



Brexit Monitor

MONETARY AND CAPITAL MARKETS DEPARTMENT

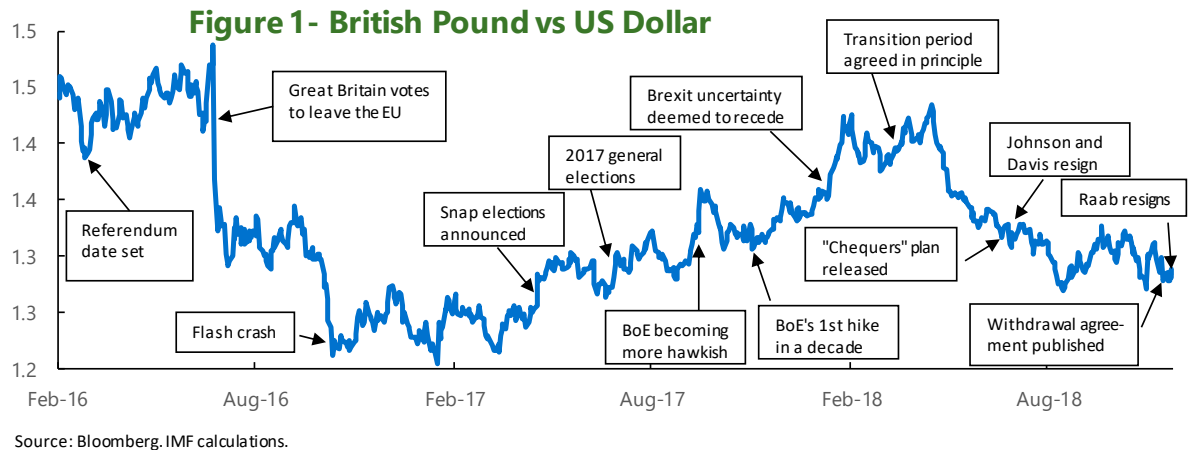
Asset prices in the UK have been volatile since the Brexit referendum in 2016. As the March 2019 deadline for the UK to leave the EU nears it is important to monitor market prices, activity and other indicators for signs of distress. This note proposes a number of such indicators.

The UK's 2016 vote to leave the European Union has had a significant effect on the financial markets in the UK as well as the outlook for the financial sector. Although the UK is not set to leave the EU until March 2019, asset prices have moved significantly in response to developments in the negotiations between Brussels and London. In addition to moves in asset prices, the decision may have financial stability implications and could alter the City of London's role as a financial center.¹ This note presents a set of indicators that can be used to monitor these risks and developments (Table 1).

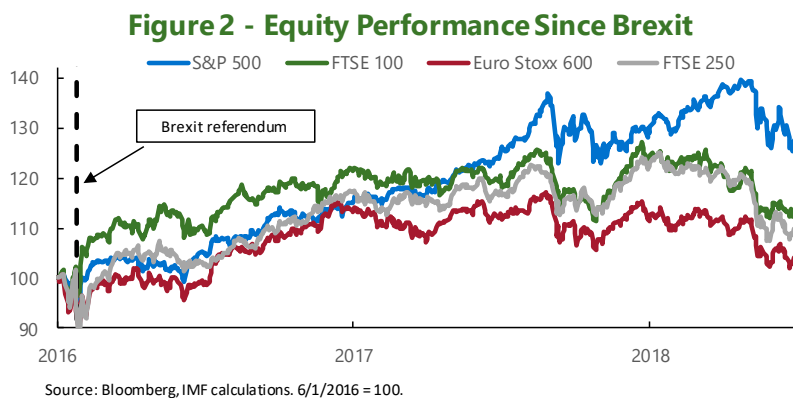
1. Financial markets

The Brexit referendum and subsequent political decisions have had a clear effect on the exchange rate. Sterling weakened about 11% (on a trade weighted basis) as soon as the referendum results were announced (Figure 1) and has remained at a low level. Most analysts expect that a no deal Brexit would lead to a further sharp depreciation of the currency, as far as 1.1 or 1.0 against the dollar. Sterling volatility also surged around the referendum and has begun to creep up again as the exit date approaches. Risk reversals, which measure the spread in the volatility of put and call options, went heavily negative following the referendum, suggesting more interest in buying protection from sterling weakness than strengthening. There is a similar story for positioning data, which also went negative after the vote, suggesting greater interest in going short sterling than long. The Brexit monitor includes market positioning indicators, as well as the exchange rate, currency risk reversals, and sterling implied volatility to assess developments in these markets in the coming weeks.

¹ The October 2018 and April 2017 issues of the GFSR include boxes on the implications of Brexit for financial stability.



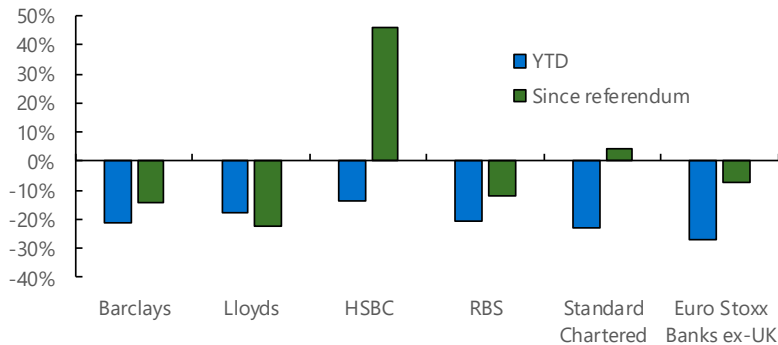
The picture is more nuanced for equities. UK stocks have, on the whole, slightly outperformed European equities since the referendum and lagged the US (Figure 2). However, this partly reflects the depreciation of the exchange rate (the correlation between the FTSE 100 and the sterling-euro exchange rate since mid-2016 is -77%)². A weakening in the currency boosts UK stocks that earn revenues in foreign currencies. This has more of an impact on the more internationally focused FTSE 100 than the FTSE 250, with its greater share of domestic firms. The difference in the two indices is used as a proxy for the expected effect of Brexit on UK domestic firms in the monitor. The monitor also includes an index of excess returns on equities with a high exposure to sterling revenues, as well as equity volatility.



Many UK banking stocks have also declined since the referendum, especially those with a large part of their business exposed to the domestic economy (Figure 3). This reflects market concerns about the potential for a disruptive Brexit to worsen bank profitability and asset quality through a slowdown in economic activity. The monitor, therefore, includes a UK bank stock index.

² This correlation has decreased somewhat recently. One interpretation of this is that the negative effect of the increased likelihood of a no deal Brexit is stronger for firms than any perceived gain from the sterling weakness that it entails.

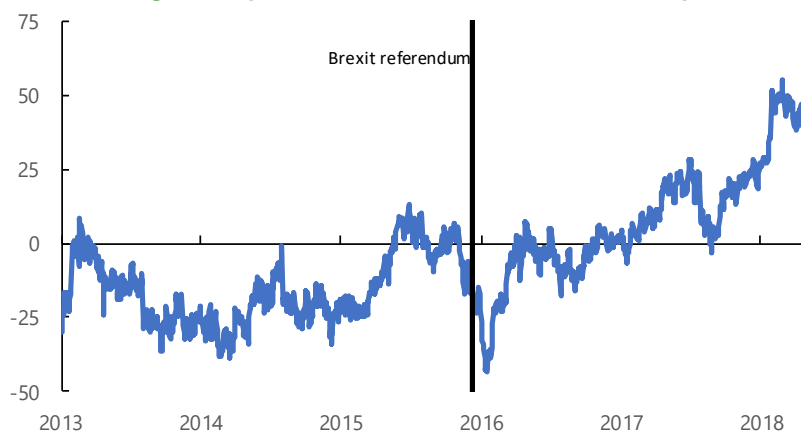
Figure 3 - Bank Performance post-Brexit



Source: Bloomberg, IMF calculations

Gilt markets have been less affected, after recovering from the initial post-referendum shock. The 10-year yield dropped from roughly 1.4% before the referendum to a low of 0.52% six weeks after it. It was quick to recover, however, and has for the most part traded in the 1.2-1.5% region since then. Expectations for monetary policy tightening dipped somewhat following the referendum but have since recovered. The market-implied policy rate 3 years out has consistently suggested modest tightening of monetary policy. The term premium on Gilts has recovered from its initial post-referendum dip but remains in negative territory. The spread between the UK yield curve slope and the slope of the US yield curve fell following the referendum to negative territory but has widened again to approximately 40 bps recently (Figure 4). As this spread should include any risk premium in UK gilts relative to US treasuries, it is included in the monitor.

Figure 4 - Spread Between UK and US Yield Curve Slope



Source: Bloomberg, IMF calculations.

Note: The slope of the yield curve is calculated as the 10-year yield less the 2-year yield.

Spreads of UK corporates have risen sharply recently and are approaching their post-Brexit highs. Market-based finance has become an increasingly important source of funds for UK corporates, and have accounted for roughly two-thirds of net finance raised publicly since 2007, primarily through corporate bond issuance. Investment grade spreads spiked on the referendum result but retreated in

the following months. Recent weeks have seen a renewed rise with levels now approaching those seen in the immediate aftermath of the referendum.

2. The UK as a financial center

Brexit may lead to relocation of some financial services employees. Initial estimates suggested that up to 100,00 staff could relocate (the financial services sector employs roughly 1 million people in the UK).³ A year later, other studies were estimating that the number could be in the region of 30,000.⁴ Recently, there have been reports that the impact could be even smaller, particularly as actual moves have been limited so far, though this is not accepted by all commentators.

Studies have also tried to estimate the degree to which financial activity will be relocated. Approximately 20% of UK financial sector revenues originate in the (non-UK) EU. This can be thought of as a rough upper bound for activities that could potentially move, although given economies of scale and scope, some related business could also move despite not being directly related to EU clients. Banking is the largest sub-component with just over half of the total. Asset management, insurance, and market infrastructure and other sectors are responsible for the remainder. In addition, related activity may also need to relocate. Companies providing legal services, management consultancy, and accounting may be amongst those at risk. These sectors employ as many people as the financial sector itself.

Reliable data on the effect of Brexit on financial activity is scarce. Banks may lose passporting rights after Brexit but the amount of adjustment taking place is unclear. Many banks involved in cross-border activities already have subsidiaries in the EU-27. Some insurance companies may need to restructure or apply for an authorization to maintain their cross-border business, but large consolidated balance sheet adjustments are not expected. Asset managers may face restrictions in their ability to delegate investment management to or market investment funds in different jurisdictions. The extent to which this is taking place is also unclear.

Within the financial sector, derivatives clearing services have been a particular source of concern in the event of a no-deal Brexit.⁵ Among the most significant effects of a no deal exit would be the non-recognition of UK CCPs under EU regulations. This could potentially lead to significant disruption in derivatives markets. Bilateral contracts could also see disruption and uncertainty as lifecycle events and other operations may not be possible.⁶ Banks and insurance companies could face difficulties due

³ Oliver Wyman, The Impact of the UK's Exit from the EU on the UK-Based Financial Services Sector (2016).

⁴ Bruegel, Brexit and the European financial system: mapping markets, players and jobs (2017).

⁵ The October 2018 GFSR has more details on this area.

⁶ Lifecycle events include novations, certain types of portfolio compression, maturity extension of open positions, material amendments, and some types of position unwinds. Lifecycle events can turn a legacy trade into a new transaction, thus falling under the umbrella of the permissions or authorizations in place at the time the new transaction occurs. Once the United Kingdom

to the loss of passporting although many institutions have done extensive preparatory work to ensure continuity of operations, even in a no deal scenario.

Recent arrangements should help mitigate the risks to clearing of leaving the EU without a deal. The UK's Temporary Permission and Temporary Recognition regimes enable EEA firms to enjoy continued market access, even in a no deal scenario, for up to three years following Brexit. EU-27 authorities have suggested that temporary arrangements could be used to ensure business continuity in derivatives markets. Indeed, there is little hard evidence of a mass relocation of existing derivatives contracts so far. While data in this area remains scarce, the number of contracts arranged in the UK has not declined noticeably recently and has in fact increased along some business lines. The monitor includes data on these clearing activities. However, recent company announcements – such as that of CME Group – indicate that there is still a possibility that derivatives activity could move to the EU.

becomes a third country, UK financial firms would require an EU equivalence decision or an explicit national authorization or waiver in some EU27 member states to continue performing these events.

3. Putting it all together

The indicators discussed in this note are presented in the table below. This combines asset prices, data on activity, betting odds, and sentiment data.⁷ We plan to continue monitoring these indicators as political negotiations over the UK's exit from the EU continue.

Table 1 - Brexit Monitor

	Indicator	Latest reading	Change (year to date)	Change (since referendum)	Comments
FX markets	1 Sterling spot price	1.28	-5%	-14%	While the currency is 6% higher than post-Brexit lows, it is still well below pre-referendum levels.
	2 GBP CFTC net long	-39	-50	13	Positioning is still heavily in negative territory, suggesting short interest is still dominating.
	3 GBPUSD risk reversal	-2.1	-1.6	2.9	Risk reversals remain negative, implying continued downside risks to the currency.
	4 GBPUSD 1M implied vol	13	7	-11.0	Currency volatility has been increasing in recent weeks, but still below the post-referendum peaks.
Equity markets	5 FTSE 250 vs FTSE 100	-11%/-9%	-2 ppts	-3 ppts	The more UK-focused FTSE 250 has continued to lag the FTSE 100, meaning companies less dependent on the UK have outperformed.
	6 FTSE All-Share Banks	3,781	-16.4%	+15.8%	Banks stocks are down 16% YTD but up 5% in recent days on reports of a Brexit deal for financial services.
	7 CBOE Brexit High 50 excess return	-11%/-9%	-1 ppt	-19 ppts	Companies with a high GBP revenues have underperformed since the referendum but tracked the FTSE 100 this year.
	8 FTSE Volatility Index	22	13	-7	Implied equity volatility has been rising in recent weeks.
Bond markets	9 UK 10-Year yield	1.25%	+6 bps	-6 bps	Yields have declined in recent weeks and are now almost unchanged this year.
	10 UK-US yield curve slope differential	39 bps	+15 bps	+51 bps	The spread between the slope of the UK and US yield curves has climbed recently, suggesting a higher UK risk premium.
	11 Sterling IG Spreads	182 bps	+63 bps	+12 bps	Bond spreads have steadily increased this year are now close to levels in the immediate aftermath of the referendum.
Clearing	12 LCH equity clearing data	106 mn	1%	49%	Monthly cleared equity volumes in LCH's London operations have held up well, despite a slight decrease in the November data.
	13 LCH repo clear data	€7.7 tn	14%	38%	Cleared repos at LCH in London have held up this year. They have increased since Brexit although the proportion done in France has increased.
Other	14 Implied probability of a no deal Brexit from bookmakers	56%	+20 ppts	-	Betting odds suggest the probability of no Brexit deal has been stable this month, but has risen over the year as a whole.
	15 Consumer confidence for financial situation (12M ahead)	5.9	2.2	-3.2	Consumer confidence has declined in recent months, but remains in positive territory.

Sources: Bloomberg LP; LCH; and IMF staff. Changes are points unless otherwise indicated. LCH data changes represent annualized changes. Reference point in the "since referendum" column is latest available before the vote on June 23rd 2016. The exception is repo clearing where only annual data is available and 2015 full-year is used.

⁷ We have mostly excluded quantification efforts for firm relocation. Most financial institutions do not include disclosure on employee or activity movement due to Brexit in their quarterly and annual reports. Various figures have been quoted in the media but these are unofficial amounts cited in interviews and remarks by management of institutions which involve a mixture of finalized as well as expected moves, and relocation in specific areas at various dates. Overall, however, it can be said that the amount of announced movement is somewhat less than initially expected by most estimates.