

The Currency Carry Trade: Is It Still Viable?

by Barry M. Gillman, CFA

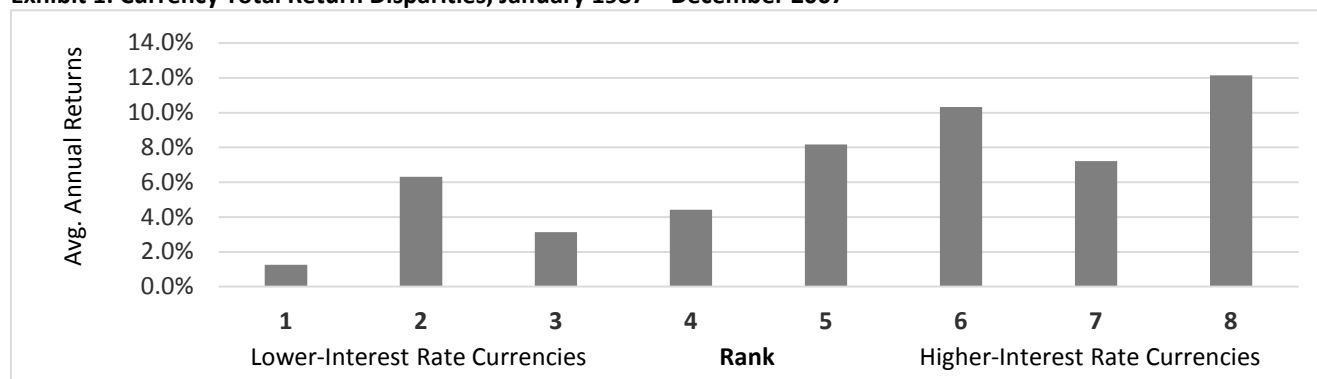
Carrying On...Back Then

The beauty of research is that sometimes you end up with results that contradict previously held assumptions, hypotheses or findings. We first researched the carry trade 10 years ago in our paper “Carrying On?” (published in October 2006¹). At that time, our hypothesis was that once we researched the data, we would be able to show that currency markets were efficient and that while the carry trade worked intermittently, it was not profitable over the long term. Instead, we found the carry trade had been *consistently* profitable. In our follow-up paper, “Has the Carry Trade Worked in World Bond Markets,” (published in October 2008²) we saw that the currency carry trade had been especially effective for the 1987 to 2007 period (see Exhibit 1), although it had not been so profitable in the early years of floating exchange rates, post 1973.

The currency carry trade is defined by investing in a high-yielding currency, funded from a lower-yield currency. This carry trade is profitable as long as the additional interest on the high-yield currency is not offset by that currency depreciating by more than that amount. In theory, if currency markets are efficient, that higher yield should be offset by a similar depreciation in the currency, and the carry trade should produce a net zero profit over time.

The methodology for our studies was straightforward. The currencies were first ranked quarterly by 3-month government short-term interest rate (lowest in rank 1, next lowest in rank 2, etc.). Then the quarterly return for each rank was calculated by adding the interest received in that quarter to the currency move relative to the U.S. dollar over the quarter. Returns for each rank were then accumulated geometrically over the relevant time periods. This approach simulates the result for each rank of a strategy of reinvesting every quarter in whichever currency occupied that rank at the end of the prior quarter³. We studied eight major currencies (from Australia, Canada, France, Germany, Japan, Switzerland, the United Kingdom and the United States). Results from our study published roughly a decade ago are shown in Exhibit 1. Total return, measured annually, was simply the interest rate plus the change in exchange rate for all currencies except the U.S. dollar, where the total return was the interest rate only.

Exhibit 1: Currency Total Return Disparities, January 1987 – December 2007



Source: Brandes Institute, based on data from FactSet, Global Financial Data, U.S. Economic Research Service, and the International Monetary Fund, as of December 31, 2007. Past performance is no guarantee of future results.

¹ <https://www.brandes.com/docs/default-source/brandes-institute/carrying-on-an-examination-of-the-currency-carry-trade-strategy.pdf>

² <https://www.brandes.com/docs/default-source/brandes-institute/has-the-carry-trade-worked-in-world-bond-markets-.pdf>

³ As an example, Japan occupied rank 1 (lowest interest rate) on September 30, 1998. So the return for rank 1 in the fourth quarter of 2008 was one quarter of the 3-month Japanese annualized interest rate, plus the change in the value of the yen against the U.S. dollar in that quarter.

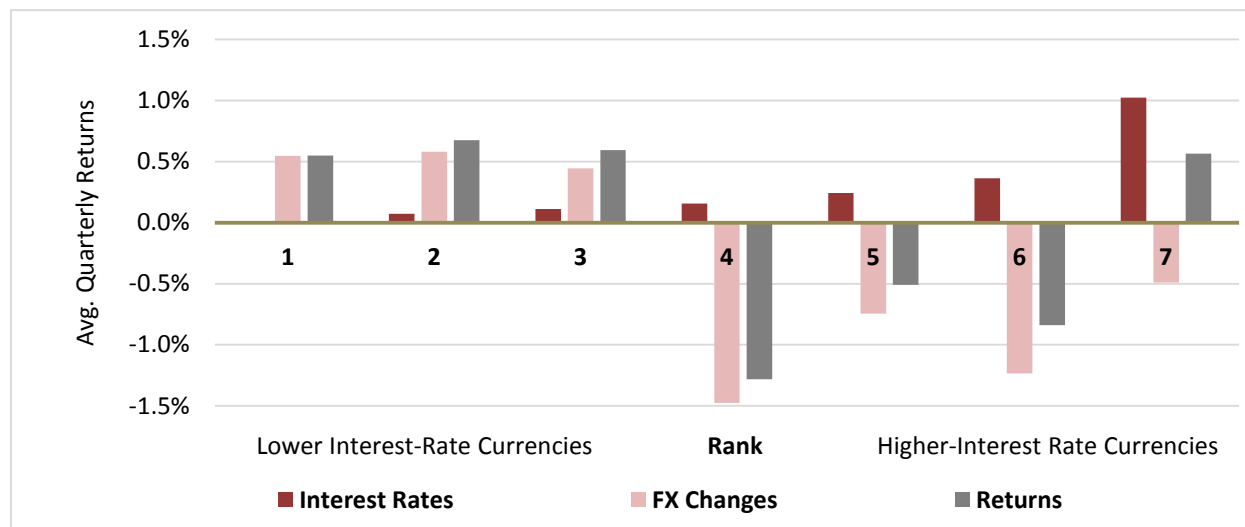
Given the generally better returns for higher-interest rate currencies, we concluded that the currency carry trade *did* contradict efficient market theory, and that a possible rationale was that behavioral factors were at play in foreign exchange markets, just as they are in global securities markets. At the end of the paper we noted, “The final question is whether this pattern of results will persist. Just because a strategy appears to have been profitable for such an extended period does not imply...that these results will persist.”

Carrying On...Today

A decade later, we had the opportunity to test the carry trade’s persistence. Working with a team of MBA candidates at the University of San Diego, our data was updated through June 30, 2016. The methodology was consistent with the original Brandes Institute research. The same major currencies were included in the recent study, except the deutschemark and French franc from the original work were replaced by the euro, so the “big 8” currencies from our earlier research were reduced to seven. In the exhibits below, total return is shown alongside its two components: interest rate and currency change. By definition, the interest rate increases linearly from rank 1, and the “swing factor” is the currency change in each rank. Note that in the following charts, returns are shown quarterly, as opposed to annually in Exhibit 1; however, the relevant comparison is the pattern across the ranks, not the numbers on the left axis.

Exhibit 2: Currency Carry Trade Failed to Deliver Consistent Results

Average Quarterly Returns, January 2008 – June 2016



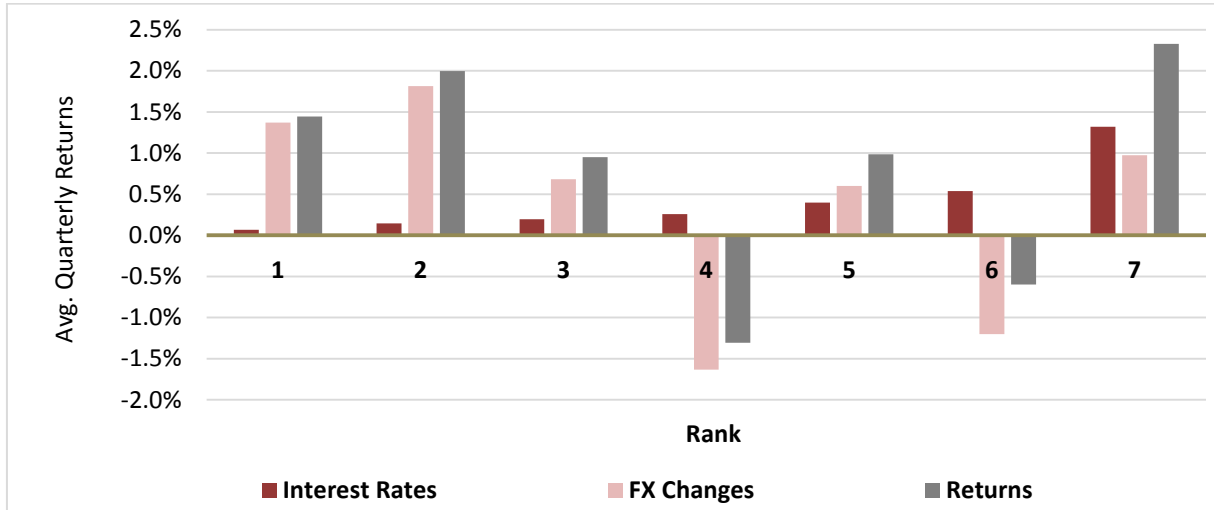
Source: Bloomberg, Datastream, Brandes Institute, as of 6/30/16. Past performance is not a guarantee of future results.

The mixed results show that the effectiveness of the carry trade seen in Exhibit 1 disappeared in the years since 2007. See the gray bars in Exhibit 2, the total return for each currency rank. No longer does the pattern show a clear increase in returns with higher rank. If it wasn’t for rank 7, the case could be made for the “reverse carry trade” of investing in ranks 1-3 (low-interest-rate currencies) and funding from the higher-yielding ranks 4-6.⁴ The overall picture suggests the benefits of the carry trade dissipated. Given the impact of the Global Financial crisis of 2008-9 on all financial markets, we asked our graduate student researchers to split the time into two periods, the first being the crisis plus immediate post-crisis years of 2008-2011, and the second being the subsequent “return to normality” period of 2012-2016. The pattern is quite different between these periods. The “crisis years” chart (Exhibit 3) shows the same random distribution of ranks shown in Exhibit 2.

⁴ Rank 7 was occupied by the Australian dollar in every quarter throughout the 2008-16 period.

Exhibit 3: Currency Carry Trade Showed Random Results Post Global Financial Crisis

Average Quarterly Returns, January 2008 – December 2011

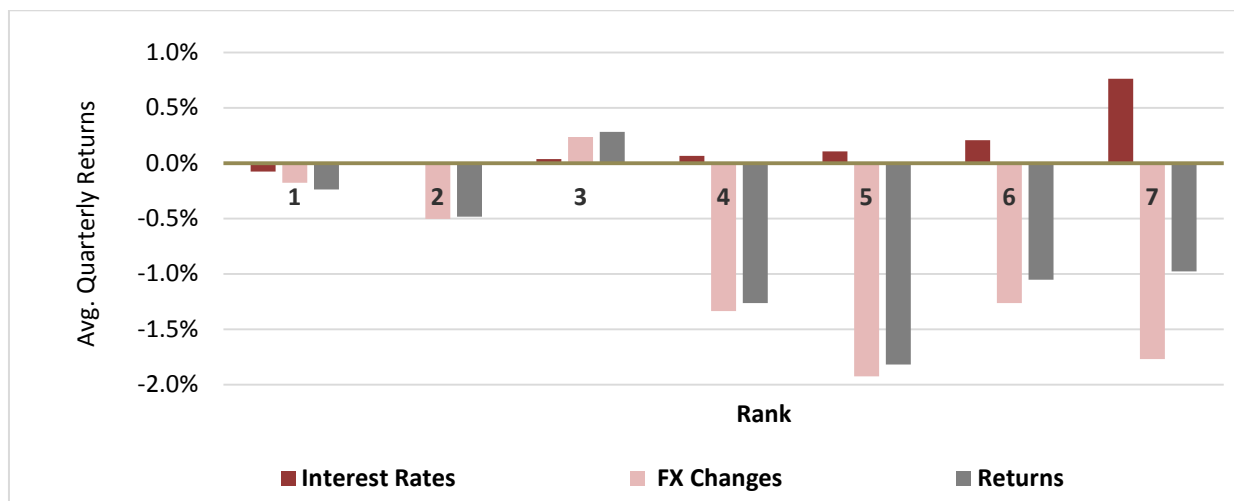


Source: Bloomberg, Datastream, Brandes Institute as of 6/30/16. Past performance is not a guarantee of future results.

It is during the most recent period (2012-2016) that the reverse carry trade would have paid off (i.e. owning the lowest yielding currencies)—despite the first instance of negative absolute interest rates for the lowest-ranked currency since our original work began. The pattern in the currency change bars in Exhibit 4 generally shows a trend downward from rank 1 to rank 7, as the higher-rank currencies depreciated more relative to the dollar. The reason that most of the currency change bars are negative reflects the U.S. dollar rising most of the time in this period, and all results in this study are converted back to U.S. dollars. The significance for the carry trade is in the downward sloping pattern however, not in the absolute value of the bars.

Exhibit 4: Currency Changes Generally Benefited “Reverse” Carry Trade Since Jan. 2012

Average Quarterly Returns, (January 2012 – June 2016)



Source: Bloomberg, Datastream, Brandes Institute, as of 6/30/16. Past performance is not a guarantee of future results.

Conclusion

With more than 40 years of floating exchange rate data, we can now identify three distinct periods for the carry trade. See Exhibit 5. From 1973 to the mid-1980s, the currency environment was not conducive to the carry trade. The next 21 years provided a much friendlier welcome to carry traders (1987-2007), but since 2007, the environment has become increasingly difficult for this strategy. In fact, between 2012 and 2016, the *reverse* carry trade tended to be profitable. It's not clear what has driven these changes and we welcome suggestions from readers (especially ones that can be tested on our data).

Exhibit 5: Carry Trade Has Shown Varying Degrees of Effectiveness from 1973 to 2016*

Carry Trade Efficacy Timeline			
Carry Trade Broadly Neutral	Carry Trade Tended to Work	Neutral	Reverse Carry Trade Worked
1973 to 1986	1987 to 2007	2008 to 2011	2012 to 2016*

Source: Brandes Institute, *as of 6/30/16. Past performance is not a guarantee of future results.

We acknowledge and thank the team of graduate students from the University of San Diego and their supervising professor, who collectively are responsible for the data collection, analysis, and development of Exhibits 2-4 used in this research: Professor Dennis Zocco, Ike Ekeh, Beyamil Ozturk, Rajat Raizada, Parul Sharma and Shreyas Sreekanth.

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