focused mechanism for achieving UK policy objectives. In 2015, receipts relating to CAP were £2,544 million. They accounted for half of the estimated £4,445 million that the UK received back from the EU in exchange for a net contribution of £8,473 million. The rest was spent on structural and social funds.

Of total EU CAP spending, 75% is spent on directly helping farms and farm businesses, and 80% of that money is paid to the top 10% of farming households by income. Within the UK, this means that the great aristocratic estates and large agricultural businesses receive the largest share (60%) of the subsidy rather than smaller traditional farming households that might be considered to merit non-market support for wider reason of social policy, supporting rural communities and helping households with low incomes. The UK has, over many years and without notable success, sought cuts in the overall EU budget supporting the CAP and tried to promote reforms that make it a more market and competition-orientated policy to help farmers prepare for a future without income support.

The EU CAP subsidies (paid under Pillar 2) relate to payments for rural development programmes that benefit the wider rural economy. Across the UK, a large component of these programmes is directed at agri-environment schemes where farmers receive additional payments to enhance the environment. Outside a CAP regime, these programmes would continue in some form across the UK as there are well-established mechanisms to promote environmental policy objectives. The Rural Development Policy programmes in the UK support the wider rural economy with priorities relating to tourism, rural broadband and SMEs.

If the UK were outside of the constraints of the CAP, it would be able to redistribute farm spending to increase help given to lower income farming households; ensure that more money went towards correcting market failures in agriculture rather than aggravating them; and would provide scope for overall savings in spending.

In summary, the message is the UK is a net contributor to the EU. Were the UK to vote for Brexit, there would be an immediate windfall gain in spite of maintaining existing support programmes, as the UK Government, not the EU, decided how to spend taxpayers' money.



NEXT PAGE
*Redistribution of the UK Contribution to EU Budget - Post Brexit*

# Redistribution of the UK Contribution to EU Budget - Post Brexit

Kent Matthews

Professor Stephen Hawking, the UK's most distinguished scientist, along with over 150 other science worthies, have argued in an open letter that increased funding from Europe has greatly benefited science in the UK and that leaving the EU would be a "disaster" for UK science. Similar letters of support for remaining in the EU have been written by various lobby groups including UK Vice Chancellors quoting the funds they receive from the EU.

The First Minister of Wales, Carwyn Jones, is on record saying a vote to leave would threaten the £200 million the EU gives farming in Wales, without which farming in Wales "would not exist".

What is important for all recipients of so called 'EU funds' to understand is that it is not the EU but the UK that provides those funds. In 2014, the gross contribution by the UK to the EU budget was £18.8 billion (HM Treasury, 2015). Subtracting the rebate ('abatement') of £4.4 billion left a total contribution after rebate of £14.4 billion. Subtracting a further £4.6 billion for UK recipients from the EU leaves a net contribution in 2014 of £9.8 billion. HM Treasury estimates the net contribution in 2015 will have been £8.5 billion (more than twice the number in 2009) and forecasts this will rise to £11.1 billion in 2016.  The net contribution by the UK to the EU has been rising systematically in real terms (adjusted for inflation) since 1973. Of course the fiscal costs represent only a fraction of the true cost of membership.

A well-established principle in welfare economics is that if the gainers can compensate the losers in any cost-benefit calculation, there is a net welfare improvement. What it is important to realise is that, as a net payer to the EU budget, the UK is well able to compensate the losers in a post Brexit world.

The two main beneficiaries of the disbursement of EU monies are regional development (30% in 2013) and farming and fisheries (60% in 2013). The latter receives funds in the form of agricultural development subsidies, block grants and price support.

Price support systems and subsidies in the absence of a market failure are distortionary and result in a misallocation of resources. Resources are used in uneconomic activity and diverted from more productive use. Thus, the removal of price support payments will have an important positive impact on the economy.  An additional benefit will be lowering prices to consumers.

Other recipients of funds via the EU number over 4000 institutions - from Rolls Royce for research in energy saving aero-engines to individual academics at universities. While these recipients may perceive they are receiving EU funding, it is money that we, the UK taxpayer, have given the EU in the first place. Moreover, it is not clear that such funds are being spent in an efficient or economically productive way. For instance, research using the European Commission's QUEST model has shown the effectiveness of structural and regional funds on GDP is negative in eight EU countries, and the UK is one of them (HM Government, 2014, p.47, Table 3). As Open Europe has pointed out, if one looks at EU cohesion funds, "Most of the money the UK received went back to the same region from which it came" (ibid, p. 60). As the UK Government's competency report on cohesion and region funding stated, "The House of Commons Communities and Local Government Select Committee was concerned that it had been so difficult to assess the value for money of European Development Regional Funds (EDRF)." (ibid)

Two important questions remain. First, what is the least distortionary way for the "gainers" from Brexit - the UK public at large - to compensate what we would call in economics the "losers" - but who, in reality, are not losers at all, namely those who currently receive the recycled EU funds - namely scientists, Vice Chancellors, farmers, and the Welsh Government, among others?

Second, can the UK government credibly commit to compensate the "losers"?

Regarding the first question, the least distortionary method of compensation is to provide a lump-sum subsidy that will leave production decisions unaffected by interventions. This would simply be a means of cushioning the financial impact on those recipients who have grown dependent on funds disbursed by the EU.

The second question is harder. There is no credible way a future government can pre-commit to spend the Brexit-dividend in the way the EU currently does. This is particularly so as much of the EU spending may be inefficient and not allocated in the right areas or for the right reasons. It may be politically defensible to promise the losers in the short term that they will be protected but in the longer term this will have to be balanced against how the resources may be better used.

Each lobby group would make their case to government, which in a democratic world will be balanced against the greater good. For example a £11 billion net saving is approaching 2 pence in the pound reduction in the tax rate which benefits all. So when Carwyn Jones asks why should he risk what is already on the table from being in the EU on the vague promises from Westminster; the answer is that is how a democracy works!

**References:**
HM Government, 2014. Review of the Balance of Competences between the United Kingdom and the European Union Cohesion Policy, Summer 2014.
HM Treasury, 2015. European Union Finances: Statement on the 2015 EU Budget and measures to counter fraud and financial mismanagement, December 2015, Cm 9167


NEXT PAGE
*Post-Brexit Forecast Based on the Liverpool Model and Cardiff Research*

# Post-Brexit Forecast
# Based on the Liverpool Model and Cardiff Research*

Patrick Minford and the Julian Hodge Institute of Applied Macroeconomics

In this post-Brexit forecast, based mainly on the Liverpool Model (Minford et al, 1984) we take the current forecast without Brexit and allow for Brexit. The assumptions we make are based on the figures in Minford et al (2015) for trade and regulation effects:

- We assume the gain in consumer living standards from leaving the EU customs union is 3.2% due to the fall in tariff-equivalents (which we treat as a fall in the UK expenditure tax) and 0.8% due to an improvement in the terms of trade (whereby the prices of UK imports from the EU fall, partially offset by a fall in the prices of UK exports to the EU, which are some 8% of GDP smaller than the imports).

- The net EU budget contribution, 0.8% of GDP, is returned to UK consumers in the form of an income tax cut

- The reduction of the regulative burden is modeled as a fall in the employer rate of national insurance by 2%

- The PSBR is left unchanged since none of these changes therefore affect the net public revenues

- The 0.8% terms of trade gain plus the 0.8% return of the net EU budget contribution are received as direct improvements of the current account

All these changes are phased in gradually over five years. It also should be noted that we assumed combined tariff and non-tariff barriers to be half of what they are currently estimated to be (on the basis they may reduce over the forecast period), which provides a significant element of conservatism to the forecast.

The main effect of these changes is to boost the economy's supply-side in the longer term. Growth improves as UK costs fall. Unemployment falls slightly. Real wages rise as firms demand more labour given higher profits. The higher output drives down the exchange rate as new markets are sought by exporters.

In the shorter term, there is a rise in inflation as the exchange rate falls and demand increases. Interest rates rise in reaction during 2017.

It is interesting to see, after Brexit, the UK becomes a more 'normal' economy, with growth reviving, monetary policy 'normalising' and inflation getting back on track. The fall in the exchange rate and the direct improvement in the current account largely correct the recently persistent current account deficit. The PSBR, as a share of GDP, continues to fall towards balance at the end of the decade, with faster growth of nominal GDP.

What about the short term uncertainties? Essentially the Brexit effect in the short term divides into two parts:

1. There is a rise in long term performance that translates into higher profitability and more investment; and rising productivity. Capital stock also raises output in a gradually increasing way
2. There is a gradual fall in the exchange rate, which triggers a rise in interest rates (in order to maintain the incentive to keep portfolio investment in the UK). This has a negative effect on demand.

In the forecast below, these two forces are seen as balancing out. A more backward-looking model (in which expectations are based on past outcomes-i.e. 'believe it when you see it') makes (2) dominate. A completely forward-looking model – i.e. "act on what you think will happen in future" - makes (1) dominate.

This Liverpool Model is based on rational expectations. Therefore, people understand the long-term changes in the environment. The fall in the exchange rate we see in the Liverpool Model after Brexit is coming from the expansion of the economy and the requirement to find larger markets to absorb the higher output. In recent work on the UK economy in which investment is forward-looking, as in Meenagh et al (2007), we find, in the short run, output does not move much so a rise of interest rates is needed to stop demand from surging upwards, because of better investment returns and higher longer term income prospects. This mechanism has been built into this forecast.

The essential point about rational expectations is it assumes people understand the supply-side changes brought in by Brexit and build these changes into their plans at once. Rational expectations have been found in recent tests of models to fit the facts impressively (Liu and Minford, 2014), unlike rival assumptions such as 'behavioural expectations' which are mainly or entirely backward looking. Hence the long term changes start immediately to have beneficial effects on demand through the role of expectations.

Brexit is a 'shock' – a good shock.

* This forecast is put forward by one of our group and of course each of us might well put forward different detailed forecasts, especially for the immediate short term. But all of us agree that leaving the EU, and adopting the Brexit approach outlined in this document, will in the medium and long term deliver higher growth, with increased jobs and investment, and higher living standards, especially versus remaining in an unreformed EU.

Table 2. UK forecast summary — pre-Brexit

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| GDP Growth[1] | 2.9 | 2.2 | 2.3 | 2.4 | 2.5 | 2.5 | 2.5 |
| Inflation CPI | 1.7 | 0.1 | 1.1 | 1.6 | 2.0 | 2.0 | 2.0 |
| Wage Growth | 1.2 | 2.7 | 3.2 | 2.9 | 3.0 | 2.5 | 2.9 |
| Unemployment (Mill.)[2] | 1.1 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 |
| Exchange Rate[3] | 87.1 | 91.6 | 90.4 | 90.5 | 90.1 | 91.8 | 91.3 |
| 3 Month Interest Rate | 0.6 | 0.5 | 0.7 | 1.1 | 1.7 | 2.1 | 2.5 |
| 5 Year Interest Rate | 1.8 | 1.4 | 2.0 | 2.2 | 2.5 | 2.5 | 2.5 |
| Current Balance (£bn) | -99.9 | -91.0 | -70.4 | -66.0 | -66.2 | -64.7 | -64.5 |
| PSBR (£bn) | 83.3 | 78.1 | 65.5 | 56.6 | 36.1 | 31.4 | 23.8 |

[1] Expenditure estimate at factor cost

[2] U.K. Wholly unemployed excluding school leavers (new basis)

[3] Sterling effective exchange rate, Bank of England Index (2005 = 100)

Table 3. UK forecast summary — post-Brexit

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| GDP Growth[1] | 2.9 | 2.2 | 2.3 | 2.7 | 2.7 | 2.8 | 3.4 |
| Inflation CPI | 1.7 | 0.1 | 1.1 | 1.6 | 2.8 | 2.6 | 2.1 |
| Wage Growth | 1.2 | 2.7 | 3.2 | 3.5 | 4.5 | 3.1 | 3.4 |
| Unemployment (Mill.)[2] | 1.1 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 |
| Exchange Rate[3] | 87.1 | 91.6 | 89.8 | 88.2 | 86.8 | 87.4 | 86.1 |
| 3 Month Interest Rate | 0.6 | 0.5 | 0.7 | 2.2 | 2.9 | 3.0 | 3.2 |
| 5 Year Interest Rate | 1.8 | 1.4 | 2.2 | 3.1 | 3.2 | 2.9 | 2.7 |
| Current Balance (£bn) | -99.9 | -91.0 | -69.7 | -66.8 | -57.8 | -39.9 | -27.1 |
| PSBR (£bn) | 83.3 | 78.1 | 64.1 | 62.9 | 26.7 | 19.8 | 17.6 |

[1] Expenditure estimate at factor cost

[2] U.K. Wholly unemployed excluding school leavers (new basis)

[3] Sterling effective exchange rate, Bank of England Index (2005 = 100)

**References:**

Chunping Liu and Patrick Minford (2014) *Comparing behavioural and rational expectations for the US post-war economy,* Economic Modelling, 2014, 43, (C), 407-415.
Patrick Minford, with Sakshi Gupta, Vo Phuong Mai Le, Vidya Mahambare and Yongdeng Xu (2015) *Should Britain leave the EU? An economic analysis of a troubled relationship*, Edward Elgar in association with the IEA, second edition, pp. 197.
Patrick Minford, Satwant Marwaha, Kent Matthews and Alison Sprague (1984) *The Liverpool macro-economic model of the United Kingdom,* Economic Modelling, January 1984, pp. 24-61.
David Meenagh, Patrick Minford and Jiang Wang (2007) *Growth and relative living standards: testing barriers to riches on postwar panel data,* Cardiff Economics working paper, E2007/12, also CEPR discussion paper, no. 6288.

# APPENDIX

## Pre-Brexit UK Forecast Detail

Table 4.. Prices, Wages, Interest Rates and Exchange Rate Forecast (Seasonally Adjusted)

| | Inflation %[1] (CPI) | Short Dated (5 Year) Interest Rates | 3 Month Int. Rates | Nominal Exchange Rate (2005=100)[2] | Real Exchange Rate[3] | Real 3 Month Int. Rates %[4] | Inflation (RPIX) | Real Short Dated Rate of Interesт[5] |
|---|---|---|---|---|---|---|---|---|
| 2013 | 2.3 | 1.3 | 0.6 | 81.6 | 86.5 | -1.5 | 3.1 | 0.0 |
| 2014 | 1.7 | 1.8 | 0.6 | 87.1 | 93.1 | -0.9 | 2.4 | 0.4 |
| 2015 | 0.1 | 1.4 | 0.5 | 91.6 | 97.6 | -0.2 | 1.0 | -0.3 |
| 2016 | 1.1 | 2.0 | 0.7 | 90.4 | 95.8 | -0.9 | 2.0 | 0.1 |
| 2017 | 1.6 | 2.2 | 1.1 | 90.5 | 95.8 | -0.9 | 2.4 | 0.2 |
| 2018 | 2.0 | 2.5 | 1.7 | 90.1 | 95.8 | -0.2 | 2.7 | 0.5 |
| 2019 | 2.0 | 2.5 | 2.1 | 91.8 | 95.8 | 0.1 | 2.7 | 0.5 |
| 2020 | 2.0 | 2.5 | 2.5 | 91.3 | 95.7 | 0.0 | 2.7 | 0.5 |
| | | | | | | | | |
| 2015:1 | 0.7 | 1.1 | 0.5 | 89.6 | 96.1 | 0.3 | 1.0 | -0.6 |
| 2015:2 | 0.2 | 1.3 | 0.5 | 91.5 | 97.2 | 0.8 | 1.0 | -0.4 |
| 2015:3 | -0.2 | 1.4 | 0.5 | 93.1 | 99.0 | -0.7 | 1.0 | -0.3 |
| 2015:4 | -0.2 | 1.8 | 0.5 | 92.4 | 98.2 | -1.0 | 1.0 | 0.1 |
| | | | | | | | | |
| 2016:1 | 0.5 | 2.0 | 0.5 | 90.6 | 95.8 | -1.0 | 1.5 | 0.1 |
| 2016:2 | 1.0 | 2.0 | 0.5 | 90.2 | 95.5 | -1.0 | 1.9 | 0.1 |
| 2016:3 | 1.2 | 2.1 | 1.0 | 90.5 | 95.8 | -0.6 | 2.1 | 0.2 |
| 2016:4 | 1.5 | 2.1 | 1.0 | 90.4 | 95.9 | -0.8 | 2.3 | 0.2 |
| | | | | | | | | |
| 2017:1 | 1.5 | 2.1 | 1.0 | 90.8 | 95.9 | -1.0 | 2.3 | 0.1 |
| 2017:2 | 1.5 | 2.1 | 1.0 | 90.4 | 95.7 | -1.0 | 2.3 | 0.1 |
| 2017:3 | 1.6 | 2.2 | 1.0 | 90.4 | 95.7 | -1.0 | 2.4 | 0.2 |
| 2017:4 | 1.8 | 2.5 | 1.5 | 90.4 | 96.0 | -0.5 | 2.5 | 0.5 |
| | | | | | | | | |
| 2018:1 | 2.0 | 2.5 | 1.5 | 90.2 | 95.6 | -0.5 | 2.7 | 0.5 |
| 2018:2 | 2.0 | 2.5 | 1.5 | 90.3 | 95.9 | -0.5 | 2.7 | 0.5 |
| 2018:3 | 2.0 | 2.5 | 2.0 | 90.0 | 95.6 | 0.0 | 2.7 | 0.5 |
| 2018:4 | 2.0 | 2.5 | 2.0 | 90.1 | 96.1 | 0.0 | 2.7 | 0.5 |
| | | | | | | | | |
| 2019:1 | 2.0 | 2.5 | 2.0 | 90.2 | 96.0 | 0.0 | 2.7 | 0.5 |
| 2019:2 | 2.0 | 2.5 | 2.0 | 89.9 | 95.8 | 0.0 | 2.7 | 0.5 |
| 2019:3 | 2.0 | 2.5 | 2.1 | 89.4 | 95.3 | 0.1 | 2.7 | 0.5 |
| 2019:4 | 2.0 | 2.5 | 2.1 | 89.9 | 96.3 | 0.1 | 2.7 | 0.5 |

[1] Consumer's Expenditure Deflator
[2] Sterling Effective Exchange Rate Bank of England
[3] Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate
[4] Treasury Bill Rate less one year forecast of inflation
[5] Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

Table 5. Labour Market and Supply Factors (Seasonally Adjusted)

| | Average Earnings (1990=100)[1] | Wage Growth[2] | Unemployment (New Basis) Percent[3] | Millions | Real Wage Rate[4] (1990=100) |
|---|---|---|---|---|---|
| 2013 | 238.3 | 1.0 | 2.9 | 1.4 | 130.6 |
| 2014 | 241.2 | 1.2 | 2.3 | 1.1 | 130.0 |
| 2015 | 247.6 | 2.7 | 2.4 | 0.9 | 133.3 |
| 2016 | 255.4 | 3.2 | 2.1 | 0.8 | 136.1 |
| 2017 | 262.7 | 2.9 | 2.0 | 0.8 | 137.8 |
| 2018 | 270.6 | 3.0 | 1.9 | 0.7 | 139.2 |
| 2019 | 277.3 | 2.5 | 1.8 | 0.7 | 139.8 |
| 2020 | 285.4 | 2.9 | 1.8 | 0.7 | 141.1 |
| | | | | | |
| 2015:1 | 246.4 | 2.3 | 2.5 | 0.9 | 132.9 |
| 2015:2 | 246.1 | 2.6 | 2.5 | 0.9 | 132.7 |
| 2015:3 | 248.3 | 3.0 | 2.4 | 0.9 | 133.6 |
| 2015:4 | 249.7 | 2.7 | 2.1 | 0.9 | 134.0 |
| | | | | | |
| 2016:1 | 254.6 | 3.3 | 2.1 | 0.8 | 136.6 |
| 2016:2 | 253.2 | 2.9 | 2.1 | 0.8 | 135.1 |
| 2016:3 | 254.7 | 2.6 | 2.1 | 0.8 | 135.5 |
| 2016:4 | 259.2 | 3.8 | 2.1 | 0.8 | 137.0 |
| | | | | | |
| 2017:1 | 260.6 | 2.4 | 2.1 | 0.8 | 137.8 |
| 2017:2 | 261.1 | 3.1 | 2.0 | 0.8 | 137.3 |
| 2017:3 | 262.2 | 2.9 | 2.0 | 0.8 | 137.3 |
| 2017:4 | 266.8 | 2.9 | 1.9 | 0.8 | 138.6 |
| | | | | | |
| 2018:1 | 268.6 | 3.1 | 1.9 | 0.8 | 139.3 |
| 2018:2 | 268.7 | 2.9 | 1.9 | 0.8 | 138.6 |
| 2018:3 | 270.4 | 3.1 | 1.9 | 0.7 | 138.9 |
| 2018:4 | 274.7 | 3.0 | 1.8 | 0.7 | 139.9 |
| | | | | | |
| 2019:1 | 276.9 | 3.1 | 1.9 | 0.7 | 140.8 |
| 2019:2 | 275.8 | 2.6 | 1.9 | 0.7 | 139.5 |
| 2019:3 | 274.5 | 1.5 | 1.8 | 0.7 | 138.2 |
| 2019:4 | 282.0 | 2.7 | 1.8 | 0.7 | 140.9 |

[1] Whole Economy
[2] Average Earnings
[3] Wholly unemployed excluding school leavers as percentage of employed and unemployed, self employed and HM Forces
[4] Wage rate deflated by CPI

Table 6. Estimates and Projections of the Gross Domestic Product[1] (£ Million 1990 Prices)

| | Expenditure Index | £ Million '90 prices | Non-Durable Consumption[2] | Private Sector Gross Investment Expenditure[3] | Public Authority Expenditure[4] | Net Exports[5] | AFC |
|---|---|---|---|---|---|---|---|
| 2013 | 149.7 | 717014.8 | 424158.3 | 274075.1 | 189359.0 | -46401.9 | 124175.7 |
| 2014 | 154.0 | 737470.2 | 428418.9 | 293309.7 | 194498.6 | -51038.0 | 127719.1 |
| 2015 | 157.4 | 753730.5 | 436512.0 | 298617.2 | 197430.6 | -54076.9 | 124749.3 |
| 2016 | 161.0 | 771083.7 | 445700.6 | 297926.9 | 197878.0 | -42875.6 | 127540.2 |
| 2017 | 164.9 | 789900.1 | 455410.4 | 303956.2 | 201835.6 | -40412.1 | 130882.3 |
| 2018 | 169.1 | 809642.0 | 466208.9 | 312287.4 | 205872.3 | -40317.6 | 134398.2 |
| 2019 | 173.3 | 829875.0 | 477782.5 | 319506.5 | 209989.8 | -39376.3 | 138026.9 |
| 2020 | 177.6 | 850628.3 | 490729.8 | 326536.5 | 214189.6 | -39055.7 | 141760.5 |
| 2013/12 | 2.2 | | 1.3 | 9.0 | 0.1 | | 8.2 |
| 2014/13 | 2.9 | | 1.0 | 7.3 | 2.7 | | 3.0 |
| 2015/14 | 2.2 | | 1.9 | 1.9 | 1.5 | | -2.3 |
| 2016/15 | 2.3 | | 2.1 | 0.0 | 0.2 | | 2.6 |
| 2017/16 | 2.4 | | 2.2 | 2.1 | 2.0 | | 2.6 |
| 2018/17 | 2.5 | | 2.4 | 2.8 | 2.0 | | 2.7 |
| 2019/18 | 2.5 | | 2.5 | 2.3 | 2.0 | | 2.7 |
| 2020/19 | 2.5 | | 2.7 | 2.2 | 2.0 | | 2.7 |
| 2015:1 | 156.2 | 186964.7 | 107966.1 | 77826.4 | 50385.0 | -15573.3 | 33639.5 |
| 2015:2 | 157.0 | 187977.5 | 108889.7 | 70313.2 | 48635.4 | -11413.2 | 28447.6 |
| 2015:3 | 157.7 | 188823.0 | 109697.1 | 74552.3 | 49279.4 | -14082.0 | 30623.8 |
| 2015:4 | 158.7 | 189965.3 | 109959.1 | 75925.2 | 49130.9 | -13008.5 | 32038.4 |
| 2016:1 | 157.6 | 188690.6 | 110498.7 | 69165.2 | 51059.5 | -10512.9 | 31517.3 |
| 2016:2 | 160.8 | 192550.4 | 111077.7 | 75256.6 | 48262.0 | -10476.7 | 31566.8 |
| 2016:3 | 161.9 | 193832.6 | 111720.2 | 75772.2 | 49051.9 | -10775.8 | 31934.9 |
| 2016:4 | 163.7 | 196010.0 | 112403.9 | 77733.0 | 49504.7 | -11110.3 | 32521.2 |
| 2017:1 | 161.8 | 193656.9 | 112869.0 | 71040.2 | 52080.7 | -10216.7 | 32114.9 |
| 2017:2 | 164.9 | 197438.1 | 113483.4 | 77708.6 | 49227.3 | -10305.9 | 32674.6 |
| 2017:3 | 166.0 | 198764.8 | 114165.1 | 77247.9 | 50032.9 | -9761.5 | 32918.1 |
| 2017:4 | 167.1 | 200040.3 | 114892.8 | 77959.4 | 50494.7 | -10128.0 | 33174.6 |
| 2018:1 | 166.1 | 198886.3 | 115462.8 | 73332.8 | 53122.3 | -10024.0 | 32997.4 |
| 2018:2 | 168.4 | 201613.6 | 116147.1 | 78918.4 | 50211.8 | -10208.0 | 33455.0 |
| 2018:3 | 170.4 | 203949.2 | 116901.4 | 79747.7 | 51033.6 | -9874.6 | 33858.7 |
| 2018:4 | 171.4 | 205192.9 | 117697.7 | 80288.5 | 51504.6 | -10211.1 | 34087.1 |
| 2019:1 | 170.6 | 204220.1 | 118297.0 | 75887.4 | 54184.7 | -10206.5 | 33943.6 |
| 2019:2 | 172.0 | 205905.8 | 119025.2 | 79286.8 | 51216.1 | -9383.2 | 34238.1 |
| 2019:3 | 174.8 | 209254.2 | 119816.8 | 81927.5 | 52054.2 | -9732.9 | 34810.5 |
| 2019:4 | 175.8 | 210494.9 | 120643.5 | 82404.8 | 52534.7 | -10053.7 | 35034.7 |
| 2020:1 | 174.2 | 208582.3 | 121462.5 | 75941.4 | 55268.4 | -9358.2 | 34733.8 |
| 2020:2 | 176.5 | 211331.9 | 122278.4 | 81589.0 | 52240.4 | -9558.0 | 35210.4 |
| 2020:3 | 179.4 | 214750.4 | 123090.4 | 84278.3 | 53095.3 | -9912.4 | 35797.4 |
| 2020:4 | 180.4 | 215963.8 | 123898.6 | 84727.8 | 53585.4 | -10227.1 | 36018.9 |

[1] GDP at factor cost. Expenditure measure; seasonally adjusted
[2] Consumers expenditure less expenditure on durables and housing
[3] Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building
[4] General government current and capital expenditure including stock building
[5] Exports of goods and services less imports of goods and services

Table 7. Financial Forecast

| | PSBR/GDP %[1] | GDP[1] (£bn) | PSBR (£bn) Financial Year | Debt Interest (£bn) | Current Account (£ bn) |
|---|---|---|---|---|---|
| 2013 | 6.1 | 1553.4 | 94.9 | 47.5 | -84.2 |
| 2014 | 5.2 | 1619.9 | 83.3 | 52.6 | -99.9 |
| 2015 | 4.8 | 1637.5 | 78.1 | 55.8 | -91.0 |
| 2016 | 3.8 | 1715.1 | 65.5 | 58.7 | -70.4 |
| 2017 | 3.2 | 1789.8 | 56.6 | 61.6 | -66.0 |
| 2018 | 1.9 | 1870.4 | 36.1 | 65.9 | -66.2 |
| 2019 | 1.6 | 1952.2 | 31.4 | 68.6 | -64.7 |
| 2020 | 1.2 | 1529.0 | 23.8 | 52.7 | -64.5 |
| 2015:1 | 0.6 | 409.1 | 2.3 | 13.3 | -25.1 |
| 2015:2 | 6.5 | 401.7 | 26.2 | 13.6 | -18.9 |
| 2015:3 | 4.1 | 407.8 | 16.9 | 13.8 | -18.9 |
| 2015:4 | 6.6 | 415.4 | 27.3 | 14.3 | -28.2 |
| 2016:1 | 1.9 | 412.6 | 7.7 | 14.1 | -15.2 |
| 2016:2 | 5.7 | 422.5 | 23.9 | 14.2 | -17.2 |
| 2016:3 | 3.7 | 427.0 | 16.0 | 14.7 | -12.9 |
| 2016:4 | 4.4 | 435.2 | 19.2 | 15.0 | -25.1 |
| 2017:1 | 1.5 | 430.5 | 6.4 | 14.9 | -14.7 |
| 2017:2 | 4.0 | 441.2 | 17.7 | 15.0 | -16.9 |
| 2017:3 | 1.8 | 445.9 | 8.1 | 15.1 | -11.0 |
| 2017:4 | 5.7 | 452.0 | 25.9 | 15.8 | -23.5 |
| 2018:1 | 1.1 | 450.7 | 5.0 | 15.8 | -14.4 |
| 2018:2 | 3.5 | 459.4 | 16.2 | 16.0 | -16.8 |
| 2018:3 | -0.1 | 466.5 | -0.3 | 16.6 | -11.2 |
| 2018:4 | 3.6 | 472.8 | 16.9 | 16.7 | -23.9 |
| 2019:1 | 0.7 | 471.8 | 3.4 | 16.7 | -14.8 |
| 2019:2 | 3.3 | 478.2 | 16.0 | 16.9 | -15.2 |
| 2019:3 | -0.5 | 487.9 | -2.4 | 17.1 | -11.0 |
| 2019:4 | 3.2 | 494.6 | 15.6 | 17.3 | -23.8 |
| 2020:1 | 0.5 | 491.4 | 2.2 | 17.3 | -13.1 |
| 2020:2 | 2.9 | 500.6 | 14.6 | 17.5 | -15.7 |
| 2020:3 | -0.9 | 510.7 | -4.8 | 17.5 | -11.2 |
| 2020:4 | 2.7 | 517.7 | 14.1 | 17.8 | -24.5 |

[1] GDP at market prices (Financial Year)

## Post-Brexit- UK Forecast Detail

Table 8. Prices, Wages, Interest Rates and Exchange Rate Forecast (Seasonally Adjusted)

| | Inflation %[1] (CPI) | Short Dated (5 Year) Interest Rates | 3 Month Int. Rates | Nominal Exchange Rate (2005=100)[2] | Real Exchange Rate[3] | Real 3 Month Int. Rates %[4] | Inflation (RPIX) | Real Short Dated Rate of Interest[5] |
|---|---|---|---|---|---|---|---|---|
| 2013 | 2.3 | 1.3 | 0.6 | 81.6 | 86.5 | -1.5 | 3.1 | 0.0 |
| 2014 | 1.7 | 1.8 | 0.6 | 87.1 | 93.1 | -0.9 | 2.4 | 0.4 |
| 2015 | 0.1 | 1.4 | 0.5 | 91.6 | 97.6 | -0.2 | 1.0 | -0.3 |
| 2016 | 1.1 | 2.2 | 0.7 | 89.8 | 95.1 | -0.9 | 2.0 | 0.1 |
| 2017 | 1.6 | 3.1 | 2.2 | 88.2 | 93.3 | -0.6 | 2.4 | 0.2 |
| 2018 | 2.8 | 3.2 | 2.9 | 86.8 | 92.9 | 0.3 | 3.3 | 0.5 |
| 2019 | 2.6 | 2.9 | 3.0 | 87.4 | 92.3 | 1.0 | 3.2 | 0.5 |
| 2020 | 2.1 | 2.7 | 3.2 | 86.1 | 91.3 | 0.7 | 2.7 | 0.5 |
| 2015:1 | 0.7 | 1.1 | 0.5 | 89.6 | 96.1 | 0.3 | 1.0 | -0.6 |
| 2015:2 | 0.2 | 1.3 | 0.5 | 91.5 | 97.2 | 0.8 | 1.0 | -0.4 |
| 2015:3 | -0.2 | 1.4 | 0.5 | 93.1 | 99.0 | -0.7 | 1.0 | -0.3 |
| 2015:4 | -0.2 | 1.8 | 0.5 | 92.4 | 98.2 | -1.0 | 1.0 | 0.1 |
| 2016:1 | 0.5 | 2.0 | 0.5 | 90.6 | 95.8 | -1.0 | 1.5 | 0.1 |
| 2016:2 | 1.0 | 2.0 | 0.5 | 90.2 | 95.5 | -1.0 | 1.9 | 0.1 |
| 2016:3 | 1.2 | 2.1 | 1.0 | 90.5 | 95.8 | -0.6 | 2.1 | 0.2 |
| 2016:4 | 1.5 | 2.9 | 1.0 | 87.7 | 92.9 | -0.7 | 2.3 | 0.2 |
| 2017:1 | 1.5 | 3.1 | 2.1 | 89.1 | 93.9 | -0.4 | 2.3 | 0.1 |
| 2017:2 | 1.5 | 3.1 | 2.2 | 88.3 | 93.3 | -0.4 | 2.3 | 0.1 |
| 2017:3 | 1.6 | 3.0 | 2.0 | 87.9 | 92.8 | -0.9 | 2.4 | 0.2 |
| 2017:4 | 1.8 | 3.3 | 2.5 | 87.8 | 93.0 | -0.7 | 2.5 | 0.5 |
| 2018:1 | 2.5 | 3.3 | 2.7 | 87.4 | 92.9 | -0.3 | 3.1 | 0.5 |
| 2018:2 | 2.7 | 3.2 | 2.7 | 86.9 | 92.9 | -0.3 | 3.3 | 0.5 |
| 2018:3 | 2.9 | 3.1 | 3.3 | 86.5 | 92.6 | 0.8 | 3.4 | 0.5 |
| 2018:4 | 3.3 | 3.0 | 2.9 | 86.5 | 93.3 | 0.9 | 3.7 | 0.5 |
| 2019:1 | 3.1 | 3.0 | 3.0 | 86.2 | 93.0 | 1.0 | 3.6 | 0.5 |
| 2019:2 | 3.1 | 3.0 | 3.1 | 85.4 | 92.5 | 1.1 | 3.6 | 0.5 |
| 2019:3 | 2.5 | 2.8 | 2.6 | 84.7 | 91.3 | 0.6 | 3.1 | 0.5 |
| 2019:4 | 2.0 | 2.8 | 2.7 | 85.5 | 92.5 | 0.7 | 2.7 | 0.5 |
| 2020:1 | 2.0 | 2.8 | 2.7 | 84.9 | 91.9 | 0.1 | 2.7 | 0.5 |
| 2020:2 | 2.1 | 2.7 | 2.6 | 83.7 | 90.9 | 0.1 | 2.7 | 0.5 |
| 2020:3 | 2.1 | 2.7 | 2.8 | 84.2 | 91.3 | 0.3 | 2.8 | 0.5 |
| 2020:4 | 2.1 | 2.7 | 3.1 | 83.7 | 90.9 | 0.6 | 2.8 | 0.5 |

[1] Consumer's Expenditure Deflator

[2] Sterling Effective Exchange Rate Bank of England

[3] Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

[4] Treasury Bill Rate less one year forecast of inflation

[5] Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

Table 9. Labour Market and Supply Factors (Seasonally Adjusted)

| | Average Earnings (1990=100)[1] | Wage Growth[2] | Unemployment (New Basis) Percent[3] | Millions | Real Wage Rate[4] (1990=100) |
|---|---|---|---|---|---|
| 2013 | 238.3 | 1.0 | 2.9 | 1.4 | 130.6 |
| 2014 | 241.2 | 1.2 | 2.3 | 1.1 | 130.0 |
| 2015 | 247.6 | 2.7 | 2.4 | 0.9 | 133.3 |
| 2016 | 255.4 | 3.2 | 2.1 | 0.8 | 136.1 |
| 2017 | 262.9 | 3.5 | 2.0 | 0.8 | 137.9 |
| 2018 | 273.2 | 4.5 | 1.8 | 0.7 | 139.4 |
| 2019 | 282.0 | 3.1 | 1.7 | 0.7 | 140.1 |
| 2020 | 291.3 | 3.4 | 1.6 | 0.7 | 141.9 |
| 2015:1 | 246.4 | 2.3 | 2.5 | 0.9 | 132.9 |
| 2015:2 | 246.1 | 2.6 | 2.5 | 0.9 | 132.7 |
| 2015:3 | 248.3 | 3.0 | 2.4 | 0.9 | 133.6 |
| 2015:4 | 249.7 | 2.7 | 2.1 | 0.9 | 134.0 |
| 2016:1 | 254.6 | 3.3 | 2.1 | 0.8 | 136.6 |
| 2016:2 | 253.2 | 2.9 | 2.1 | 0.8 | 135.1 |
| 2016:3 | 254.7 | 2.6 | 2.1 | 0.8 | 135.5 |
| 2016:4 | 259.2 | 3.8 | 2.1 | 0.8 | 137.0 |
| 2017:1 | 260.7 | 2.5 | 2.1 | 0.8 | 137.9 |
| 2017:2 | 261.5 | 3.5 | 1.9 | 0.8 | 137.4 |
| 2017:3 | 262.5 | 3.7 | 2.0 | 0.8 | 137.5 |
| 2017:4 | 267.0 | 4.3 | 1.9 | 0.8 | 138.7 |
| 2018:1 | 270.1 | 4.9 | 1.8 | 0.8 | 139.5 |
| 2018:2 | 270.9 | 4.8 | 1.8 | 0.8 | 138.8 |
| 2018:3 | 273.3 | 4.6 | 1.8 | 0.7 | 139.2 |
| 2018:4 | 278.4 | 4.3 | 1.8 | 0.7 | 140.1 |
| 2019:1 | 281.5 | 3.8 | 1.8 | 0.7 | 141.1 |
| 2019:2 | 281.1 | 3.2 | 1.8 | 0.7 | 139.8 |
| 2019:3 | 279.1 | 2.1 | 1.6 | 0.7 | 138.6 |
| 2019:4 | 286.3 | 3.1 | 1.7 | 0.7 | 141.3 |
| 2020:1 | 289.3 | 3.1 | 1.5 | 0.7 | 142.2 |
| 2020:2 | 289.3 | 3.1 | 1.5 | 0.7 | 141.1 |
| 2020:3 | 291.3 | 4.4 | 1.6 | 0.7 | 141.9 |
| 2020:4 | 295.1 | 3.0 | 1.5 | 0.7 | 142.7 |

[1] Whole Economy
[2] Average Earnings
[3] Wholly unemployed excluding school leavers as percentage of employed and unemployed, self employed and HM Forces
[4] Wage rate deflated by CPI

Table 10. Estimates and Projections of the Gross Domestic Product[1] (£ Million 1990 Prices)

| | Expenditure Index | £ Million '90 prices | Non-Durable Consumption[2] | Private Sector Gross Investment Expenditure[3] | Public Authority Expenditure[4] | Net Exports[5] | AFC |
|---|---|---|---|---|---|---|---|
| 2013 | 149.7 | 717014.8 | 424158.3 | 274075.1 | 189359.0 | -46401.9 | 124175.7 |
| 2014 | 154.0 | 737470.2 | 428418.9 | 293309.7 | 194498.6 | -51038.0 | 127719.1 |
| 2015 | 157.4 | 753770.6 | 436595.2 | 298648.7 | 197430.6 | -54148.4 | 124757.4 |
| 2016 | 160.8 | 770055.7 | 445695.9 | 297068.1 | 197125.4 | -42461.3 | 127367.1 |
| 2017 | 165.1 | 790816.9 | 455364.6 | 308041.5 | 199245.4 | -40776.5 | 131044.4 |
| 2018 | 169.7 | 812428.2 | 466130.4 | 320355.6 | 198882.9 | -38062.1 | 134876.0 |
| 2019 | 174.1 | 833565.5 | 477699.4 | 326332.4 | 202570.1 | -34364.1 | 138667.4 |
| 2020 | 180.1 | 862130.2 | 490658.3 | 338625.4 | 213457.6 | -36882.7 | 143710.4 |
| 2013/12 | 2.2 | | 1.3 | 9.0 | 0.1 | | 8.2 |
| 2014/13 | 2.9 | | 1.0 | 7.3 | 2.7 | | 3.0 |
| 2015/14 | 2.2 | | 1.9 | 1.9 | 1.5 | | -2.3 |
| 2016/15 | 2.3 | | 2.1 | 0.0 | 0.2 | | 2.6 |
| 2017/16 | 2.7 | | 2.2 | 3.7 | 1.1 | | 2.9 |
| 2018/17 | 2.7 | | 2.4 | 4.0 | -0.2 | | 3.0 |
| 2019/18 | 2.8 | | 2.5 | 1.9 | 1.9 | | 2.9 |
| 2020/19 | 3.4 | | 2.7 | 3.8 | 5.5 | | 3.6 |
| 2015:1 | 156.2 | 186964.7 | 107966.1 | 77826.4 | 50385.0 | -15573.3 | 33639.5 |
| 2015:2 | 157.0 | 187977.5 | 108889.7 | 70313.2 | 48635.4 | -11413.2 | 28447.6 |
| 2015:3 | 157.7 | 188823.0 | 109697.1 | 74552.3 | 49279.4 | -14082.0 | 30623.8 |
| 2015:4 | 158.7 | 190005.4 | 110042.3 | 75956.7 | 49130.9 | -13080.0 | 32046.5 |
| 2016:1 | 160.6 | 192288.6 | 110866.2 | 74555.9 | 51059.5 | -12075.9 | 32120.6 |
| 2016:2 | 162.6 | 194619.7 | 111552.7 | 78788.9 | 48262.0 | -12079.2 | 31908.8 |
| 2016:3 | 162.9 | 195077.1 | 112243.5 | 78004.2 | 49051.9 | -12079.8 | 32142.0 |
| 2016:4 | 162.9 | 194982.0 | 112399.2 | 76874.2 | 48752.1 | -10695.9 | 32348.1 |
| 2017:1 | 165.3 | 197774.0 | 112863.5 | 78105.7 | 51270.0 | -11661.6 | 32803.2 |
| 2017:2 | 165.2 | 197838.0 | 113468.8 | 79596.3 | 48527.4 | -11020.5 | 32742.5 |
| 2017:3 | 164.9 | 197442.5 | 114154.3 | 75797.5 | 49559.6 | -9359.0 | 32701.2 |
| 2017:4 | 165.2 | 197762.3 | 114878.0 | 74542.0 | 49888.4 | -8735.4 | 32797.4 |
| 2018:1 | 170.0 | 203531.3 | 115447.0 | 80615.5 | 52017.3 | -10766.6 | 33769.1 |
| 2018:2 | 169.1 | 202501.7 | 116127.6 | 81636.6 | 48633.1 | -10291.5 | 33604.9 |
| 2018:3 | 169.7 | 203082.4 | 116880.7 | 79589.7 | 49188.9 | -8853.0 | 33719.2 |
| 2018:4 | 169.9 | 203312.6 | 117675.1 | 78514.0 | 49043.7 | -8151.0 | 33782.9 |
| 2019:1 | 173.3 | 207471.6 | 118273.8 | 81367.1 | 51965.9 | -9646.8 | 34489.8 |
| 2019:2 | 172.6 | 206696.1 | 119004.4 | 81536.0 | 48932.1 | -8398.4 | 34375.6 |
| 2019:3 | 174.8 | 209273.1 | 119798.6 | 82105.1 | 50408.6 | -8218.1 | 34820.7 |
| 2019:4 | 175.4 | 210124.7 | 120622.7 | 81324.2 | 51263.3 | -8100.8 | 34981.2 |
| 2020:1 | 178.4 | 213652.0 | 121441.7 | 82568.1 | 54499.1 | -9272.5 | 35585.2 |
| 2020:2 | 178.9 | 214190.0 | 122259.2 | 85038.2 | 51931.8 | -9335.4 | 35694.8 |
| 2020:3 | 181.1 | 216769.7 | 123073.5 | 85807.6 | 53256.0 | -9219.2 | 36143.0 |
| 2020:4 | 181.7 | 217518.7 | 123884.0 | 85211.4 | 53770.7 | -9055.7 | 36287.6 |

[1] GDP at factor cost. Expenditure measure; seasonally adjusted
[2] Consumers expenditure less expenditure on durables and housing
[3] Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building
[4] General government current and capital expenditure including stock building
[5] Exports of goods and services less imports of goods and services

Table 11. Financial Forecast

| | PSBR/GDP %[1] | GDP[1] | PSBR | Debt Interest | Current |
|---|---|---|---|---|---|
| | | (£bn) | (£bn) | (£bn) | Account |
| | | | Financial Year | | (£ bn) |
| 2013 | 6.1 | 1553.4 | 94.9 | 47.5 | -84.2 |
| 2014 | 5.2 | 1619.9 | 83.3 | 52.6 | -99.9 |
| 2015 | 4.6 | 1641.6 | 74.6 | 55.2 | -91.0 |
| 2016 | 3.4 | 1727.5 | 58.1 | 62.1 | -79.1 |
| 2017 | 3.2 | 1798.6 | 57.5 | 74.6 | -77.0 |
| 2018 | 1.1 | 1896.7 | 21.9 | 73.5 | -67.3 |
| 2019 | 0.7 | 1996.5 | 15.5 | 73.4 | -48.3 |
| 2020 | 0.7 | 1590.2 | 15.8 | 57.1 | -34.4 |
| 2015:1 | 0.6 | 409.1 | 2.3 | 13.3 | -25.1 |
| 2015:2 | 6.5 | 401.7 | 26.2 | 13.6 | -18.9 |
| 2015:3 | 4.1 | 407.8 | 16.9 | 13.8 | -18.9 |
| 2015:4 | 6.5 | 414.0 | 26.8 | 13.9 | -28.1 |
| 2016:1 | 1.1 | 418.2 | 4.8 | 13.9 | -17.9 |
| 2016:2 | 5.3 | 424.6 | 22.4 | 14.0 | -20.0 |
| 2016:3 | 3.5 | 427.3 | 15.0 | 14.6 | -15.2 |
| 2016:4 | 4.4 | 432.1 | 19.1 | 16.2 | -26.0 |
| 2017:1 | 0.3 | 443.5 | 1.5 | 17.4 | -20.7 |
| 2017:2 | 4.0 | 443.2 | 17.6 | 17.9 | -21.2 |
| 2017:3 | 2.4 | 442.6 | 10.4 | 18.3 | -12.6 |
| 2017:4 | 6.7 | 445.9 | 29.5 | 19.5 | -22.5 |
| 2018:1 | -0.1 | 467.0 | -0.1 | 18.9 | -18.0 |
| 2018:2 | 3.0 | 465.5 | 14.3 | 19.1 | -18.6 |
| 2018:3 | -0.4 | 468.2 | -1.8 | 18.7 | -10.3 |
| 2018:4 | 3.0 | 473.0 | 14.1 | 17.9 | -20.4 |
| 2019:1 | -1.1 | 489.9 | -4.8 | 17.9 | -13.2 |
| 2019:2 | 2.2 | 489.3 | 10.8 | 17.9 | -12.1 |
| 2019:3 | -1.1 | 494.4 | -5.4 | 18.3 | -5.9 |
| 2019:4 | 2.9 | 498.6 | 14.4 | 18.7 | -17.2 |
| 2020:1 | -0.9 | 514.3 | -4.5 | 18.6 | -7.9 |
| 2020:2 | 2.3 | 516.7 | 12.1 | 18.7 | -9.2 |
| 2020:3 | -1.1 | 522.1 | -5.7 | 18.7 | -2.8 |
| 2020:4 | 2.7 | 526.5 | 14.2 | 18.8 | -14.4 |

[1] GDP at market prices (Financial Year)

# CONTACT

## Online

press@economistsforbrexit.co.uk
www.economistsforbrexit.co.uk