# DISCUSSING FX, CARRY TRADES AND SMART HEDGING

Jeremy Schwartz - Global Chief Investment Officer 08/16/2017

I was lucky to be joined by Nikolai Roussanov and Wesley Gray on our podcast last week. Gray, CEO of Alpha Architect, describes Roussanov as a Russian math genius who went to Harvard, and someone he studied with at the University of Chicago for his PhD. Roussanov came to Wharton in 2007-his first job out of graduate school-and his research has focused on global macro, foreign exchange, carry trades and commodity currencies, as well as fracking and oil. This podcast was the first in a series Gray and I plan to do together-hosting academics with practical insights on the markets.

# The Carry Trade

Roussanov discusses the carry trade as one of the oldest global macro trades and refers to extensions of it in the 1500s. Academically speaking, people have been studying the carry trade back to the 1980s. The idea of a carry trade is to go long high-interest-rate currencies and short the low-interest-rate currencies. <u>Uncovered interest rate parity</u> would suggest that the higher-interest-rate currencies should depreciate by the amount of the higher-<u>interest-rates</u>. The carry trade has worked on average over time because these higher-rate currencies have not depreciated by their higher rates and one has been able to earn a "carry" factor return.

Of course, strategies that work on average over time can have large losses. During the financial crisis, carry trades suffered significantly—with high-interest-rate currencies going down and low-interest-rate currencies like the yen and Swiss franc appreciating greatly.

Roussanov believes there is a common factor structure in foreign exchange. During good economic times, high-interest-rate currencies tend to appreciate in a group and low-interest-rate currencies depreciate in a group. During bad times, high macro uncertainty causes the reverse occurrence—where low-rate currencies like the yen tend to appreciate (this is the classic risk-off environment).

Commodity Currency Carry Trade vs. Commodity Futures: Roussanov discusses how commodity-exporting countries have often had high-interest-rate currencies. The economies of funding currencies like the euro, yen and Swiss franc are not commodity rich and import a lot of their goods. Commodity-exporting countries see their currencies moving in line with commodity prices. We saw these currencies and commodities all move down during the financial crisis, just as the currencies of the importers all appreciated during those periods.

Yen as Risk Reducer: Roussanov believes the yen and Swiss franc offer a form of insurance against global crisis times and explains why there could be a negative <u>risk pr</u>



<u>emium</u> to owning the yen through the carry trade-that there should be a cost to this portfolio insurance due to its increasing in <u>value</u> during bad times.

**Discussing FX Hedging Strategies:** Roussanov discusses how utilizing <u>currency hedges</u> for countries like Japan-in which you remove a safe-haven asset like the yen-reduces a hedge to your overall portfolio during bad times and layers in a "carry trade."

Japan is the one market today that I have found to offer this type of strong negative <u>correlation</u> over the last 20 years. There are times when the euro becomes negatively correlated—and in recent months we can see a strengthening euro hurting equity markets in Germany. But for the developed world indexes like the <u>MSCI EAFE Index</u>, we have seen volatility levels increase, in aggregate, when currencies and equities are packaged together. Japan is really an exception to that rule—where the yen reduces risk from buying Japanese equities. But that also can be stated differently: To have a positive view on Japanese equities today, one really needs the yen to weaken. If one has no view and just wants the risk reduction, WisdomTree would advocate for looking at small caps there; Gray also likes Japan in their international value strategy.

Smart Hedging: Roussanov is a bigger fan of "smart" hedging programs that adjust hedge ratios more systematically and dynamically based on a currency factor model in lieu of a standard, always-hedged program. Roussanov's research has been focused on the benefits of interest rates, or the carry trade, but he also cites research in the academic community on both the momentum factor within currencies and the value factor; Roussanov says academics are split on whether value really worked in G-10 currencies.

This is consistent with the research WisdomTree conducted on <a href="mailto:dynamic FX">dynamic FX</a> hedging—where the carry, or interest rate factor, was the strongest of our hedging signals, momentum was the middle signal and value was the weakest from a timing perspective. But WisdomTree does believe all three signals have merit and has created a series of indexes that incorporates these dynamic hedges on top of equities.

Gray refers to this as putting "global macro hedge funds out of business" by layering in a currency trade on top of equities without charging 2% and 20% of profits. I agree, but I also think this is more a smart factor model for international equities—just as any stock selection model looks to add value. Roussanov's moniker—"smart hedging"—perhaps will stick, just like smart beta.

I'd like to thank Wes and Nick for coming on the podcast, and I look forward to the next discussion in our joint series. If you'd like to join Wes, me and 50 others interested in quant finance on an insane exercise challenge on September 15, look up March for the Fallen on the Alpha Architect website.

Listen to the entire "Behind the Markets" podcast series here:



## Important Risks Related to this Article

Investments focused in Japan increase the impact of events and developments associated with the region, which can adversely affect performance.

Hedging can help returns when a foreign currency depreciates against the U.S. dollar, but can hurt when the foreign currency appreciates against the U.S. dollar.

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### **DEFINITIONS**

<u>Macro</u>: Focused on issues impacting the overall economic landscape as opposed to those only impacting individual companies.

<u>Global carry trades</u>: Occur when investors borrow money in a low-interest-rate country at low cost and use it to invest in a higher-interest-rate country. The potential profit that exists relates to the difference in interest rates between the two countries, minus applicable trading costs.

<u>Uncovered interest rate parity</u>: the interest rate differential between two countries is equal to the expected change in the exchange rate between currencies.&nbsp.

Interest rates : The rate at which interest is paid by a borrower for the use of money.

**Risk premium**: Equity investments are not risk free, but it is thought that investors buy stocks because the returns they expect are high enough to allow them to take the risk.

<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>Currency hedging</u>: Strategies designed to mitigate the impact of currency performance on investment returns.

<u>Correlation</u>: Statistical measure of how two sets of returns move in relation to each other. Correlation coefficients range from -1 to 1. A correlation of 1 means the two subjects of analysis move in lockstep with each other. A correlation of -1 means the two subjects of analysis have moved in exactly the opposite direction.

MSCI EAFE Index: is a market cap-weighted index composed of companies representative of the developed market structure of developed countries in Europe, Australasia and Japan.

<u>Momentum Factor</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 Factor</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 time.

**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.

