



## Foreign Exchange Professionals Association<sup>1</sup>

# White Paper: Sources of FX Market Liquidity During the Brexit Vote

## I. Introduction

On June 23, 2016, citizens of the United Kingdom participated in a referendum to decide whether the United Kingdom would withdraw from the European Union. This initiative has been referred to as “Brexit.”

Early in the morning of June 24, the results became clear: a majority of voters supported the UK leaving the EU.

Financial market participants planned for volatility and uncertainty in the hours and days preceding and following the Brexit vote. Banks, funds, and venues prepared for potential liquidity shortages and swings in prices. The Bank of England, for example, took steps to ensure the smooth operation of markets during this time<sup>2</sup> and urged orderly operation of capital markets in the immediate aftermath of the results being announced.<sup>3</sup>

In the global institutional foreign exchange (FX) market, there was significant debate as to whether order book liquidity would remain in place during this expected time of turbulence and whether the source of liquidity would be banks or non-bank market makers.

## II. Framework for the FXPA Study

In order to measure the relative sources of liquidity during the Brexit voting window, the Foreign Exchange Professionals Association (FXPA) conducted an anonymous, voluntary survey among its trading venue members to better understand the nature of FX spot liquidity provided to the market on executable streams and central limit order book (CLOB) structures around the Brexit event.

Trading venue members were asked to provide trading volume information on an hourly basis over 54 hours, from Wednesday London noon (on the day before the vote) until London 5 pm on Friday (the day after the vote). The venues provided volume information for liquidity provided by banks and non-banks. The currency pairs analysed included GBP/USD, GBP/JPY, EUR/GBP, EUR/USD, USD/JPY, and EUR/JPY.

The information was collected, aggregated, anonymized, and converted to percentages (bank vs. nonbank) by Steptoe & Johnson LLP, counsel to the FXPA. Steptoe received the confidential submissions and is the only party who reviewed each venue’s submission. The FXPA stipulated that the study would only proceed in the case that three or more venues provided data. FXPA members do not know how many firms provided data or the identity of the participating venues.

## III. Analysis: FX Spot Data Brexit

It is best to divide the data up between the three major currency pairs and the three crosses as the latter are very much a derivative of the former (with the exception of EUR/JPY, which has reasonable “natural” flow).

<sup>1</sup> The Foreign Exchange Professionals Association represents the collective interests of professional foreign exchange industry participants, including asset managers, to advance a sound, liquid, transparent and competitive global currency market to policymakers and the marketplace through education, research and advocacy. The FXPA’s activities focus on educating US and international legislators, regulators and central banks, the news media, and the general public, as well as coordinating with multinational organizations and trade bodies. The following comments do not represent the specific individual opinion of any one particular member. For more information, please see [www.fxpa.org](http://www.fxpa.org).

<sup>2</sup> <http://uk.reuters.com/article/uk-britain-boe-liquidity-idUKKCN0W91YH>.

<sup>3</sup> <http://www.bankofengland.co.uk/publications/Pages/news/2016/056.aspx>

## A. What the Data Tells Us

At face value, it looks as though non-banks stepped up to the plate in the hour of the Sunderland announcement as the percentage of volume evened out; however, the Sunderland result came in the window between the New York close and the Asian open. Obviously desks were manned for the event, but compared to the previous day at the same time, bank participation in the market was higher – 51% from 45% in Cable, 68% from 4% in sterling/JPY, 61% from 52% in EUR/USD and 70% from 51% in USD/JPY during the time the Sunderland result was announced and the major move lower in sterling occurred.

The non-bank proportion rose in EUR/GBP and EUR/JPY, but could be because the data suggest the non-banks are more active in crosses than the “legs”. Several of these firms construct a price in the cross using the legs and because their technology is often nimbler and quicker, they are top of book in the more complex pairs.

During the Asian time zone when most of the results were announced and the result of the referendum became clear, participation across bank and non-bank segments was broadly similar to the same time the previous day, although non-bank activity in Cable and EUR/JPY was significantly higher.

Suggesting liquidity was lower and volatility levels higher in the “legs”, non-bank participation in EUR/GBP and EUR/JPY was noticeably lower during the result hours compared to the previous day.

Bank participation rates were lower in the European afternoon and US afternoon as they reduced risk ahead of the polls closing, likewise, after polls closed, the balance tipped back in the direction of the banks.

Over the sample window, banks were responsible for 66.6% of Cable flow, 67.25% of EUR/GBP flow, 64.9% of EUR/USD flow, 64.1% of USD/JPY and 61.7% of EUR/JPY. GBP/JPY, which is a somewhat synthetic cross (i.e., there is little underlying, or “natural” flow in the pair), was evenly balanced over the window with non-banks handling 50.3%.

The proportion of flow in GBP/JPY was wild – with non-bank participants in one hour responsible for 96% of flow and in another, just 9%. Around Sunderland and the result becoming obvious windows, bank participation grew significantly in GBP/JPY.

During the critical hours of the result sequence, non-bank participation on GBP/JPY was between 1/2 to 1/3 the levels it was at the same time the previous day.

Non-banks like the most liquid times of day. Generally speaking, the FX market is at its most liquid between 12 noon and 5pm London time, when Europe and the US are both in. Non-banks have a higher proportion of the market during this window across most currency pairs (this sector does have a higher proportion in the US afternoon, however, in EUR/USD) than during the US only and Asian only windows, it is also a higher proportion than during the Europe-only window.

Anecdotally there appears to be an impact from the changes enforced around the London 4pm Fix. Bank participation in Cable is at its lowest in the 4pm window and it was lower than the previous hours in the other currency pairs except for EUR/JPY.

This is evidence that rules established by banks that have either ring-fenced customer Fix business or preclude traders from participating in the market in the Fix window, may have had an impact.

## B. What the Data Doesn't Tell Us

A percentage of volume is all very well, but it could be the different segments are a bigger piece of a smaller pie. It would be helpful for further study if a historical benchmark could be provided in terms of real notional volume traded and then this data could be overlaid as a percentage of the benchmark (meaning of course real data does not have to be disclosed).

A crucial moment in the Brexit vote was the Sunderland vote, but this was only an impact for three or four minutes during the hour. The data does not tell us if either segment had a greater/smaller influence in the crucial minutes when Sterling dropped 6%, and equally whether there was a shift in the minutes after the Sunderland vote (ditto the period when the outcome became clear).

Better analysis of where liquidity is provided from could be made if volatility levels can be taken into account, for example, when markets get busier, is there a shift in the proportion of activity? Does one segment thrive on thin, whippy markets?

## IV. Conclusion

The FXPA survey examines the nature of FX spot liquidity provided to the market on executable streams and CLOB structures around the Brexit event. The data resulting from the survey indicates that non-bank participation increased in the hour of the Sunderland announcement. Bank participation rates were lower in the European afternoon and US afternoon as they reduced risk before polls closed, but the balance tipped back in the direction of the banks after polls closed. Notably, the data collected suggests that rules established by banks to ring-fence customer Fix business or preclude traders from participating in the market in the Fix window had an impact.

While the FX survey provides certain insights regarding the sources of FX market liquidity during the Brexit vote, further analysis regarding historical benchmarks and volatility levels would be helpful in order to fully understand market behavior surrounding the Brexit event.

# Results of FXPA Member Survey



