DYNAMIC CURRENCY OVERLAY: WHAT'S BEHIND THE SIGNALS?

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WisdomTree has worked with Record Currency Management (Record) to use its currency research and currency signals to help support dynamically hedging currency exposures within international equity strategies. In international investing, currencies can contribute a significant portion of overall returns and volatility, making exposure to currency an important factor driving international results. Record's research finds that there are a number of fundamental factors that capture the sources of return inherent in the currencies of developed markets. The dynamic currency overlay distills these factors into a set of signals used to adjust hedge ratios up or down, according to the anticipated likelihood of international equity exposure currencies depreciating or appreciating.

Setting hedge ratios in this manner means retaining high hedge ratios when the exposure currencies are expected to depreciate, and lowering hedge ratios when exposure currencies are expected to appreciate. This is intended to allow investors to help protect against currency losses, while participating in foreign currency gains, to the extent the currencies perform within these expectations.

For any individual currency, hedge ratios can be adjusted between 0% and 100% based on the results of three commonly-accepted signals as researched by record:

- <u>Carry</u> (interest rate differentials or the cost of hedging): the observation that higher interest rate currencies tend to outperform low interest rate currencies
- <u>Momentum</u>: Momentum is the tendency for the spot rate to appreciate following prior appreciation.
- <u>Value</u>: The value factor seeks to profit from the mean-reverting nature of exchange rates at longer time horizons around "fair value," as measured by <u>purchasing power parity (PPP)</u>.

Combined, these signals inform currency hedge ratios, depending on where a currency is in its cycle, how expensive it is to hedge and the current trajectory of the currency.

Active Signal Weights and the Factors Considered

WisdomTree incorporates the hedge ratios into models that underpin certain actively managed WisdomTree exchange-traded funds (ETFs), such as the <u>WisdomTree International Multifactor Fund (DWMF)</u>. The hedge ratio weights are determined on a currency-by-currency basis through an assessment of the relative strength of these three signals, the underlying macroeconomic environment, broad market positioning and imbalances and other



technical considerations that could be expected to alter the effectiveness of any given signal. In effect, hedging signals for which there is a higher level of conviction are given a greater weight.

Current Signal Positioning

Across the currencies within this framework, hedge ratios are higher than would be the case under equal weights for all currencies except the Swiss franc (which is already 100% hedged under equal weights). These higher hedge ratios reflect a greater allocation to the carry and momentum signals (which both have hedges switched on) and a relative underweight to the value signal (which has lower overall hedge ratios). The discussion below provides more color behind these weightings, including through research from Record.

Carry

U.S. economic activity remains robust compared with other developed markets, likely helped along by tax cuts and still accommodative financial conditions. Accordingly, the Federal Reserve is well into its <u>rate hiking</u> cycle while other central banks maintain comparatively easy <u>monetary policy</u>. This has created an attractive interest rate differential that is earned by U.S.-based investors who are <u>hedging currency risk</u>. It appears that this interest rate differential is currently enhanced by a market anomaly called the "cross-currency basis" whereby U.S. interest rates on <u>forward foreign exchange</u> <u>e contracts</u> exceed those in money markets; it reflects a supply shortage of U.S. dollars and equally represents an opportunity for U.S.-based hedgers to supply <u>liquidity</u> to the market.

Momentum

The same factors creating interest rate hedging tailwinds have created currency momentum in the U.S. dollar, which has been appreciating on a trade-weighted basis since April. The momentum signal may to be adequately tracking relative economic cycles, and may likely to adjust if there is a sudden change in market positioning, a reversal in the economic cycle or a multimonth, risk-driven move in the U.S. dollar.

Value

Over time, monetary policy in different countries can diverge, which may cause terms of trade shocks and other external drivers of momentum to cause overshooting of exchange rates from their fair values. While the interest rate opportunity is universal across exposure currencies, value opportunities seem more mixed. The euro, yen and British pound appear undervalued, while the Australian dollar and Swiss franc may be overvalued.

Only in the euro exposures does there appear to be a value opportunity following the currency's politically driven decline over the summer. The Swiss franc is substantially overvalued on a PPP basis; however, Record's research shows the need to account for high Swiss productivity rates, which makes PPP a less conclusive signal empirically. In the British pound, a lower value allocation leads to an increase in the hedge ratio which might be beneficial given current uncertainty as the <u>Brexit</u> deadline approaches.

Dynamic Currency Overlay



Hedge ratios	AUD	EUR	GBP	CHF	JPY
Active hedge ratio	90.0%	80.0%	90.0%	100.0%	95.0%
Equal hedge ratio	83.3%	66.7%	83.3%	100.0%	83.3%

Source: Record. as of 8/31/18.

A Multifactor ETF

As noted above, the WisdomTree International Multifactor Fund is one of the models-based, actively managed ETFs available from WisdomTree that incorporates this more active currency signal. Instead of creating multiple currency versions from unhedged to fully hedged to dynamically hedged, in this new multifactor international strategy, WisdomTree wanted to create one option that incorporated what WisdomTree believes is a best of breed for this type of strategy: including the currency factor as one of the multiple factors of the ETF. WisdomTree's research, including that of Record, leads WisdomTree to believe this dynamic currency factor can both increase returns over the unhedged and fully hedged strategies and reduce volatility compared with unhedged strategies. This dynamic currency factor also makes DWMF unique among the international, multifactor range of today's ETFs.

¹Euro, Japanese yen, British pound, Australian dollar and Swiss franc.

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DEFINITIONS

Dynamic Hedge: Strategy in which a currency hedge can be varied (as opposed to targeting a constant level) and change over the course of time.

<u>Volatility</u>: A measure of the dispersion of actual returns around a particular average level. .

<u>Carry</u>: The amount of return that accrues from investing in fixed income or currency forward contracts.

<u>Momentum</u>: Characterized by assets with recent price increase trends over time. This term is also associated with the Momentum Factor which associates these stock characteristics with excess return vs the market over time.

<u>Value</u>: Characterized by lower price levels relative to fundamentals, such as earnings or dividends. Prices are lower because investors are less certain of the performance of these fundamentals in the future. This term is also related to the Value Factor, which associates these stock characteristics with excess returns vs the market over tim.

<u>Purchasing power parity</u>: Academic concept stating that exchange rates should adjust so that equivalent goods and services cost the same across countries, after accounting for exchange-rate differences.

Rate Hike : refers to an increase in the policy rate set by a central bank. In the
U.S., this generally refers to the Federal Funds Target Rate.

Monetary policy: Actions of a central bank or other regulatory committee that determine the size and rate of growth of the money supply, which in turn affects interest rates.

<u>Hedge</u>: Making an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

<u>Currency risk</u>: the risk that an investment will decline in value due to a change in foreign exchange rates.

Forward currency contracts: A forward contract in the forex market that locks in the price at which an entity can buy or sell a currency on a future date.

<u>Liquidity</u>: The degree to which an asset or security can be bought or sold in the market without affecting the asset's price. Liquidity is characterized by a high level of trading activity. Assets that can be easily bought or sold are known as liquid asset.

Brexit: an abbreviation of "British exit" that mirrors the term Grexit. It refers to the possibility that Britain will withdraw from the European Unio.

