

# The WM/R Fix Quarterly Update

Q2 2016

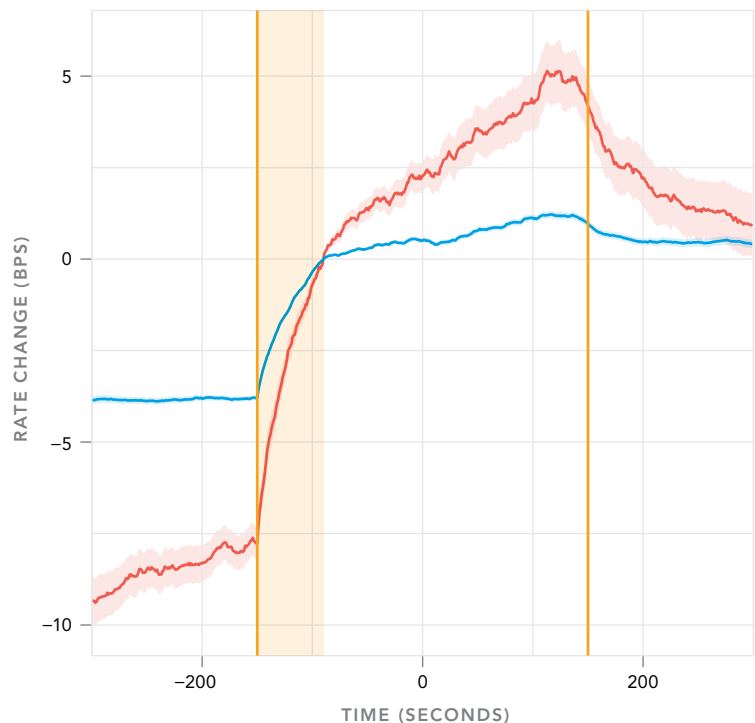
## Overview

Last year, after the adoption on February 15, 2015, by WM/Reuters of a five-minute window to calculate its 4 p.m. currency benchmark rates known as the “Fix”, we described a predictable pattern that emerged in currency trading around the Fix. As banks shifted toward agency style execution during the new five-minute Fix window, the systematic concentration of demand imbalances created strong momentum in rate changes throughout the Fix window, followed by a marked reversion. Pragma subsequently deployed SmartFix, an execution algorithm that leverages the pattern to achieve better execution for firms targeting the WM/Reuters benchmark. In this update, we note that the tradable pattern persists into Q2 2016, although the pattern continues to weaken, particularly on ordinary days.

## The Pattern

Figure 1 shows the trading pattern of momentum during the Fix window and reversion afterward first described by Pragma in the summer of 2015.<sup>1</sup> The X axis shows the time relative to 4 p.m. London time, and the Y axis shows the rate change in basis points relative to the “observation time” of one minute after the start of the Fix window. The rate change during the first minute of the Fix window predicts a

FIGURE 1 Rate changes around 4 p.m.



— Month Ends — Normal Days

On average the direction of rate movement in the first minute of the fixing window continues over the remainder of the window, and the rates tend to revert after the end of the window. The pattern is much more robust on month-ends than on normal days.

1 “New Trading Patterns around the WM/R Fix,” No. 9, July 2015, Pragma Securities. The returns in Figure 1 are the average of ten relatively liquid currency pairs: EUR, GBP, CHF, JPY, CAD, AUD, NZD, MXN, SGD, and ZAR, and cover all trading days from February 15, 2015 through June 30, 2016.

continuing rate change in the same direction over the subsequent minutes of the window, and a reversal or reversion starting shortly before the end of the window. The figure shows the average rate changes for normal days and month-end days separately.

In our original research note, we speculated that this tradable pattern would quickly dissipate in an efficient market. Figure 2 shows the pattern separately for each of the quarters (with "15Q2+" including data from Feb. 15 to June 30, 2015). The strength of the trading pattern has indeed weakened from quarter to quarter. Almost a year and half after the adoption of the new Fix methodology, the pattern appears close to disappearing on ordinary days. It is still relatively robust on month-end days, though, as Figure 1 shows.

## Trading Volume

Figure 3 shows that trade intensity<sup>2</sup> relative to the average trading volume around the same time of the day during the same quarter. We

FIGURE 2 Rate changes around 4 p.m.

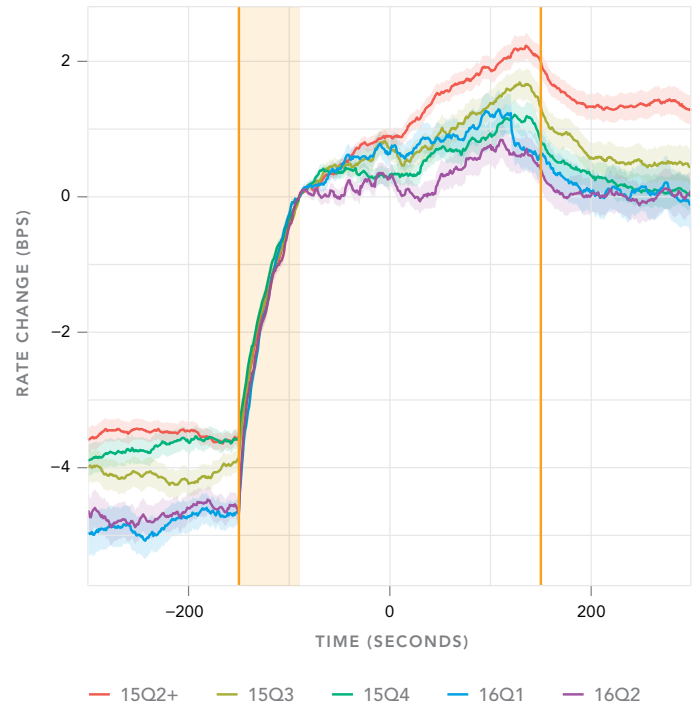
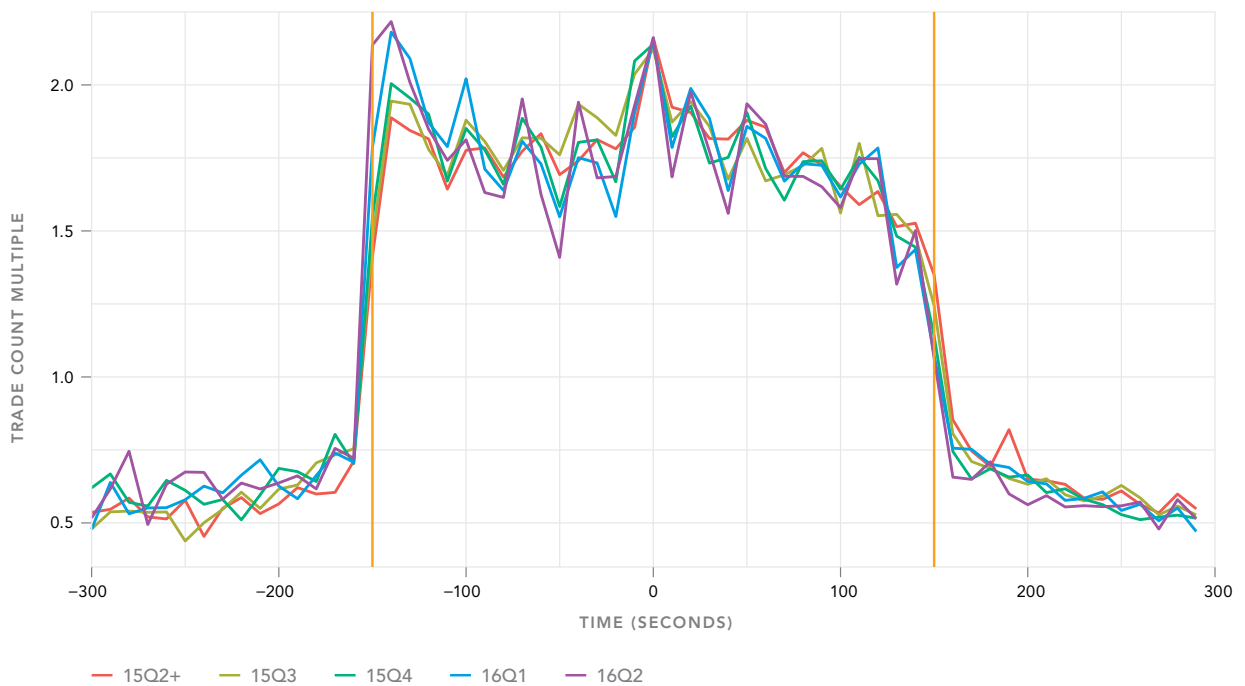
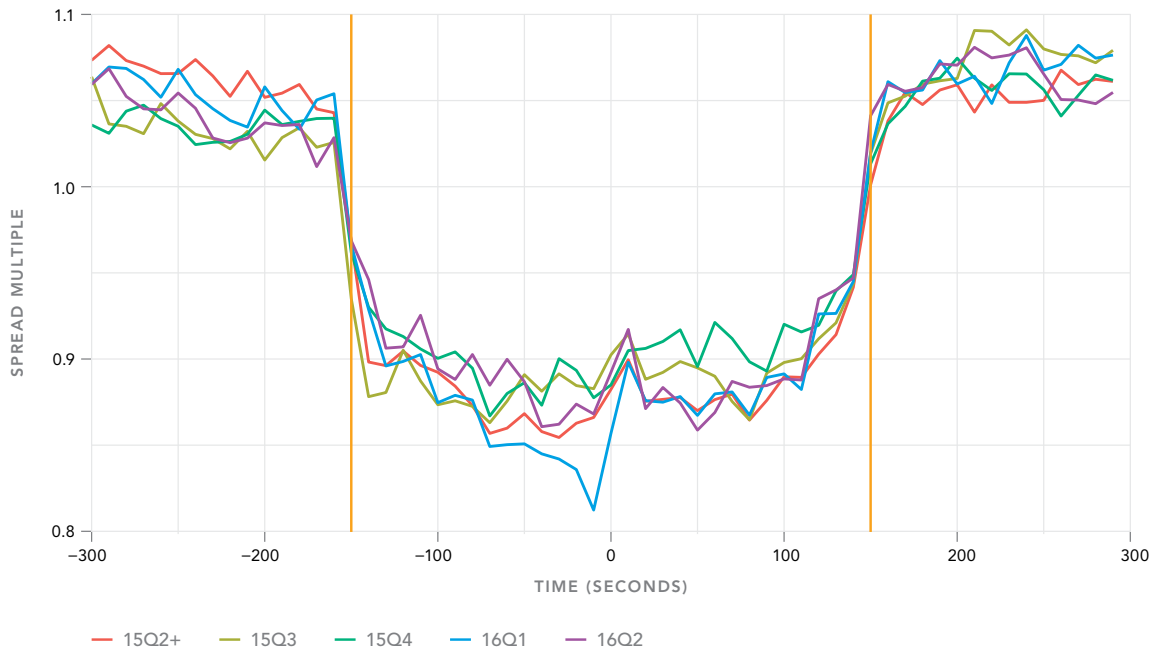


FIGURE 3 Trade count around 4 p.m.



2 The number of trades or volume of trading reported by several major ECNs.

FIGURE 4 Bid-offer spread around 4 p.m.



observe a consistent pattern of sudden increase at the start of the Fix window, and a less sudden trailing off at the end. This step-like pattern is consistent with the market's shift to algorithmic trading during the Fix window. There has been no marked quarter to quarter shift in the volume pattern around the Fix.

## Best Execution

The concentration of trading the Fix window is one of the most liquid times of the day, and bid-offer spreads contract by about 20% relative to the period just before the Fix window, as shown in Figure 4. This pattern of contracting spreads has also not changed from quarter to quarter, indicating that aggregate trading in the market place has been stable since the adoption of the new Fix window.

## Conclusion

Firms able to tolerate deviation from the Fix benchmark can do significantly better on average by trading outside of the Fix window, which avoids paying the price concession to complete their trade during the crowded five-minute window alongside many other traders going in the same direction. The persistence of the pattern in volume and spread around the Fix window, however, suggests that many market participants will continue to concentrate their trading during the Fix window.

Given that the gross trading patterns around the fix window haven't changed significantly, the deterioration of the signal on ordinary days is interesting. Rather than any broader shift to move trading away from the Fix window, it suggests that trading within the Fix window may have become more intelligent or conditional, for example through use of algorithms like Pragma's SmartFix algorithm, which modifies trading activity based on price action during the Fix window.

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