FX·Week

Reprinted for Deutsche Bank – February 2008

Choosing the right carry strategy

Nikki Marmery reports on the proliferation of carry trade indexes and outlines the key differences between the products the main banks are offering

Automation of foreign exchange trading has turned what was once a varied, huge-margin industry, led by hundreds of sell-side players, into a commoditised volume-driven business, dominated by a handful of mega-banks.

Yet there are still small pockets of this market where bubbles of innovation have wrought real differences in different banks' products; markets that are so new that consensus on how they should function is yet to be reached.

The phenomenon of carry trade indexes is one of these new market niches – a product that has evolved rapidly, and very differently, from bank to bank, and which customers should be wary of assuming is always the same. Carry trade indexes are still the preserve of only the largest banks – no-one else sees the flow, or has the back data, needed to construct the complex models required. But so rapidly have carry indexes evolved, and with such little consensus over methodology, that they stand out as a rare example of differentiation between the top banks in today's foreign exchange market.

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Carry comes into its own

Carry trade indexes emerged from the trading models banks developed to profit from the strategy of carry trading – investing in currencies of countries with high interest rates using money borrowed in currencies with low interest rates. Over time, the carry trade makes money – and lots of it. "You could come into the office once a month, place a trade, and go home, and you would have seen a better information ratio over the past 20 years than the average equity index," says Jessica James, global head of quantitative investor solutions for FX at Citigroup in London.

Having long used carry strategies on their own proprietary trading desks, the emergence of foreign exchange as an asset class in its own right over the past few years has made marketing carry-based products to clients the obvious next move. Equity and bond investors had been looking for diversified sources of income, and the newly automated and highly liquid FX industry was an ideal source. The nature of indexes, as a simplified form of investment with analysis and due diligence thrown into the package, makes them an ideal entry point to the market for such clients – often retail or private traders seeking asset diversification, or bond managers looking for a currency overlay for their portfolios.

"One attraction of these products is that they require little management," says John Normand, head of global currency strategy and cross-commodity research at JP Morgan in London. "They allow clients to exploit an efficiency in the market without having to time entry and exit, or to rebalance exposures. This approach can free up resources to focus on other strategies that might require more discretion to execute successfully."

Or, as Philippos Kassimatis, co-head of FX structuring at Barclays Capital in London, puts it: "Why hire a team of FX traders to extract alpha from the FX markets when you can use an index to extract 'smart beta'?"

But for these clients in particular, who might have little experience of FX, it is imperative they do their homework to make sure they are investing in an index that suits their view and risk profile. They must also understand the downside and potential underperformance of carry strategies in a highly volatile trading environment, particularly given the experience of the past six months.

Key differences

Each bank has opted for a different methodology in constructing its indexes. The key differences are the number and type of currencies used, and the degree to which an index is optimised – that is, weighted to take into account the effects of volatility or correlation between currencies.

Deutsche Bank's model for its Harvest family of indexes is perhaps the simplest. Each month, its G-10 index buys the three G-10 currencies with the highest interest rates, and sells the three currencies with the lowest. Its Balanced Index buys the five highest and sells the five lowest yielders from a global universe of currencies, although at least two must be G-10; the Global Index buys and sells five high- and low-yielders from an unconstrained universe.

Barclays Capital's Intelligent Carry Index (ICI) was launched in September 2006. It uses a model to decide optimal currency allocation by weighting each G-10 currency from –100% to +100% in terms of suitability for positive carry. With the sum of all positive positions equalling the sum of the negative positions, the index then buys long positions, financed by equal short positions. BarCap also has an Asian currencies version of ICI, launched last November.

Credit Suisse's Roci (Rolling Optimised Carry Indexes) are constructed for four base currencies: US dollar, euro, sterling and Swiss franc. Each month, the bank constructs G-10 and G-18 (which includes the most liquid emerging markets currencies) indexes for each of these base currencies, buying the higher-yielding and selling the lower-yielding units in each case through cash-settled one-month forwards. Target volatility is 5%, and the allocation to each currency is optimised by mean variance.

Citigroup's Beta1 Index includes components of carry, as well as other common currency trading strategies such as momentum and PPP (purchasing power parity; the notion that all currencies should converge to a fair value). The Beta1 G-10 sub-index is based on the 13 most liquid tradeable currency pairs that are not subject to government control; the same applies for the emerging markets sub-index, except it uses only nine currency pairs. In each pair, the index buys the currency with a higher yield and sells the lower-yielding currency.

JP Morgan's IncomeFX index for G-10 currencies was launched in 2005, followed by IncomeEM for emerging markets carry in mid-2007. The G-10 index selects four G-10 pairs using an algorithm that determines the highest yield per unit of risk. The basket is then leveraged, or de-leveraged, to realise target volatility of 5%; maximum leverage is 200%. IncomeEM works on the same principle but selects five currency pairs from a universe of 20 emerging markets currencies, has a target volume of 10% and maximum leverage of 300%.

The biggest difference between these indexes is whether or not they are optimised. On one side of the debate are Deutsche Bank and JP Morgan, who believe all optimisation should be avoided. "Optimised frameworks are more susceptible to breakdown out-of-sample," says JP Morgan's Normand. "We prefer to keep the models simple by using equally weighted components."

Barclays Capital and Credit Suisse respond that not optimising indexes is dangerous in a volatile market. "The main problem with non-optimised indexes is that the volatility or the risk of the portfolio changes dramatically over time," says Umberto Alvisi, currency strategist at Credit Suisse in London. "It's highly exposed and vulnerable to a correction."

Citigroup sits somewhere in the middle. Its range of Beta1 indexes is not optimised. "The fewer parameters you have, the more likely you are to have a successful strategy," says Citigroup's James. But the bank has a sister range of carry-based indexes that are optimised: the Alpha1 range has a series of risk filters that kick in to 'de-activate' a particular trade if certain risk levels are breached. Triggers include market volatility, and Citi optimises to find the right level of volatility to cut out the trade.

And volatility is certainly an issue in the current market, as heavy swings in global currency markets in the second half of 2007 sparked mass unwinds of carry trades, particularly those funded by yen. Many analysts question whether now is a good time to be

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Product	Methodology
Barclays Capital's Intelligent Carry Index	Applies a weight from –100% to +100% to each G-10 currency, the sum of all positive positions equalling all negative positions in the index. It then buys long positions financed by equal shorts
Citigroup's Beta1 range	G-10 index based on the 13 most liquid tradeable pairs not subject to controls; the EM index on nine pairs. Within each pair, the indexes buy the higher-yielding currency and sell the lower-yielder
Credit Suisse's Rolling Optimised Carry Indices	G-10 and G-18 portfolios are constructed for four base currencies ($, €, £ and Sfr), buying higher-yielding and selling lower yielding units in each case through cash-settled one-month forwards
Deutsche Bank's Harvest suite	G-10 index buys the three G-10 currencies with the highest interest rates each month and sells the three lowest. 'Balanced' and 'Global' indexes include more currencies and some emerging markets units
JP Morgan's IncomeFX and IncomeEM	IncomeFX selects four pairs calculated to offer the best carry opportunity for the least risk. The basket is leveraged or de-leveraged to realise volatility of 5%. IncomeEM uses five pairs and targets vol of 10%

investing in carry at all. Hans Redeker, global head of foreign exchange strategy at BNP Paribas in London, is one of them. "In my view, carry trade indexes are a very bad idea. You cannot assume of a market that started to correct a few months ago that that's it. I'm expecting a full year of misery and stress in yen markets."

Proponents of carry indexes argue that's where derivatives come in: BarCap, Citi, Credit Suisse, JP Morgan and Deutsche all offer structured products and options on their indexes that enable clients to express a negative view of carry if that is their view. "We need to acknowledge that, from time to time, the index will go through drawdowns, and the current episode is one of them," said Alvisi at Credit Suisse. The bank says its 'cliquet' options, which pay out coupons equal to the annual performance of the index floored at zero, and its 'lookback' options, which pay out the all-time high performance of the index during the life of the investment, have been well received. "These products allow investors to mitigate the risk of drawdown," said Olivier Van der Haegen, forex structurer at the bank in London.

Deutsche offers principle-protected versions of its Harvest indexes that more risk-averse clients prefer, reported Bilal Hafeez, global head of FX strategy at the bank in London, while hedge funds use options on Harvest to take leveraged views.

Whatever your view of the viability of the carry trade right now, carry indexes and their derivatives are becoming mainstream products. Clients must make sure the one they choose is suitable for their own view and risk profile. FX

Optimisation	Pros	Cons	Performance FY 2007
Uses portfolio theory to decide weight of each currency	Variety in terms of currencies offered: one index offers exposure solely to Asian currencies, which have seen better returns from carry than G-10 in recent months	Opponents of optimisation warn that it limits upside in a good environment	Barclays Capital was unable to give performance figures for FY 2007
None in the Beta1 range. The Alpha range is optimised to determine the level of volatility required to necessitate the removal of any pair from the index	Range of indexes offered for varying levels of risk tolerance; client can choose to invest with the risk level they are happy with	Diversity of portfolio could limit performance in good times	Citigroup was unable to give performance figures for FY 2007
Uses mean variance to determine weight of each currency	Optimisation offers more protection in times of high volatility	Optimisation means the index is slower to benefit from a rebound in volatility	ROCI18US index: 0.61% Since launch however, the index has risen steadily from 100 at March 15, 1999 to a high of 378.76 on June 22, 2007. As of Feb 7, 2008, it stood at 323.47
None; positions are equally weighted	Simplicity of model makes it highly transparent, and open to more upside in good environment	Proponents of optimisation warn that it exposes indexes in periods of high volatility	**Excess returns:** G-10: 3.4% Balanced: 13.1% Global: 12.4%
None; positions are equally weighted	The combination of minimal optimisation and EM focus won IncomeEM fantastic returns in 2007	IncomeFX showed limited performance in the poor carry environment of H2, 2007	**Excess returns:** IncomeFX: -4.57% IncomeEM: 20.14%

*FY2007 includes the period of massive currency volatility in the second half of 2007 which dragged down all indices' performances for the year. Lifetime performances to date for all indices are much higher.
Note: UBS also has indexes linked to carry trade strategies, although the bank declined to give further information for this article