Special Report

United Kingdom: Inflation expectations remain fairly well-anchored, but there are Brexit-related risks

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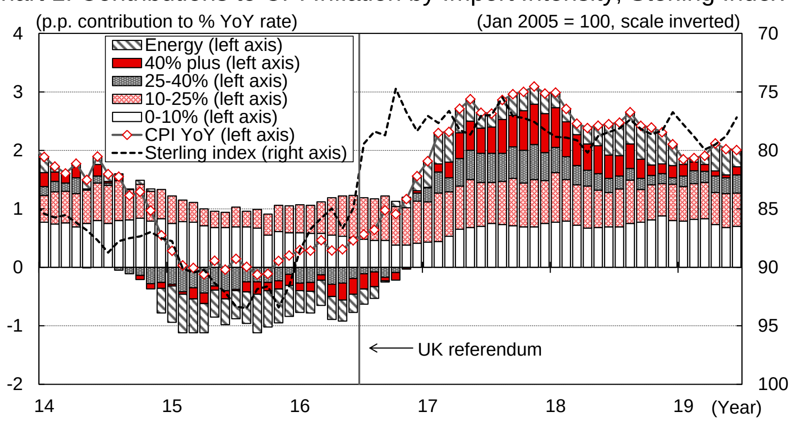
1. Introduction

As other major central banks worry about weakening inflation expectations, the situation in the UK appears to be different. Market-based measures of inflation expectations have diverged noticeably from those of the US and euro area. We think this is largely driven by a higher perceived risk of 'no deal' Brexit as the candidates to replace Theresa May as UK prime minister have adopted a harder 'leave' stance to appeal to their party's membership. UK inflation rose sharply following the referendum result in June 2016 after weaker sterling pushed up import prices (Chart 1). This experience provides a clear guide to what would happen in a 'no deal' Brexit scenario: further depreciation, followed by higher inflation – which is the risk being priced in to inflation-linked contracts.

Meanwhile, public inflation expectations remain broadly well-anchored despite the period of higher inflation in 2017, but there are some signs that long-term expectations are increasing. This could influence salary negotiations and feed into actual inflation if firms have to increase prices for pay rises. For now, there seem to be few signs of higher wage growth, and the Bank of England (BoE) is probably content that inflation expectations are not showing signs of *decreasing* in the UK either (which may be the case in other jurisdictions).

Chart 1: Contributions to CPI Inflation by Import Intensity, Sterling Index



Note: Sterling index is the Bank of England's narrow effective exchange rate index. It is an measure of the currency against multiple other currencies, weighted according to the UK's trade flows.
Source: ONS, Bank of England, MUFG Bank Economic Research Office

2. Inflation expectations and monetary policy

Recent developments in inflation expectations are a concern for many major central banks at the moment. In the US, the minutes of the FOMC's April meeting reveal that:

> *"Several participants commented that … there was* ***a risk that inflation expectations could become anchored at levels below those consistent with the Committee's symmetric 2 percent objective****—a development that could make it more difficult to achieve the 2 percent inflation objective on a sustainable basis over the longer run."*

And, in the euro area, it was noted at the ECB's April meeting that:

> *"Some* ***concern was expressed that market-based inflation expectations had shifted downwards*** *in parallel with actual inflation and across all maturities."*

What are policymakers worried about? The answer is that inflation expectations can affect the primary objective of low and stable inflation. When inflation expectations are 'anchored' close to the central bank's target then, in theory, price stability should be easier to achieve. If people expect 2% inflation then they will also expect nominal pay increases of at least 2% – which in turn would require employers to increase product prices. Well-anchored inflation expectations may therefore become self-fulfilling by feeding back into the price setting process. On the other hand, a decrease in expected inflation could reinforce disinflationary pressures, as once inflation expectations fall they can be hard to shift. This is the case in Japan where the BoJ claims that very gradual price deflation may have cemented a 'disinflationary mind-set' in among the public. Despite various accommodative monetary policies since 2013, inflation expectations have remained stubbornly low.

The situation appears to be different in the UK. In a clear contrast to the comments from the Fed and the ECB above, the BoE judged in June that "**inflation expectations had remained well anchored**." We consider whether this is the case below.

3. Developments in UK inflation expectations since the referendum

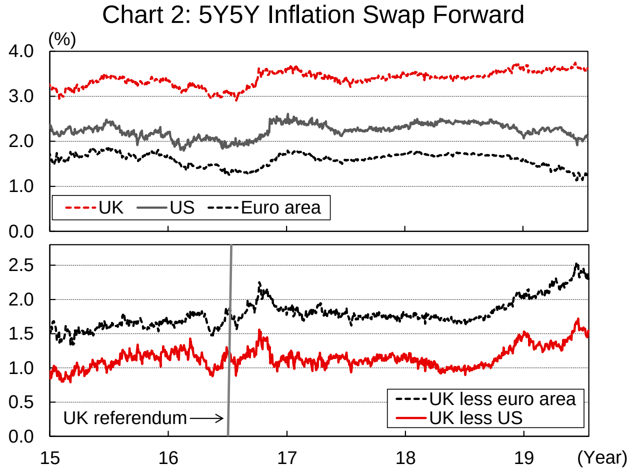
There are various ways of judging developments in expected inflation. The three most common methods to consider are market-based measures, surveys of the general public and professional forecasts.

(1) Market-based measures: remaining steady

Market-based measures of inflation expectations benefit from being available at high frequency and are widely monitored. One approach is to look at 'breakeven' inflation rates (the spread between nominal and inflation-linked bonds) which can be interpreted as the average rate of inflation priced in by the market over the relevant horizon. The UK 5-year breakeven rate has increased slightly from the start of 2019. However, this method can be affected by liquidity constraints (the market for indexed bonds is smaller than the one for nominal bonds). A better approach is to consider inflation-linked swap (ILS) contracts in which one party receives a payment linked to the realised inflation rate over a set horizon. The most widely referenced ILS horizon for inflation expectations is the 5Y5Y forward inflation rate (the average inflation over the five year period that starts five years from the reported date). Chart 2 (upper) shows the 5Y5Y ILS rate for the US, euro area and the UK.[1] While market-based inflation expectations in the US and euro area have declined since the start of the year (which explains the Fed and the ECB's concern), **market-based inflation expectations in the UK have remained steady**.

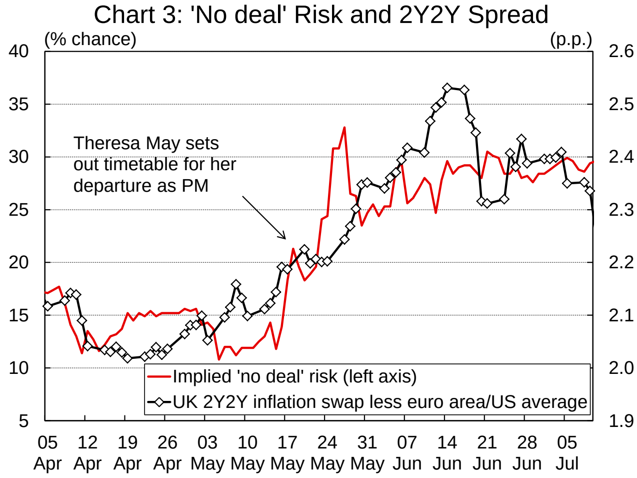
There is a clear correlation between the rates as large shifts are generally mirrored across each jurisdiction. This synchronisation can in part reflect global trends for aggregate demand and the associated inflationary pressures. But it is important to note that market-based measures of inflation expectations such as ILS contracts also contain information on changes in the *inflation risk premium*.[2] This is the compensation required by investors to hold assets subject to inflation risks (for this reason ex-Fed Chair Yellen remarked that she preferred to use the term "inflation compensation" rather than inflation expectations when referring to market-based measures). The lower panel of Chart 2 shows the spread between the UK and the US/euro area 5Y5Y rates to isolate any idiosyncratic UK changes from shifts in the global inflation risk premium. The spread has clearly increased from mid-2018 and we think that **Brexit is the likely driver of the divergence**. After the Brexit vote, the depreciation in sterling pushed up import prices and CPI in turn (we discussed the pass-through in detail last February).[3] The spread widened shortly after the referendum, and again in late 2018 as it became clear that many MPs would oppose the Withdrawal Agreement.

Chart 2: 5Y5Y Inflation Swap Forward



Source: Bloomberg, MUFG Bank Economic Research Office

Chart 3: 'No deal' Risk and 2Y2Y Spread



Source: Betfair, Bloomberg, MUFG Bank Economic Research Office

More recently, the implied risk of 'no deal' Brexit on prediction markets increased sharply after Theresa May announced in May that she would step down as prime minister. Her successor will be chosen by members of the Conservative party who tend to be in favour of Brexit, so leading candidates have duly adopted a hard 'leave' stance and opened the door wider to a 'no deal' Brexit. As this risk has increased, the spread between the UK 2Y2Y ILS rate and others has clearly widened (Chart 3). In this case we judge that the 2Y2Y ILS is preferable to the

[1] Note that in the euro area the contracts refer to the Harmonised Index of Consumer Prices excluding tobacco (HICPxT). In the US, it is the Consumer Price Index for All Urban Consumers (CPI-U). In the UK, ILS contracts refer to the *retail* price index (RPI). RPI inflation tends to be higher than CPI – the UK's Office for Budget Responsibility assumes a long-run wedge of 1pp between RPI and CPI inflation – due to formula effects and a difference in coverage.

[2] A rough estimate of the inflation risk premium is the difference between the one year ahead ILS rate and the +1 year Consensus forecasts shown below in Chart 4.

[3] See here: www.bk.mufg.jp/report/ecoeu2018e/BTMU-Economic-Brief-UK20180219.pdf

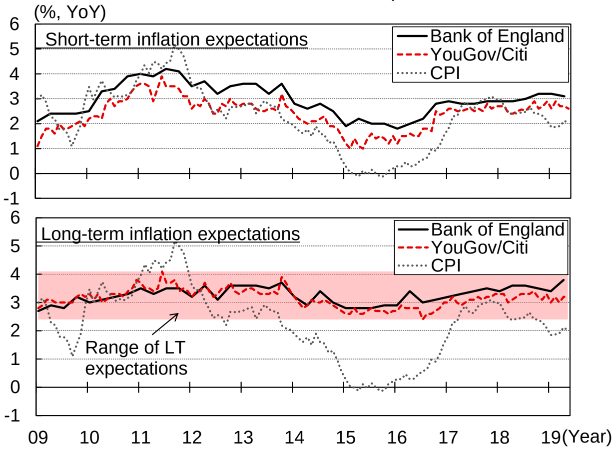
5Y5Y gauge as it better reflects the horizon for the direct pass-through of a sterling depreciation to inflation. That said, market participants may also price in higher inflation due to Brexit over a longer period because the BoE would likely delay any tightening in the event of 'no deal' and consumers' inflation expectations might be pushed higher after another period of above-target inflation.

(2) Survey-based measures: hints of higher long-term expectations

There are various survey measures which assess the expectations of the general population over different horizons. Short-term public inflation expectations in the UK have increased since the referendum and then remained fairly steady just above the BoE's target (Chart 4, upper). We advise some caution when interpreting these figures: year-ahead expectations tend to be a lagged response to recently experienced inflation. There is also some evidence that longer-term expectations are more important for inflation dynamics than short-run expectations.[4]

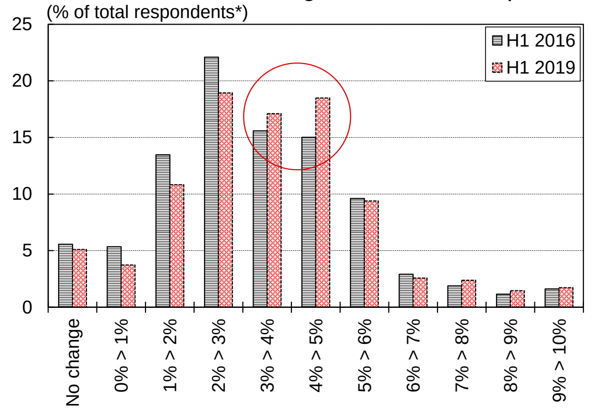
Longer-term expectations are much less responsive to recent out-turn price growth. **Survey measures of long-term expectations have remained in a fairly tight range** of around 2.5 to 4% since the Global Financial Crisis (Chart 4, lower). We note that there has been some disconnect between the YouGov/Citi survey measure of longer-term inflation expectations, which continues to hover around 3%, and the BoE gauge which has drifted slightly higher. More granular data available from the BoE isolates the slippage. In H1 2016 there had been a clear majority of respondents expecting inflation to "go up by 2% but less than 3%" [the BoE's target, or just above] over the longer term, but since the referendum there is little between the proportion of people suggesting that inflation will average 2, 3 or 4% over the longer term (Chart 5).

Chart 4: Public Inflation Expectations



Source: ONS, YouGov/Citi, BoE, MUFG Bank Economic Research Office

Chart 5: Distribution of Long-term Inflation Expectations



Note: Percentages exclude those who answered 'no idea' but include those who expect deflation or inflation above 10% (not shown on chart).
Source: BoE, MUFG Bank Economic Research Office

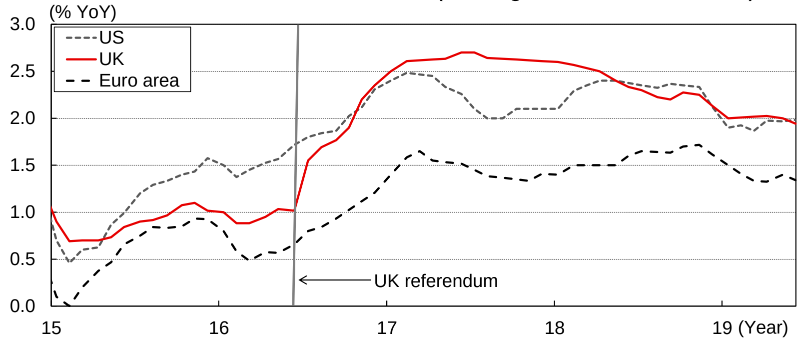
(3) Professional forecasters' views: most forecasts are based on an 'orderly Brexit'

Aggregated inflation forecasts are another way to judge developments in expected inflation. Chart 6 shows the average forecasts for CPI inflation from Consensus Economics over a 12-month horizon. These swiftly moved higher after the Brexit referendum result but have now declined to 2% (which happens to be both the BoE's target and the latest figure for headline

[4] For example, Clark and Davig (2008) write that "long-run expectations, which are tantamount to trend inflation, more important than short-run expectations" for inflation dynamics. See here: www.kansascityfed.org/PUBLICAT/RESWKPAP/PDF/rwp08-05.pdf

inflation). Economists generally base inflation forecasts on a judgement of the balance between aggregate demand and supply, but Brexit is a source of uncertainty.

Chart 6: Consensus CPI Forecasts (Average of Next 12 Months)



Note: Consensus Economics aggregates independent forecasts for the current (*t*) and following (t_{+1}) calendar years. To estimate a rolling 12-month forecast we create a weighted average of the *t* and t_{+1} forecasts. We apply a weight of 11/12 to the February *t* forecast and 1/12 to the February t_{+1} figure. These weights shift through the year so that in December *t* is weighted 1/12 and t_{+1} 11/12. The January forecast for *t* is left unadjusted.
Source: Consensus Economics, MUFG Bank Economic Research Office

While market participants have been pricing in the full spectrum of Brexit outcomes, **most economists continue to predicate their UK forecasts on an orderly departure from the EU rather than a weighted probability of different outcomes**. This explains the clear contrast with the market-based measures outlined above. This would change if 'no deal' were to start to be perceived as the most likely outcome. In that case, inflation forecasts would be rapidly revised upwards. After all, the initial referendum result provided a useful recent guide to how a sudden sterling depreciation passes through to consumer prices.

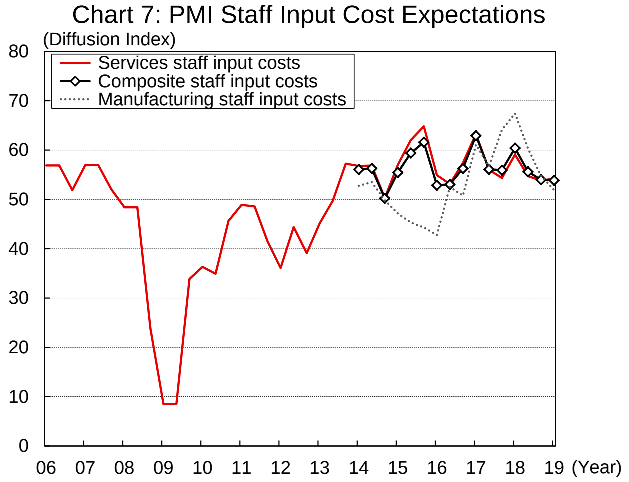
4. Inflation expectations and wage growth

Taken together, **we cannot dispute the BoE's claim that inflation expectations remain "well anchored"**. But risks probably lie on the upside, unlike in the euro area and perhaps the US where market-based measures of inflation expectations have slipped recently. These measures remain firm in the UK, and there are a few tentative signs of public long-term expectations slipping higher.

Does this matter? Any signs of higher embedded inflation expectations might concern the BoE if accompanied by higher wage demands, which could feed back into price growth and push inflation higher. However, even with a tight labour market – unemployment has fallen to 3.8%, a 45-year low – businesses do not seem to expect labour costs to increase. The broad PMI gauge of staff input costs remains relatively muted, hovering just above the 50 'expansion' mark (Chart 7). More specific surveys of expected pay awards also show that firms are generally unwilling to offer pay increases much above the rate of inflation. The latest analysis from XpertHR, which collates data on pay agreements at large employers, shows that the median expected annual pay award has remained at 2.5% through 2019. Meanwhile, data from the UK's Chartered Institute of Personnel and Development (CIPD) show the median expected basic pay increase in the private sector for the 12-months to March 2020 was just 2%. With UK productivity growth averaging around just 0.5% YoY since 2010 it is easy to see why many firms are reluctant to offer high pay increases.

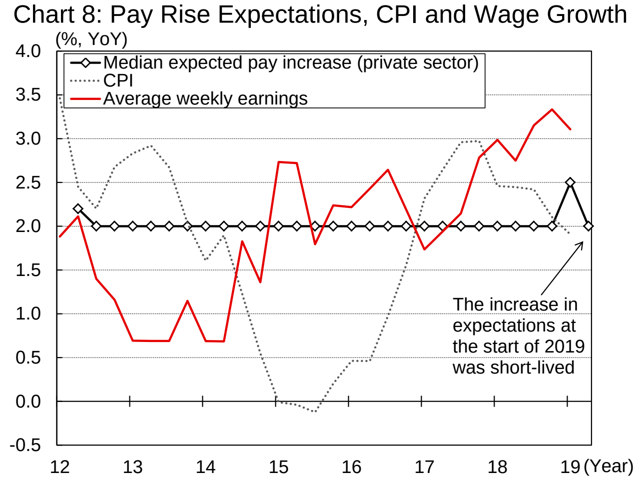
There is some difference between the median expectations and actual pay growth in Chart 8. It might be that firms are willing to pay more to their most productive workers, or those taking a risk by joining from other firms. CIPD suggests "employers are offering increased pay to key or new employees" with many firms only raising salaries for "a minority of vacancies and positions". But, overall, pay growth remains modest by historical standards and we expect it will remain this way while Brexit uncertainty remains high.

Chart 7: PMI Staff Input Cost Expectations



Source: IHS Markit, MUFG Bank Economic Research Office

Chart 8: Pay Rise Expectations, CPI and Wage Growth



Source: CIPD, ONS, MUFG Bank Economic Research Office

5. Conclusion

Market-based measures of inflation expectations have remained firm in the UK despite decreasing in other jurisdictions. This is related to the perceived risk of 'no deal' Brexit, which has increased after Theresa May announced her departure as prime minister. Market participants are pricing in a 'no deal' scenario which would see sterling weaken and push up the cost of imports, leading to higher consumer inflation. Public inflation expectations remain relatively well-anchored, but there are a few signs that the period of higher inflation after the referendum result may have affected longer-term inflation expectations. Despite the higher perceived risk of 'no deal', most economists continue to base their forecast on an 'orderly' Brexit, rather than a weighted probability of the different outcomes. For that reason, the consensus is for inflation to be around the BoE's target of 2% YoY over the next 24-months (we expect 2.1% YoY CPI growth in 2020 – assuming 'no deal' is avoided).

For the BoE, higher inflation expectations matter if they affect pay awards, which could then feed back into actual inflation as firms raise prices to increase wages. But firms seem to be unwilling to offer significant pay rises to most workers, and wage growth seems unlikely to increase much, if at all. In fact, the problem of slightly higher inflation expectations is a relatively nice one for the BoE to have at a time when other jurisdictions are grappling with entrenched expectations for lower inflation. Such expectations can become self-fulfilling if wage demands fall, and it is better to have slightly above-target inflation than to be haunted by the spectre of deflation.

However, a 'no deal' Brexit would be a headache for the BoE. Policymakers would have to weigh up the medium-term effect on inflation due to weaker currency versus the risk of trade friction and weaker confidence weighing on economic activity. The quick reaction to the initial

Brexit vote – a 25bp rate cut and expanded quantitative easing programme – suggests that further easing would be more likely. The BoE has carried out two rate hikes since then but has hinted that it could reverse the normalisation process in the case of 'no deal. Mark Carney, the governor of the BoE, recently said that "it's more likely that we will provide some stimulus" in the event of a 'no deal', but also added that "there is no guarantee".

If implemented in a 'no deal' scenario, more accommodative monetary policy would be another tailwind for inflation, and probably not the only one. The government might also introduce various fiscal stimulus measures in an attempt to cushion any blow to economic activity, there could be increases in tariffs and other trade costs, and lower immigration might force firms to raise wages in order to attract suitably skilled workers. The BoE might look past a temporary deviation from its target, but if these factors contribute to a persistent overshoot then it would be harder to ignore. A balance between stabilising price growth and economic activity might exist in such a scenario, but it would be a narrow path for the BoE to walk – especially if there is any upward slippage in inflation expectations.