FX RISK PREMIA

At the heart of risk premia investing is the idea that investors are not compensated for investing in particular asset classes, but are compensated for assuming risks. Risk premia can be captured by investing in currencies as well as conventional asset classes like equities and bonds. The most prominent currency risk premia will be discussed in this article.

Over the last decades, the existence of risk premia for all major asset classes has been well documented in academic literature. The origins of this research go back to the work of Graham and Dodd (1934), who paved the way for value investing for equities. Beside equities, there is a long history of risk premia research for currencies. Hansen and Hodrick (1980), Meese and Rogoff (1983) and Fama (1984) documented that a strategy based on interest rate differentials between currencies, commonly known as the carry trade, generates positive returns and became a phenomenon during the post-Bretton Woods period in the early 1970s. Besides carry, additional risk premia, such as value and momentum, have also emerged from the academic literature.

**FX CARRY:** Carry risk premia are designed to take advantage of the outperformance of higher yielding currencies. This is achieved by taking long positions in higher yielding currencies (sometimes known as investment currencies) and short positions in lower yielding currencies (or funding currencies) to generate a strong return over a long-term investment horizon. A FX carry strategy is equivalent to borrowing in a country with low interest rate and investing the cash into a country with a higher interest rate. Therefore, if the exchange rate between the two countries is constant, the return is simply the interest rate differential between the two currencies.

The positive returns generated by currency carry trades are created by the violation of Uncovered Interest Rate Parity (UIP), also referred to as the forward premium puzzle. UIP assumes that the interest rate differential would be completely offset by the depreciation of the investment currency, however this principle does not hold empirically. A lot of academic research has been devoted to the phenomenon of the UIP violation. Brunnermeier, Nagel and Pedersen (2008) argue that carry opportunities exist due to the risk of sudden unwinding of positions by speculators facing funding constraints during crises. Alternatively, a number of academics argue that the failure of UIP is caused by the so called “peso problem” explained by Evans and Lewis (1995) and others. In the 1970s, Mexico pegged the peso to the US dollar, however during this time there was a large gap between the interest rate on Mexican and comparable US bank deposits. Friedman reasoned that interest differential reflected the market’s concern that the peso would be devalued. This was realised in 1976 when the peso fell 46% after it was allowed to float. So the violation of the UIP was caused by the risk of a sudden devaluation of the peso.

**FX VALUE:** The value risk premia for currencies is based on the proposition that once converted to a common currency the price of goods and services from two different countries will be on par (otherwise known as Purchasing Power Parity (PPP)). However, the academic literature shows that PPP is an anchor for long-term real exchange rates but not in the short term. For example, Frankel and Rose (1995) examined data for 150 countries with more than 40 years history and their results suggest an estimated half-life for PPP deviations of about 4 years. The short term risks for an investor are large due to the volatile deviations from the long term fair value or PPP. Examples of these deviations are asset price bubbles, monetary shocks and change in portfolio preferences as researched by Rogoff (1996).

In practice, currency value strategies rank currencies according to their under- or overvaluation. Long positions in undervalued currencies combined with dollar neutral short positions in

Along with equity and fixed income premia, FX risk premia are an essential building block for multi-asset strategies.
overvalued currencies generate positive returns. The value premia is derived from the ratio of the PPP of country i at time t relative to the current exchange rate, where the PPP i,t conversion rate as well as the exchange rate i,t are expressed in units of foreign currency per USD. The ratio of greater or less than one indicates that the currency is overvalued or undervalued, respectively, relative to the USD and is expected to depreciate/appreciate in the future. Value strategies buy currencies with the strongest undervaluation and sell those with the strongest overvaluation. PPP data from the International Monetary Fund (IMF) is commonly used for calculating the relative value of a currency.

FX MOMENTUM: Momentum effects have been proven for a variety of asset classes. A prominent piece of research in this field is from Carhart (1997) who provided evidence of one year momentum in equity mutual fund returns. In his research he extended the well-known Fama-French three-factor model that was based on market, value and size by a fourth factor, momentum. The explanation for momentum effects is manifold. Strong positive average returns for momentum come at the risk of infrequent sudden reversals which have been found to be positively correlated with the market volatility. For example, Daniel and Moskowitz (2013) find evidence that the most severe momentum losses do not happen as markets collapse but rather at the beginning of a quick recovery. Further explanations based on the efficient market hypothesis have been discussed by Johnson (2002), Sagi and Seasholes (2007) as well as Liu and Zhang (2008). They propose that momentum returns are a premium for the higher riskiness of winners versus losers. While the evidence that links momentum and standard proxies of macroeconomic risk is still being examined, there is a lot of academic literature that treats momentum as a behavioural finance effect. The overreaction to news was researched by Barberis, Shleifer and Vishny (1998) and Daniel, Hirshleifer and Subrahmanyam (1998) and underreaction by Hong, Lim and Stein (2000).

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REFERENCES

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