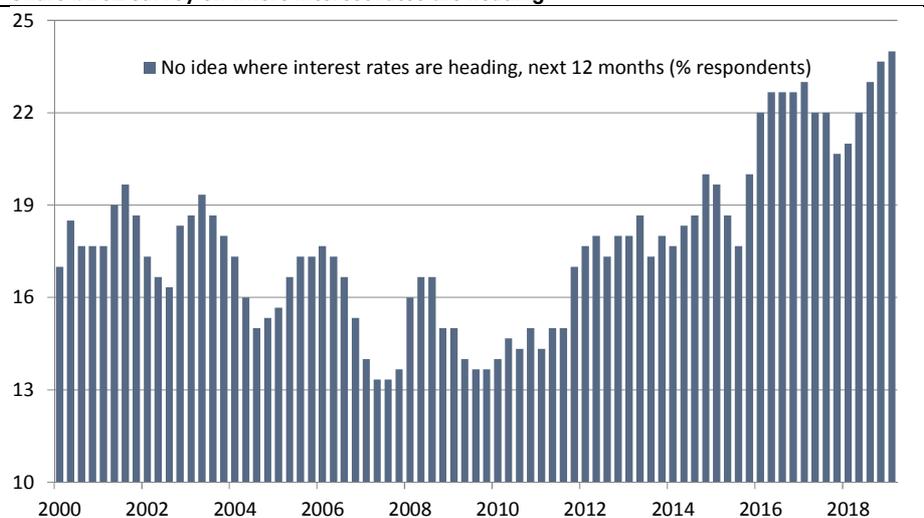


Waning BoE credibility: causes and consequences

- **Waning influence:** The Bank of England's approach to monetary policy, which has further strayed since the UK voted to leave the EU in June 2016, is damaging its credibility. Strikingly, its own surveys show that a record balance of households surveyed has no idea where interest rates are heading over the next 12 months (see Chart 1).
- **We identify five key issues:**
 - **The MPC's (Monetary Policy Committee) guidance on the path of the bank rate** – the BoE's primary monetary policy tool – and the **underlying “conditioning” assumptions** that go into its quarterly forecasts **are excessively complicated** and are unnecessary to achieve the BoE's mandate.
 - By raising rates far more slowly than its consistently hawkish forward guidance signalled, **the BoE has weakened the link between its communications and actions.**
 - **The BoE has been excessively timid with its policy normalisation** given the healthy UK economic fundamentals.
 - With **Brexit, the BoE has departed from its standard approach** of incorporating government policy into its forecasts and policy decisions. Instead, it has put **too much emphasis on potential Brexit scenarios** – especially to the downside.
 - **Inflation expectations are no longer well anchored and have risen sharply since the Brexit vote.** Unless the BoE takes steps to re-anchor inflation expectations, its capacity to look through future temporary inflationary shocks could be constrained.
- The BoE's fading ability to shape expectations has three key negative implications: 1) It raises the risks that markets get caught out by future policy changes; 2) The BoE will get less bang for its buck for a given policy change in the future; and 3) Its ability to look through transitory exogenous inflation shocks is diminished.
- The BoE should address the problems with its current monetary policy framework. It should simplify its forward guidance and the conditioning assumptions for its forecasts. In light of Brexit developments, the BoE should make its reaction function more transparent. Any steps the BoE can take to strengthen the link between its actions and words should be encouraged.

Chart 1: BoE survey on where interest rates are heading



Quarterly data. Source: BoE, TNS. Three quarter moving average

Key macro reports

Understanding Germany: A last golden decade ahead
October 2010

Euro crisis: The role of the ECB
29 July 2011

The lessons of the crisis: what Europe needs
27 June 2014

Brexit: assessing the domestic policy options
2 November 2016

After Trump: notes on the perils of populism
14 November 2016

Reforming Europe: which ideas make sense?
19 June 2017

Notes on the inflation puzzle
5 October 2017

Can productivity growth keep inflation at bay?
5 February 2018

10 years after: 10 lessons from the financial crisis
11 September 2018

China's slowdown has significant global effects
15 November 2018

Global outlook 2019: Coping with a cocktail of risks
6 January 2019

How weak is the German economy?
22 February 2019

Brexit: stakes rise as May forges a path through the gridlock
3 April 2019

European Progress Monitor: ready for a new shock?
10 May 2019

22 May 2019

Introduction

The Bank of England's approach to monetary policy has further strayed since the UK voted to leave the EU in June 2016. This is damaging its credibility. The muted response by markets to the decidedly [hawkish tone of the May Inflation Report](#) is telling. That the BoE tried and failed to talk up market expectations for rates is the clearest example yet of how much the BoE's ability to steer the market's expectations via its forward guidance policies has waned in recent years.

That households, firms and market participants have a clear view of the BoE's policy objectives and, critically, what is within its remit and what is not, helps it deliver its mandate of price stability¹ – defined as a symmetric inflation target of 2% measured by the annual change in the Consumer Price Index. The more the BoE's credibility is diminished, the less effective the bank is at conducting monetary policy and delivering on its policy objectives. This has wide-reaching consequences for the UK economy.

The BoE's own surveys show that a record balance of households surveyed have no idea where interest rates are heading over the next 12 months (Chart 1), despite a sustained rise over the past two years in market and household inflation expectations to levels consistent with above-target inflation (Chart 2).

In this report we identify five key issues that pose risks to the BoE's credibility and suggestions on how they could be addressed.

Chart 2: Sharp rise in market's and households' inflation expectations since the Brexit vote



Monthly data. Source: Bloomberg, GfK. Data show three-month moving average. Household expectations show balance of respondents expecting consumer prices to rise versus fall over the next 12 months. May data for five-year breakeven rate based on 17 May 2019 value.

1. Increasingly complicated guidance on rates

The MPC's (Monetary Policy Committee) guidance on the path of the bank rate – the primary policy tool – and the underlying “conditioning” assumptions that go into its quarterly forecasts, are excessively complicated and are unnecessary to achieve the BoE's mandate. Continuing this approach provides no advantage and only downside costs and potential risks.

The MPC's policy guidance is included – usually at the end – of the minutes that are published after each of the eight-per-year policy meetings. The MPC's current hawkish tilt emerged in March 2017 when, amid the growing evidence that the UK was outperforming the initially pessimistic expectations following the June 2016 Brexit vote, then-MPC member Kristin Forbes dissented by voting against Governor Mark Carney's proposition to hold the bank rate at 0.25%. Forbes favoured raising the bank rate by 25bp instead.

The MPC gradually became more hawkish over the course of 2017 amid growing evidence that demand was holding up better than expected, despite the temporary Brexit-related

¹ The remit for the MPC is set out on an annual basis by the Chancellor of the Exchequer. The latest remit from October 2018 set the following mandate: a) to maintain price stability; and b) subject to that, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment.

surge in inflation and elevated uncertainty.

Furthermore, in the minutes of the June 2017 policy meeting, the MPC introduced the phrase of “limited and gradual” to its guidance. The minutes noted that “all members agree that any future increases in bank rate would be expected to be at a gradual pace and to a limited extent”. This prudent decision ensured that the BoE did not add to Brexit uncertainties by triggering an unnecessary tightening of financial conditions that could have stemmed from an excessive steepening of the benchmark Gilt yield curve.

By November 2017, a majority of MPC members voted in favour of a 25bp rate hike. The bank rate was raised to 0.5% from 0.25%. This marked the first upward move for rates since July 2007.

In February 2018, the MPC became more hawkish again, saying that “monetary policy would need to be tightened somewhat earlier and by a somewhat greater extent over the forecast period than anticipated at the time of the November Report”. Following the March 2019 policy meeting this was upgraded to “an ongoing tightening of monetary policy over the forecast period would be appropriate to return inflation sustainably to its target”, adding that “any future increases in bank rate are likely to be at a gradual pace and to a limited extent”. The MPC has since maintained this guidance, including at the August 2018 meeting when it last hiked the bank rate – by 25bp to 0.75%.

In his opening statement from the May 2019 meeting, Governor Carney took an unusual step. When providing guidance on the policy outlook, he referred directly to market pricing of interest rates, saying: “The MPC’s latest projections imply that the current market curve used as the conditioning assumption for our forecast is unequal to the task of achieving the MPC’s remit.”

The BoE uses the market implied curve for rates as its conditioning assumption for its forecasts. In the May forecast round, the bank rate rose to 1% by Q2 2022 from its current rate of 0.75%. Governor Carney stated: “It will require more and more frequent interest rate increases than the market currently expects.”

Seldom do central banks say so clearly – in their own somewhat contorted words – that the market has got it wrong. It gives the impression that the BoE is straining to shift market expectations. And yet, market pricing after the guidance barely budged. Sterling held steady against the dollar while the forward-looking interest rate curves barely moved. On 10 May, the day after the Inflation Report press conference, the market curve that Carney directly referenced still showed that markets expected the bank rate to rise to just 1.0% by Q2 2022. The market ignored the BoE’s forward guidance.

Like other major central banks, the BoE has the capacity to jar global markets with policy surprises. It relies on its forward guidance as a tool to smooth the market pricing towards new policy settings. The BoE should be worried by the market now seeming to be dismissing its latest guidance on rates.

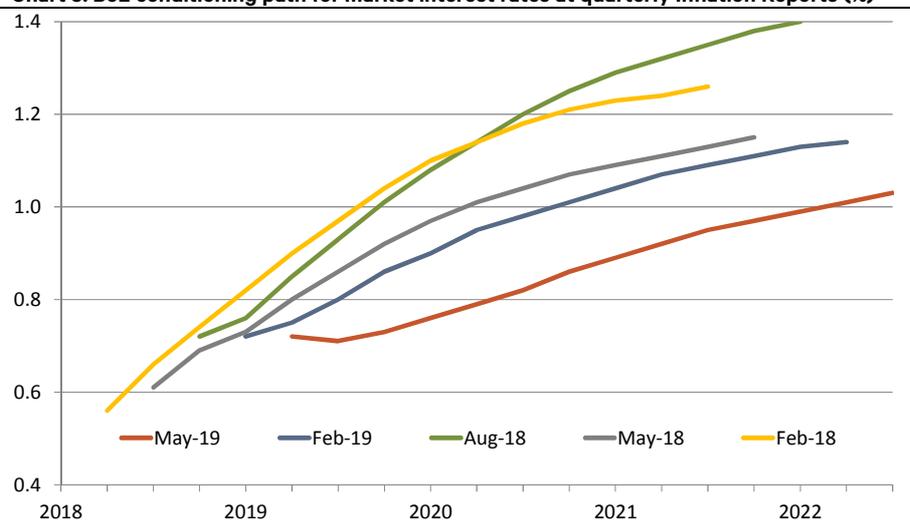
A key issue may be that the BoE guidance has become needlessly complicated. This is due to the way it refers to the underlying “conditioning” assumptions that go into its quarterly forecasts for growth, unemployment and inflation. At each forecast round, the BoE takes the path for the bank rate implied by forward market interest rates at the time of the forecasts. The curve is based on overnight index swap (OIS) rates. These rates fluctuate with the usual gyrations in markets that are driven by a host of factors, including the BoE’s previous communications and projections for the UK economy, but also many non-BoE factors.

As a result, the BoE’s baseline assumption for rates changes at each forecast round, sometimes dramatically, and often independently of any shift in the MPC’s view on policy. (Chart 3). If the market implied curve for rates falls between forecast rounds, perhaps because global market rates have shifted down, then the BoE’s new forecasts will factor in looser monetary policy compared to the previous forecast. On its own, this would have a positive impact on the BoE’s updated projections for growth and inflation. The MPC then has to consider whether the factors that shifted market expectations mean the opposite is actually true and, if so, make this clear in its communications. The committee did this in July 2013 when it noted that “it was not obvious that current forward curves were a fair reflection of market participants’ expectations” and “taken in isolation, this increase in interest rates represented an unwelcome tightening in monetary conditions that, were it to persist, would risk hampering the emerging recovery. Given that, the committee agreed that it was important to communicate that the implied rise in the expected future path of

the bank rate had not been warranted by the recent developments in the domestic economy.”²

Keep in mind that the BoE’s updated forecasts also provide the market with forward guidance that supplements the written guidance. The BoE’s choice to rely on the market implied path adds unnecessary complexity to its verbal guidance that is partly based on its economic forecasts, especially at times when the MPC’s view on rates is inconsistent with the view of markets. Economist and former member of the MPC Charles Goodhart³ provides a comprehensive discussion on the pros and cons of the possible options for the conditioning assumption for the bank rate path. He describes the “dynamic” implications of using the market implied path for rates: “It is, to say the least, an incestuous exercise. The market is trying to guess what the authorities will do, and their guess is then incorporated as the conditioning assumption to the initial forecast on which, in part, the MPC bases its decision.” This can complicate how financial markets form their judgements about the implications for monetary policy following forecast revisions. For example, if the BoE raises its projections for inflation, how can the market easily judge whether the MPC is likely to be more hawkish as a result unless it also factors in the implications of the shift in the conditioning assumption for interest rates.

Chart 3: BoE conditioning path for market interest rates at quarterly Inflation Reports (%)



Quarterly data. Source: BoE

In addition to producing forecasts conditioned on the market implied path for rates, the BoE also produce forecasts using a constant rate assumption. It switched emphasis from the constant rate to the implied rate at the August 2004 Inflation Report, noting that: “When official interest rates are unusually high or low, the assumption that official rates remain unchanged over the forecast period becomes less plausible and the behaviour of inflation and growth as one moves beyond the conventional two-year horizon a correspondingly less helpful guide to the outlook.”⁴ The MPC essentially reacted to the fact that it, jointly with the market, anticipated a sustained rise in rates in the coming years amid an expected recovery in domestic and global demand following the sharp rate cuts linked in the early-2000s slowdown. The BoE had cut the bank rate from 6% in January 2001 to 3.5% in July 2003 before hiking it to 5.75% by July 2007.

The strongest argument against the constant rate assumption is that it could be so inconsistent with the most likely path of the bank rate that any economic forecasts based on it end up being wildly inconsistent with the BoE’s outlook for the economy. Goodhart argues that “when the policy interest rate is cyclically high – or low, as it patently was in many countries after 2001 – extrapolating the current level of interest rates into the future will give implausible results and cannot therefore be either a sensible basis for internal decisions or a fruitful means of communication with the private sector”. The BoE switched to the market implied path for rates to provide a more realistic benchmark on which to

² MPC minutes July 2013

³ ‘The Interest Rate Conditioning Assumption’ Charles Goodhart Financial Markets Group, London School of Economics.

⁴ Inflation Report August 2004.

condition its economic projections and improve the information they contained.

The BoE updated its forecasting framework to address the problems it faced in 2004. But the world has changed since then. Fresh challenges in 2019 should prompt a rethink. A new approach, or indeed old approach, may be more suited to the times. One option would be to publish the MPC's aggregated views on the most likely path of rates. The Fed's "dot-pots" is an example of this method. Alternatively, the BoE might consider emphasising the forecasts that assume a constant nominal interest rate over the forecast horizon – taken as the official bank rate at the time of the forecast. This would mean returning to its previous approach.

It is common knowledge in markets that major central banks seldom forecast inflation too far away from their target rates beyond the two-year horizon at which monetary policy is most effective. Returning to a constant rate assumption for the purpose of setting monetary policy in the UK would achieve two things: 1) it would impose a stronger discipline on MPC to change current policy in order ensure that its inflation forecasts were consistent with its target; and 2) a fixed reference point for the bank rate would make the potential policy implications of any forecast changes – especially for inflation and growth – easier to interpret. Markets would find it easier to recognise and react to the updated forecasts as any changes would reflect a genuine shift in the BoE's assessment and expectations of economic fundamentals and not a happenstance shift in the key underlying assumption for interest rates.

As a starting point, the BoE could begin an appraisal of current practices for its conditioning assumptions and consider the benefits and drawbacks of the alternative strategies. At the very least, the extra transparency could improve private agents' understanding of the bank's guidance.

2. Weakened link between the BoE's guidance and actions

By raising rates far more slowly than its consistently hawkish policy guidance had suggested, the BoE has weakened the link between its communications and actions.

Central banks have long sought to influence private agents' expectations about the future path of monetary policy. But they have become much more active in this regard since the financial crisis. When policy rates hit the lower bound constraint, central banks sought to further lower benchmark yields and ease financial conditions. They achieved this through vast balance sheet expansions in conjunction with strong guidance that policy rates would be kept on hold at ultra-low levels well beyond the horizon that private agents had initially anticipated to delay agents' expectations about "lift off".

The first major example of the BoE taking this approach came in August 2013 when it stated: "At its meeting on 1 August 2013, the MPC agreed its intention not to raise the bank rate from its current level of 0.5% at least until the Labour Force Survey (LFS) headline measure of the unemployment rate had fallen to a 'threshold' of 7%."

The guidance was accompanied by analysis of expected effects and a series of caveats about how and when it would apply⁵. The economic projections in the 2013 August Inflation Report, based on the assumption of no change in the bank rate, showed the unemployment rate falling from 7.9% to 7.4% in Q3 2016 – when the forecast ended. However, the guidance proved short lived. Unexpectedly, the unemployment rate started to fall sharply thereafter and had dropped to 6.9% as soon as January 2014 – nearly three years before the BoE had projected six months prior.

The BoE began to first signal rate hikes in 2014 during a spate of strong economic data. When the hike never came, Pat McFadden, a member of the Treasury Select Committee (TSC), said Carney was like an "unreliable boyfriend ... one day hot, one day cold, and the people on the other side of the message are left not really knowing where they stand". Then in late 2015, Carney suggested that households should begin to prepare for higher interest rates, but that was a "possibility not a certainty". He reversed his commentary in early 2016 as the falling oil price began to dampen the headline inflation rate.

As discussed in the previous section, the BoE has now been signalling gradual and limited rate hikes for nearly two years. It has hiked just twice during that period. Although the BoE has actually fulfilled its guidance by hiking rates this time around, the pace has been far too slow and has thus continued to weaken the link between the BoE's words and its actions.

⁵ 'Monetary policy trade-offs and forward guidance', Bank of England, August 2013

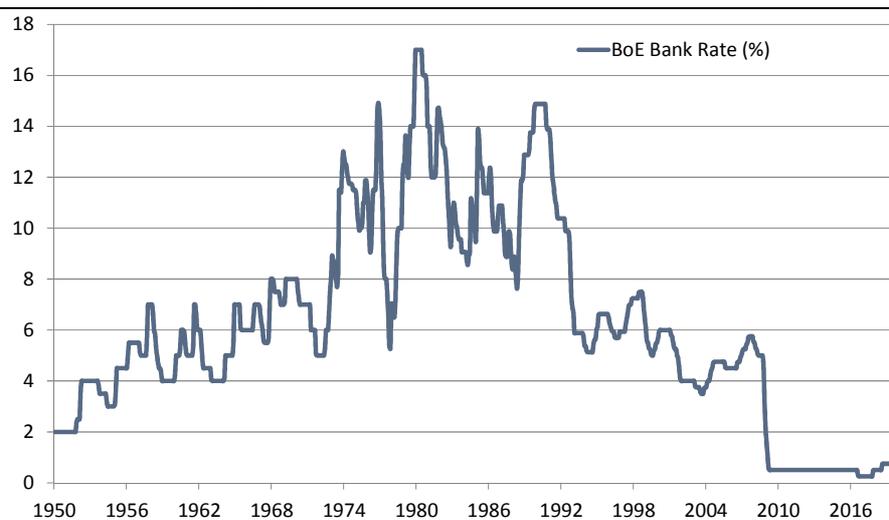
Forward guidance carries risks. Because the BoE must adjust its economic commentary and guidance in line with the normal economic gyrations, it can appear skittish. If the guidance is excessively complicated or if it is not fully believed, it may not serve its intended purpose and can damage the BoE's credibility. To begin to contain these risks, the BoE should step up the pace of its current normalisation, or opt for shorter lead times between its guidance and policy changes. Alternatively, the BoE could simply sound less hawkish in the first place – that is, it should only be hawkish when almost certain to follow up soon. These steps would strengthen the link between the BoE's communication and its actions.

3. Too-slow normalisation amid resilient fundamentals

The BoE has been too timid with its policy normalisation given the healthy UK economic fundamentals.

The frequency at which the BoE has adjusted the bank rate has fallen in the post-Lehman era (Chart 4). This is not just a UK story. The Fed (until late 2015), the ECB and the BoJ have held their policy rates much lower for much longer than initially anticipated following the financial crisis. Weak productivity and a massive debt-related hangover after the 2008 crash lowered real equilibrium interest rates to well below zero in major parts the advanced world. But major central banks have not yet dared to try to stimulate demand by lowering their policy rates much below zero. Instead, they have waited for the recovery to gradually drive up real equilibrium interest rates while keeping policy rates on hold at record lows and experimenting with quantitative easing and other extraordinary policies to stimulate demand.

Chart 4: BoE bank rate (%)



Monthly data. Source: BoE

In another respect, however, the BoE is indeed an outlier. Despite a rocky start, in which the Fed waited a year after the first hike in the funds rate in December 2015 before hiking again, it eventually gained momentum and hiked rates by 25bp seven times from January 2017 to December 2018. Up from 0.25% in November 2015, the Fed funds rate is currently at 2.5% where it is likely remain for the foreseeable future according to the Fed's latest guidance. The ECB and BoJ have not yet signalled any plans to hike their main policy rates. While the BoE has had a hawkish bias since May 2017, it has hiked rates just twice this cycle. In light of the resilient performance of the UK economy since the Brexit vote, a fact the BoE itself acknowledges, the pace of normalisation has been too timid.

While inflation has not exceeded the target rate by much since the Brexit vote – averaging 2.2% yoy with considerable variation around that rate owing to the currency-driven swing – inflationary pressures have built up gradually in the past two years. Wage growth has accelerated while productivity growth has stagnated, pushing up unit labour costs. Inflation expectations jumped after the Brexit vote and have remained elevated. In the BoE's May Inflation Report, upon which the MPC guided the market towards more rate hikes over the medium term, the bank projected a sustained rise in the annual rate of CPI growth to 2.2% by 2022 Q2.

Between Q3 2016 and Q1 2019 the UK economy expanded at an average annualised rate of 1.7% in real terms, modestly higher than the BoE's 1.5% estimate of potential growth. Household spending, which makes up c70% of GDP, has grown at an average annualised rate of 4.2% in nominal terms, slightly above the five-year average until the Brexit vote of 4.0%. Meanwhile, the labour market has made impressive gains. Nominal wage growth has picked up from 2.4% to 3.5% over the same period. The unemployment rate is currently 3.8%, the lowest rate since 1975. While measures of confidence and other soft data have persistently reflected uncertainties linked to Brexit, the hard data has remained resilient. Private sector credit growth has remained firm, helped by low costs of borrowing and healthy credit availability. The real bank rate – adjusted using the annual percentage change in the GDP deflator – has remained very low, averaging -1.8% since the Brexit vote. It was -0.9% in Q1 2019.

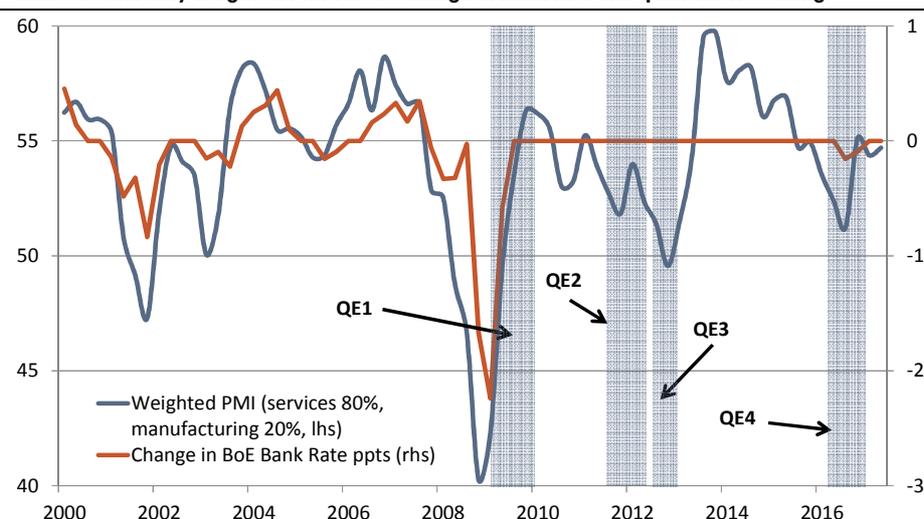
A faster pace of policy normalisation, say at a pace of two hikes per year over the past two years, would have remained consistent with the BoE's guidance of "gradual and limited", while being more in tune with the resilient economic fundamentals, rising inflation expectations and wage pressures in the labour market.

4. Tangled up in the politics of Brexit

With Brexit, the BoE has departed from its standard approach of incorporating government policy into its forecasts and policy decisions and has put too much emphasis on potential Brexit scenarios – especially to the downside – rather than focusing on actual economic trends and how they impact the outlook for inflation.

As the key UK institution for monetary and financial policy, the BoE will play an important role during the UK's transition from EU member to non-member. Immediately after the Brexit referendum the BoE made a series of well-timed and proportionate policy adjustments. It helped to prevent what, considering the large initial sell-off in global equity markets and sharp correction in sterling, could have been a much more significant confidence crisis. By providing extra liquidity in sterling markets in the hours and days after the UK voted to leave the EU on 26 June 2016, and by promising and later delivering in August 2016 a sizeable monetary stimulus, the BoE helped to contain the initial shock.

Chart 5: Quarterly weighted PMI versus change in bank rate and quantitative easing



Source: Markit/CIPS, BoE, Berenberg calculations. QE highlights purchases of Gilts only. QE1: £200bn from March 2009 to January 2010. QE2: £125bn from October 2011 to May 2012. QE3: £50bn from July 2012 to November 2012. QE4: £70bn from August 2016 to April 2017. QE4: £60bn from August 2016 to February 2017.

One often hears the critique that the forecast upgrades beginning in November 2017 linked to the resilience of the UK economy after the Brexit vote, and the shift from a dovish to hawkish bias over the course of 2017, was down to initially excessive pessimism on the part of the BoE. But this argument looks misplaced. The initial shock of the Brexit vote caused business and consumer confidence to tank badly in Q3 2016. UK PMIs signalled the UK was heading for a recession. As Chart 5 shows, the BoE's decision to cut the bank rate and begin bond purchases in August was consistent with its past reactions to falling PMI data. Before and during the financial crisis, the bank rate tracked the weighted PMI index closely. When

the BoE decided not to take the policy rate lower than 0.5% in 2009 and begin QE instead, QE continued to track the PMI. QE2 and QE3 in response to the euro crisis coincided with a sharp drop in the weighted index. Similarly, in light of the ongoing current inflation risks – accelerating growth in wages and unit labour cost and elevated inflation expectations – the BoE’s hawkish tilt in 2017 now looks prudent. More recently, however, the BoE has been drawn into the souring politics of Brexit.

On 27 June 2018, the House of Commons Treasury Committee requested that the BoE publish analysis of how Brexit would impact the bank’s ability to meet its objectives for financial and monetary stability. This included “worst-case scenario” analysis of a hard Brexit in which the BoE estimated a potential hit of c10% of GDP by the end of 2023. The quality of such estimates and the underlying assumptions upon which they rest is an interesting discussion, but is not the focus of this analysis. Instead, we draw attention to the approach the BoE chose to deliver on the Treasury Committee’s request.

At the November 2018 Financial Stability Report, much of Governor Carney’s opening statement was dedicated to outlining the BoE’s analysis of a worst-case scenario hard Brexit. It seems curious why the BoE, in light of building criticisms that it had been used as an instrument of “project fear” to support the case against Brexit by the “pro-EU establishment”, chose to meet its obligations to the Treasury Committee in this way. In the opening statement Carney said: “These are scenarios not forecasts. They illustrate what could happen not necessarily what is most likely to happen.”⁶ This is all well and good. But does the general public appreciate such nuance? Hardly. Such commentary thus distorts the BoE’s normal forward guidance. Did the BoE really need to dedicate a major press conference to such “scenarios” or could it have simply published the analysis online or as part of a letter addressed to the Treasury Committee?

It is also worth pointing out that the BoE has taken a non-standard approach to factoring in government policy on Brexit. To draw a comparison, consider the BoE’s approach to fiscal policy. When it comes to the government’s plans for public spending and taxation, it operates as a de facto Stackleberg follower – taking government’s policy, or more precisely, its forecasts for policy as given. For example, if the Chancellor of the Exchequer announces plans to loosen fiscal policy over the next three years, the BoE simply assumes this happens and sets monetary policy today in line with the expected impact on inflation. Similarly, the BoE would not guess the outcome of an election and what that could entail for the economic and policy outlook.

The BoE has not applied the same framework for Brexit. The BoE instead assumes “a smooth adjustment to the average of a range of possible outcomes for the United Kingdom’s eventual trading relationship with the European Union”. Because of the uncertainty around the Brexit outcome, this working assumption is pragmatic from the point of view of producing economic forecasts. However, it creates challenges for setting policy. The BoE is de facto forecasting an outlook that by definition can never exist. How does this fit into the MPC’s policy decisions. The risk is that the MPC’s collective policy decisions also reflect its collective judgement on the Brexit outlook. Even if each MPC member’s views on Brexit are not explicitly revealed, they could be implicit in their voting behaviour. This would imply a mismatch between how the MPC sets policy and the BoE’s official forecast.

There is no obvious solution to this problem. Perhaps, the BoE should have instead taken the government’s policy intentions at their word – a transitional period where the UK remains in the single market and customs union until the end of 2020 followed by a free-trade agreement with the EU mostly covering goods. If the outcome of Brexit is then different to what the government had planned, the BoE can at least defend its action by standing behind its mandate and argue that it has simply behaved in a way that is consistent with how it incorporates other government policy.

Governor Carney’s predecessor, Sir Mervyn King, has criticised the BoE approach to Brexit on several occasions. On the BoE’s worst-case hard-Brexit scenario, Sir King said it “saddens me to see the Bank of England unnecessarily drawn into this project”. He added: “Before the referendum, official economic projections intended to scare the country into voting Remain didn’t succeed. Based on flimsy and arbitrary assumptions, they were subsequently proved wrong. The same strategy has resurfaced.”⁷ The BoE is apolitical. By stepping away from its normal approach to factoring in government policies, and by over-

⁶ Financial Stability Report, 28 November 2018 ([link to opening statement](#))

⁷ ‘May’s Brexit deal is a betrayal of Britain’, Sir Mervyn King, 4 December 2018.

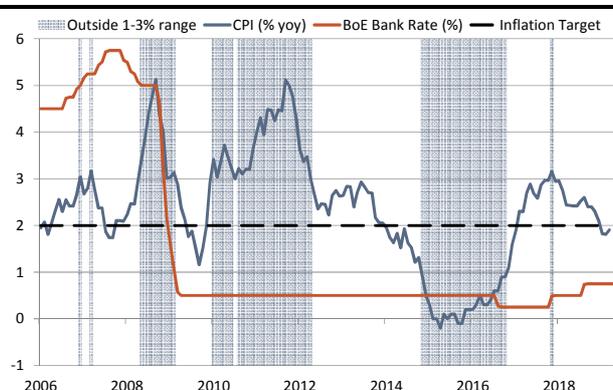
emphasising the potential consequences of a no-deal hard Brexit, it has overreached and invited mostly undue criticism about its role in Brexit both before and after the referendum.

5. Inflation expectations have become unanchored

Inflation expectations are no longer well anchored and have risen sharply since the Brexit vote. Unless the BoE takes steps to re-anchor inflation expectations its capacity to look through future temporary inflationary shocks could be constrained.

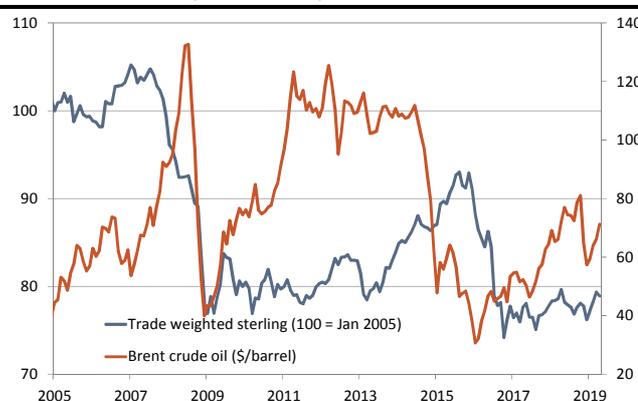
The BoE's 2% target for the annual change in CPI is symmetrical. If the headline inflation rate deviates by more than 1pt from the target, the BoE Governor is required to send a letter to the Chancellor of the Exchequer to explain why this has happened and what the BoE intends to do about it. The BoE should treat deviations in the rate of inflation above and below the target equally.

Chart 6: CPI inflation (% yoy) versus BoE bank rate (%)



Monthly data. Source: ONS, BoE. Highlights indicate when CPI % yoy is < or > than 1pt from 2% target.

Chart 7: Trade-weighted sterling and Brent crude oil prices



Monthly data. Source: BoE, EIA

Since the financial crisis, there have been four periods when the headline inflation rate has deviated by more than 1pt from the 2% target. Two of those were under the tenure of Carney, which began in June 2013 (Chart 6)

- Between May 2008 and February 2009, headline inflation exceeded 3% yoy and peaked at 5.1% in September 2008, the month that Lehman Brothers collapsed. The inflation surge was driven by a sharp rise in import prices due to the +20% depreciation in sterling during the depths of the 2008/09 recession and a sharp rise in the oil price earlier in the year to \$130-plus per barrel of Brent crude (Chart 7).
- From January 2010 to April 2012, headline inflation exceeded 3% and peaked at 5.1% in September 2011. The rise was driven by a surge in the oil price from c\$40 per barrel of Brent crude in late 2008 to above \$120 per barrel by spring 2011. The price of a barrel of oil remained well above \$100 for much of the next three years before the advent of global shale oil increased supplies and caused a collapse in the oil price beginning in summer 2015.
- From November 2014 to October 2016 the headline inflation rate was sub-1% driven by the collapse in the oil price to below \$30 per barrel of Brent crude in early 2016 and sustained gains in sterling on the back of a relatively strong economic performance in the UK.
- From September 2017 to January 2018, the headline inflation rate rose towards 3% and peaked at 3.2% in November 2017. The rise was caused by a 15%-plus depreciation in sterling after the June 2016 Brexit vote, which caused import prices to surge.

On all four occasions, the BoE opted to “look through” these exogenous shocks. In each case this made sense. Typically, inflation returns towards its underlying rate once the effects of the currency or commodity price volatility have washed through the inflation rate. Such shocks do not usually justify a policy response to correct for the short-term impact to the price level. Inflation targeting central banks mostly focus on endogenous inflationary trends driven by shifts and trends in the underlying balance domestic balance of demand and supply – typically linked to labour market fundamentals and wages, or

capacity utilisation and domestic producer prices. However, households and business simply experience a change in the price level. To ensure inflation returns to target after a temporary shock, inflation expectations must be well anchored. This represents a normal scenario and held true for the 2008, 2010 and 2014 shocks.

But Brexit is not normal. It highlights how bad economic policies can cause excess inflation. The initially temporary inflation shock following the Brexit vote has had persisting inflationary effects. Although the temporary surge in inflation from the weaker sterling has passed and headline inflation has returned to near 2%, inflation expectations remain elevated and currently exceed 3% (Chart 2). Over time, elevated inflation expectations will begin to show up in wage and price-setting behaviour.

While the dislodging of inflation expectations is not necessarily the BoE's fault, although looking through four such shocks in short succession will not have helped, as the guardian of price stability it is the BoE duty to reset inflation expectations to rates consistent with its 2% target. An obvious way to do this would be to simply act in line with its guidance and hike the bank rate soon. This could reinforce a commitment to normalise monetary policy until inflation expectations returned to rates consistent with the BoE meeting its 2% inflation target in the medium-term.

Negative consequences

The BoE's fading ability to shape market expectations through its communications to markets impairs its reaction function and makes the already tricky task of meeting its 2% inflation target on a consistent basis all the more challenging. It has three key negative implications.

- **It raises the risks that the market gets caught out by future policy changes:** In normal times the BoE has no desire to surprise markets with its policy changes. A sudden lumpy adjustment by money markets to an unanticipated policy change can trigger undesirable price changes in longer-dated benchmark assets that are used to price credit to households and businesses. An overreaction by markets would risk jarring the real economy and financial markets. The dramatic 100bp rise in 10-year US Treasuries in 2013, dubbed the "taper tantrum", serves as an example of how markets can overreact when they do not have a clear view on the likely path of future policy. If the BoE can no longer trigger a front-running of market pricing to its policy change, the risk of a sudden re-pricing – including the risk of an over-reaction – is higher than before.
- **The BoE will get less bang for its buck for a given policy change in the future:** The best way that the BoE can achieve its goal of price stability is to ensure that long-run inflation expectations remain well anchored at rates consistent with its inflation target. By adjusting its policy in line with fluctuations in inflation and inflation expectations on a consistent basis, markets and economic agents gain a practical understanding of the BoE's reaction function. If households and market participants believe that the BoE will take the necessary steps to achieve its long-run goal of price stability, they will view any deviation in inflation from the target as temporary – reflected in stable inflation expectations. When this element of policy works well, the BoE can affect market rates with modest changes in short-term rates so long as such changes are supplemented with credible guidance that reiterates its mandate. In other words, when it works well within a credible policy framework, forward guidance can do much of the heavy lifting. When this link breaks down, the BoE may require larger changes in the bank rate for a desired effect on benchmark rates and inflation expectations.
- **The BoE's ability to look through transitory exogenous inflation shocks is diminished** because inflation expectations are no longer well anchored. In the past, the BoE has been able to look through such inflation shocks and thus avoid triggering and unwelcome softening in the real economy. When inflation expectations are well anchored, central banks can look through temporary inflation spikes because economic agents and financial markets believe the central bank would not allow inflation to raise beyond the target on a persistent basis – because this belief is factored into current price setting it thus becomes self-fulfilling. This is a remarkable trick when central banks can pull it off. Since the Brexit vote, the option to look through the next exogenous inflation shock carries more risks than before. For example, it is no longer unthinkable that the BoE would be forced to hike rates in a hard Brexit, which triggered another spike in inflation. As the lesson of the 1970s in the US and Europe shows, when

inflation expectations are not well anchored, slow growth and rising unemployment do not always contain inflationary pressures.

Final comments

Waning BoE credibility, at its core, is a question of perceptions of the MPC's discipline with respect to its mandate of price stability. At the May Inflation Report, the MPC gave clear guidance to markets to step up interest rate expectations. That the market ignored this highlights the problems we discuss herein.

To re-establish its credibility and re-anchor inflation expectations, the BoE should address the problems with its current monetary policy framework. It should aim to simplify its forward guidance and conditioning assumptions for its forecasts, and in light of Brexit developments, make its reaction function more transparent. Any steps the BoE can take to strengthen the link between its actions and words should thus be encouraged.

Disclaimer

This document was compiled by the above mentioned authors of the economics department of Joh. Berenberg, Gossler & Co. KG (hereinafter referred to as “the Bank”). The Bank has made any effort to carefully research and process all information. The information has been obtained from sources which we believe to be reliable such as, for example, Thomson Reuters, Bloomberg and the relevant specialised press. However, we do not assume liability for the correctness and completeness of all information given. The provided information has not been checked by a third party, especially an independent auditing firm. We explicitly point to the stated date of preparation. The information given can become incorrect due to passage of time and/or as a result of legal, political, economic or other changes. We do not assume responsibility to indicate such changes and/or to publish an updated document. The forecasts contained in this document or other statements on rates of return, capital gains or other accession are the personal opinion of the author and we do not assume liability for the realisation of these.

This document is only for information purposes. It does not constitute a financial analysis within the meaning of § 34b or § 31 Subs. 2 of the German Securities Trading Act (Wertpapierhandelsgesetz), no investment advice or recommendation to buy financial instruments. It does not replace consulting regarding legal, tax or financial matters.

Remarks regarding foreign investors

The preparation of this document is subject to regulation by German law. The distribution of this document in other jurisdictions may be restricted by law, and persons, into whose possession this document comes, should inform themselves about, and observe, any such restrictions.

United Kingdom

This document is meant exclusively for institutional investors and market professionals, but not for private customers. It is not for distribution to or the use of private investors or private customers.

United States of America

This document has been prepared exclusively by Joh. Berenberg, Gossler & Co. KG. Although Berenberg Capital Markets LLC, an affiliate of the Bank and registered US broker-dealer, distributes this document to certain customers. This document does not constitute research of Berenberg Capital Markets LLC. In addition, this document is meant exclusively for institutional investors and market professionals, but not for private customers. It is not for distribution to or the use of private investors or private customers.

This document is classified as objective for the purposes of FINRA rules. Please contact Berenberg Capital Markets LLC (+1 617.292.8200), if you require additional information.

Copyright

The Bank reserves all the rights in this document. No part of the document or its content may be rewritten, copied, photocopied or duplicated in any form by any means or redistributed without the Bank's prior written consent.

© 2018 Joh. Berenberg, Gossler & Co. KG



JOH. BERENBERG, GOSSLER & CO. KG

EQUITY RESEARCH

GENERAL MID CAP

MID CAP - DACH	
Carl-Oscar Bredengen	+44 20 3753 3160
Marta Bruska	+44 20 3753 3187
Martin Comtesse	+44 20 3207 7878
Charlotte Friedrichs	+44 20 3753 3077
Gustav Froberg	+44 20 3465 2655
James Letten	+44 20 3753 3176
Alexander O'Donoghue	+44 20 3207 7804
Gerhard Orgonas	+44 20 3465 2635
Benjamin Pfannes-Varrow	+44 20 3465 2620

MID CAP - EU core

Beatrice Allen	+44 20 3465 2662
Fraser Donlon	+44 20 3465 2674
Christoph Greulich	+44 20 3753 3119
Andreas Markou	+44 20 3753 3022
Anna Patrice	+44 20 3207 7863
Trion Reid	+44 20 3753 3113
Jan Richard	+44 20 3753 3029

MID CAP - UK

Joseph Barron	+44 20 3207 7828
Calum Battersby	+44 20 3753 3118
Joseph Bloomfield	+44 20 3753 3248
Robert Chantry	+44 20 3207 7861
Sam Cullen	+44 20 3753 3183
Ned Hammond	+44 20 3753 3017
Edward James	+44 20 3207 7811
Kieran Lee	+44 20 3465 2736
Lush Mahendrarajah	+44 20 3207 7896
Benjamin May	+44 20 3465 2667
Iain Pearce	+44 20 3465 2665
Anthony Plom	+44 20 3207 7908
Eoghan Reid	+44 20 3753 3055
Owen Shirley	+44 20 3465 2731
Donald Tait	+44 20 3753 3031
Sean Thapar	+44 20 3465 2657

THEMATIC RESEARCH

Steven Bowen	+44 20 3753 3057
Julia Schrameier	+44 20 3753 3172

EQUITY SALES

SPECIALIST SALES

AEROSPACE & DEFENCE & CAPITAL GOODS

Cara Luciano	+44 20 3753 3146
--------------	------------------

AUTOS & TECHNOLOGY

Edward Wales	+44 20 3207 7815
--------------	------------------

BANKS & DIVERSIFIED FINANCIALS

Alex Medhurst	+44 20 3753 3047
---------------	------------------

BUSINESS SERVICES, LEISURE & TRANSPORT

Rebecca Langley	+44 20 3207 7930
-----------------	------------------

CONSUMER DISCRETIONARY

Victoria Maigrot	+44 20 3753 3010
------------------	------------------

CONSUMER STAPLES

Ramnique Sroa	+44 20 3753 3064
---------------	------------------

HEALTHCARE

David Hogg	+44 20 3465 2628
------------	------------------

MEDIA & TELECOMS

Jonathan Smith	+44 20 3207 7842
----------------	------------------

METALS & MINING

Sanam Nourbakhsh	+44 20 3207 7924
------------------	------------------

OIL & GAS AND UTILITIES

Jason Turner	+44 20 3753 3063
--------------	------------------

THEMATICS

Chris Armstrong	+44 20 3207 7809
-----------------	------------------

SALES

Miel Bakker	+44 20 3207 7808
-------------	------------------

Bram van Hijfte	+44 20 3753 3000
-----------------	------------------

SALES TRADING

LONDON

Charles Beddow	+44 20 3465 2691
Mike Berry	+44 20 3465 2755
Joseph Chappell	+44 20 3207 7885
Stewart Cook	+44 20 3465 2752
Mark Edwards	+44 20 3753 3004
Tom Floyd	+44 20 3753 3156
Tristan Hedley	+44 20 3753 3006
Luke Holmes	+44 20 3465 2750
Peter King	+44 20 3753 3139
Simon Messman	+44 20 3465 2754

BERENBERG CAPITAL MARKETS LLC

Member FINRA & SIPC

EQUITY RESEARCH

CONSTRUCTION

Robert Muir	+1 646 949 9028
Daniel Wang	+1 646 949 9025

GENERAL MID CAP - US

Samuel England	+1 646 949 9035
Alex Marocchia	+1 646 949 9033
Brett Knoblauch	+1 646 949 9032

HEALTHCARE

BIOTECH/THERAPEUTICS

Shanshan Xu	+1 646 949 9023
-------------	-----------------

MED. TECH/SERVICES

Ravi Misra	+1 646 949 9028
------------	-----------------

SPECIALTY PHARMA/BIOTECH

Patrick R. Trucchio	+1 646 949 9027
---------------------	-----------------

CAPITAL GOODS

Andrew Buscaglia	+1 646 949 9040
------------------	-----------------

LEISURE

Brennan Matthews	+1 646 949 9024
------------------	-----------------

BUSINESS SERVICES, LEISURE & TRANSPORT

BUSINESS SERVICES

Zaim Beekawa	+44 20 3207 7855
Tom Burton	+44 20 3207 7852

LEISURE

Roberta Ciaccia	+44 20 3207 7805
Jack Cummings	+44 20 3753 3161
Stuart Gordon	+44 20 3207 7858
Annabel Hay-Jahans	+44 20 3465 2720

TRANSPORT & LOGISTICS

William Fitzalan Howard	+44 20 3465 2640
Joel Spungin	+44 20 3207 7867
Adrian Yanoshik	+44 20 3753 3073

CONSUMER

BEVERAGES

Javier Gonzalez Lastra	+44 20 3465 2719
Matt Reid	+44 20 3753 3075

FOOD MANUFACTURING AND HPC

Ebba Bjorkild	+44 20 3753 3247
Rosie Edwards	+44 20 3207 7880
James Targrett	+44 20 3207 7873

FOOD RETAIL

Dusan Milosavljevic	+44 20 3753 3123
---------------------	------------------

GENERAL RETAIL

Michael Benedict	+44 20 3753 3175
Thomas Davies	+44 20 3753 3104
Oliver Anderson	+44 20 3753 3173
Graham Renwick	+44 20 3207 7851
Michelle Wilson	+44 20 3465 2663

LUXURY GOODS

Mariana Horn	+44 20 3753 3044
Lauren Molyneux	+44 20 3207 7892

ENERGY

OIL & GAS

Baha Bassatine	+44 20 3753 3158
John Gleeson	+44 20 3465 2716
Ilkin Karimli	+44 20 3465 2684

FRANCE

Alexandra Chevasus	+33 1 5844 9512
Dalia Farigoule	+33 1 5844 9510
Kevin Nor	+33 1 5844 9505
Guillaume Viret	+33 1 5844 9507

SCANDINAVIA

Donata Leonova	+44 20 3753 3156
Marco Weiss	+49 40 3506 0719

UK

Thomas Baker	+44 20 3753 3062
James Burt	+44 20 3207 7807
Fabian De Smet	+44 20 3207 7810
Marta De-Sousa Fialho	+44 20 3753 3098
Katie Ferry	+44 20 3753 3041
Robert Floyd	+44 20 3753 3018
David Franklin	+44 20 3465 2747
Sean Heath	+44 20 3465 2742
Stuart Holt	+44 20 3465 2646
James Hunt	+44 20 3753 3007
James McRae	+44 20 3753 3036
David Morlock	+44 20 3207 7850
Eleni Papoula	+44 20 3465 2741
Bhavin Patel	+44 20 3207 7926
Kushal Patel	+44 20 3753 3038
Richard Payman	+44 20 3207 7825

LONDON (cont'd)

AJ Pulleyn	+44 20 3465 2756
Paul Somers	+44 20 3465 2753
Frans Van Wakeren	+44 20 3753 3079

PARIS

Vincent Klein	+33 1 58 44 95 09
---------------	-------------------

ENERGY (cont'd)

OIL & GAS (cont'd)

Edward Pizzev	+44 20 3753 3185
Henry Tarr	+44 20 3207 7827

UTILITIES

Oliver Brown	+44 20 3207 7922
Andrew Fisher	+44 20 3207 7937
Lawson Steele	+44 20 3207 7887

FINANCIALS

BANKS

Adam Barrass	+44 20 3207 7923
Frederick Brennan	+44 20 3753 3171
Michael Christodoulou	+44 20 3207 7920
Andrew Lowe	+44 20 3465 2743
Eoin Mullany	+44 20 3207 7854
Peter Richardson	+44 20 3465 2681

DIVERSIFIED FINANCIALS

Panos Ellinas	+44 20 3753 3149
Chris Turner	+44 20 3753 3019

REAL ESTATE

Kai Klose	+44 20 3207 7888
-----------	------------------

HEALTHCARE

Scott Barco	+44 20 3207 7869
Klara Fernandes	+44 20 3465 2718
Michael Healy	+44 20 3753 3201
Tom Jones	+44 20 3207 7877
Michael Ruzic-Gauthier	+44 20 3753 3128

INDUSTRIALS

AEROSPACE & DEFENCE

Andrew Gollan	+44 20 3207 7891
Ross Law	+44 20 3465 2692
George McWhirter	+44 20 3753 3163

AUTOMOTIVES

Cristian Dirpes	+44 20 3465 2721
Asad Farid	+44 20 3207 7932
Alexander Haissl	+44 20 3465 2749
Viktoria Oushatova	+44 20 3207 7890

UK (cont'd)

Christopher Pyle	+44 20 3753 3076
Adam Robertson	+44 20 3753 3095
Joanna Sanders	+44 20 3207 7925
Mark Sheridan	+44 20 3207 7802
George Smibert	+44 20 3207 7911
Sam Stannah	+44 20 3753 3157
Paul Walker	+44 20 3465 2632

GERMANY

Simone Arnheiter	+49 69 91 30 90 740
Nina Buechs	+49 69 91 30 90 735
André Grosskurth	+49 69 91 30 90 734

SWITZERLAND, AUSTRIA & ITALY

Duncan Downes	+41 22 317 1062
Andrea Ferrari	+41 44 283 2020
Gianni Lavigna	+41 44 283 2038
Jamie Nettleton	+41 44 283 2026
Yeannie Rath	+41 44 283 2029

COO Office

Fenella Neill	+44 20 3207 7868
Greg Swallow	+44 20 3207 7833

EQUITY TRADING

HAMBURG

David Hohn	+49 40 350 60 761
Lukas Niehoff	+49 40 350 60 798
Lennart Pleus	+49 40 350 60 596
Marvin Schweden	+49 40 350 60 576
Philipp Wechmann	+49 40 350 60 346
Christof Winter	+49 40 350 60 559

LONDON

Christopher Brown	+44 20 3753 3085
Edward Burlinson-Rush	+44 20 3753 3005

Internet www.berenberg-us.com

E-mail: firstname.lastname@berenberg.com

INDUSTRIALS (cont'd)

CAPITAL GOODS

Jonathan Coubrough	+44 20 3465 2699
Phillippe Lorrain	+44 20 3207 7823
Rizk Maldi	+44 20 3207 7806
Simon Teonessen	+44 20 3207 7819
Ethan Zhang	+44 20 3465 2634

MATERIALS

CHEMICALS

Sebastian Bray	+44 20 3753 3011
Xian Deng	+44 20 3753 3014
Anthony Manning	