



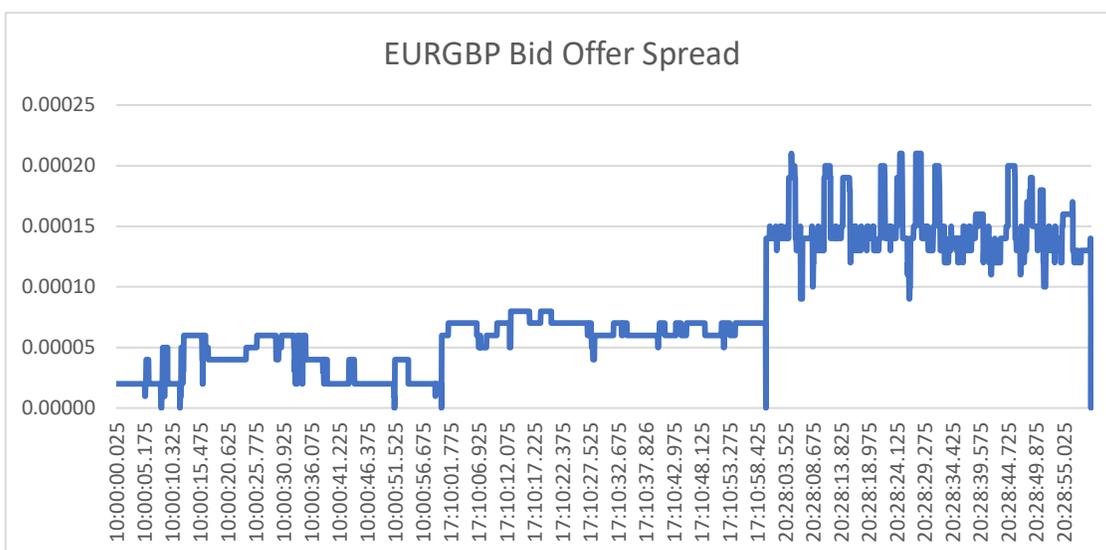
NEWCHANGE FX

Market Impact API

The Market Impact component of Implementation Shortfall (Perold 1988) measures the change in portfolio value between the moment an order is externalised to the market and the moment an order is filled. This formulation makes market impact and effective spread (the difference between Arrival Price and Execution Price) equivalent.

Market impact is the product of two effects: a liquidity component and an information component.

The liquidity component of spread is an instantaneous adjustment away from equilibrium. This is experienced as a skew away from the mid-rate as dealers quote bids and offers relative to equilibrium price of the market. This skew is called temporary because it does not persist beyond the lifetime of the trade (Kissel & Glantz 2003). The skew away from mid is not static. It changes as a function of liquidity conditions and risk. In the chart below we trace the top of the book Bid Offer spread for €1 million at three distinct moments during the day. The size of the spread i.e. the skew away from mid is narrowest during London trading hours when markets are most active.



Source: NCFX aggregated data.

The information component of spread considers the change in mid-rates over time. We can understand this by considering that the mid-rate represents the equilibrium rate where buyers and sellers are in balance. A change in mid-rates through time reflects a re-evaluation of this balance. Prices adjust to new information. Buy orders push equilibrium (mid-rate) prices higher, sell orders push equilibrium (mid-rate) prices lower. The information content of a trade captured in the effective spread may persist beyond the completion of the trade, but for the purposes of measuring a one off transaction, the dealing price captures the point at which this risk (of changing prices) is transferred to the dealer.

The NCFX market impact model captures these liquidity and information components of effective spread by decomposing effective spread into two parts: The change in mid-rates between the submission time and execution time, and the instantaneous half spread between the Fill Rate and the NCFX mid-rate at Execution time. If the trade submission time is unknown, the API returns a default value set at 30 seconds before execution time.

The Market Impact API is currently available for Spot FX only. The API converts all costs to USD at the relevant USD exchange rate at each time stamp. This allows for comparison of costs between pairs that are quoted in different terms.

Versions for outright and swaps are planned for release in the near future. For more details about the NCFX Price Impact API please contact your NCFX representative