

Endless arbitrage?

The spread between dollar/won cross-currency swaps and interest rate swaps in South Korea has widened to unprecedented levels. What are the factors sustaining the market imbalance and what opportunities does this present? William Rhode reports

In March 2007, the spread between the interest rate component on a dollar/Korean won cross-currency swap (CCS) and a vanilla domestic interest rate swap (IRS) was just 20-40 basis points. In mid-April 2008, after widening to as much as 500bp in November, the spread remains huge, at around 400bp. Experts say the development is indicative of a liquidity crisis in the South Korean market. At the same time, it presents an arbitrage opportunity for investors.

"In a nutshell, the main issue behind the divergence volatility in dollar/won CCS relative to the rest of the fixed-income market is a lack of dollar liquidity in the Korean interbank system," says Christian Carrillo, a Tokyo-based strategist at Deutsche Bank in an April report, *A Review of the Korean Basis Trade*. "To see this, it is important to remember that (in Asia, in particular) CCS curves have been powerful mechanisms for hedging investment inflows to markets that historically had illiquid and/or underdeveloped funding markets."

CCSs have become an important funding mechanism in South Korea. Take an international bank, ABC Bank, which sets up in the country and funds the operation by borrowing foreign currency, typically dollars, from a regional hub in a country with an open capital account - say, ABC Bank Singapore. ABC Seoul thus has a dollar liability to ABC Singapore. ABC Seoul then converts the borrowed dollars into won to fund its local business activities, buying assets that generate won-denominated income, such as two-year monetary stabilisation bonds (MSBs) issued by the Bank of Korea, the central bank. But now it faces an asset-liability mismatch, which must be hedged. So ABC Seoul enters into an agreement with a local counterparty to exchange won for dollar at a fixed date, paying a fixed won rate and, in exchange, receiving a dollar floating rate.

In the absence of credit, counterparty and convertibility risk, it can be assumed that ABC Seoul has fully hedged the forex and interest rate risks incurred by borrowing dollars from ABC Singapore. And, by definition, the situation means that ABC Seoul - like almost all foreign banks operating in South Korea - has a position in the market as a 'payer' of dollar/won CCS rates.

It is in the interest of international banks to continue being 'payers' of dollar/won CCS rates, especially as there is such a broad divergence between CCS rates and Korean

interest rates (see graph).

International banks, more than ever before, must hedge the currency and interest rate exposure incurred by borrowing dollars overseas to buy won-denominated assets. That's because dollars are thin on the ground in South Korea. For a start, there is a substantial drain on domestically available dollar funds from South Korean exporters, notably shipbuilding companies, which typically hedge their current and expected dollar revenues in the spot and derivative markets.

And that trend looks set to continue. Orders from shipbuilders may be slower than last year, but they are still coming through. There is a backlog of orders worth \$100 billion, according to the Korean Shipbuilder's Association, which is driving rates down because there is a shortage of available onshore dollars to hedge.

Hedging demand

Moreover, as a result of the credit crunch, it is extremely difficult for South Korean borrowers to issue corporate bonds offshore. Hedge funds, meanwhile, have stepped in to do won/dollar forward trades with South Korean companies that are looking to hedge.

Exporters' need to hedge their currency exposures can be clearly seen in the forex markets. In late March, for example, there was significant dollar selling by exporters in long-term forex forwards following a wave of speculative buying on the spot dollar/won market. This forex activity further widened the spread between CCSs and IRSs, and made won-denominated sovereign assets cheaper at the long - three-year-plus - end of the curve.

The local authorities have not made life easier either. Due in part to the effects of asset-liability mismatches caused by excessive foreign-currency borrowing in the 1990s, the Bank of Korea and the Financial Supervisory Service (FSS) have taken a dim view of any increases in short-term forex borrowing. In fact, they have introduced measures to curb such practices since November 2006, including increasing reserve requirements on foreign-currency deposits at banks in South Korea and auditing the balance sheets of foreign banks in the country for signs of 'excessive' currency borrowing.

Most recently, in July 2007, the FSS unveiled plans to introduce changes to the so-called 'thin cap' rule, thereby reducing the non-taxable amount foreign banks can borrow from their overseas branches from six times to three times the equity held by, say, ABC Bank Singapore in ABC Seoul. If the loans do exceed three times the equity, the interest on the excess amount of the loans is not tax deductible. The rule took effect in January.

Many South Korean observers blame this piece of regulation in particular for the widening of the basis spread. "The timing of the regulation was not right, as it came out right before the subprime mortgage issue blew up," says the Seoul-based head of interest

rate derivatives at a South Korean bank.

Jong-Hwan Cho, head of interest rate derivatives trading at Société Générale in Seoul, adds: "The widening trend started when the FSS introduced changes to the thin-cap rule. Unfortunately, the global subprime crisis came at the same time and caused a massive drain of dollars from the domestic market."

But Duncan Wooldridge, chief Asian economist at UBS in Hong Kong, says the South Korean authorities have good reason to control money supply. "There are no signs of loan growth slowing while, at the same time, broad money supply has been accelerating," he says. "If the authorities did nothing, this could have led to inflationary pressures. In addition to raising rates in August, the central bank has been successful in its strategy to curb the risk of inflation, which, after all, is its primary concern."

However, the global interbank liquidity crisis has helped sustain the widening trend. "While in Korea, the market faced strong demand to borrow dollars but supply was constrained by regulatory factors elsewhere in the world, banks have been avoiding inter-bank lending amid increasing credit concerns related to losses in ABS (asset-backed securitisation) and, more recently, on fears of hedge fund de-leveraging and counterparty exposure," says Deutsche Bank's Carrillo. "As such, dollar scarcity in Korea was compounded by malfunctioning global money markets."

Nevertheless, the global credit crunch hasn't stopped investors from making the most of the widening trend, which has presented the unusual situation of an arbitrage that fails to close. And the reason it fails to close is because there are simply not enough dollars in the South Korean interbank system to eliminate it. "We think the current dynamics driving the Korean 'basis' are complex and markets will likely remain volatile as dollar liquidity around the world remains scarce," says Carrillo.

Even in the last week of March, when markets globally were under major stress, market participants say there was nearly \$2 billion in foreign buying of South Korean bonds, suggesting that liquid, long-term investors are continuing to get involved in the basis trade.

"Since the middle of April 2007, Korean financial markets have been focused on developments in the dollar/won CCS curve," Carrillo says. "The volatility and divergences in the CCS curve highlighted the increased importance of linkages between Korean and overseas markets, but also led to the emergence of significant opportunities in rates markets, which attracted substantial interest from overseas investors to the so-called 'Korean 'basis' trade."

A derivatives specialist at an international bank in Seoul adds: "We are seeing a negative basis trade. Rates at the front end of the curve have fallen, so it's a good opportunity to buy domestic-currency government bonds funded by won borrowing. It means you are effectively borrowing at zero to get Libor-plus-200-type returns." He estimates more

than \$3 billion has already been traded on this arbitrage play.

There are several popular basis trades. One example is a two-year asset swap. By buying two-year MSBs and paying two-year CCS, investors can take advantage of the illiquidity at the front-end of the dollar/won CCS curve, while securitising sovereign risk at around Libor plus 200bp. "We recommend this trade as a carry proposition, as we may see further volatility in front-end basis while interbank liquidity issues remain," says Carrillo. "We note that this position also takes advantage of the fact that the outstanding stock of MSBs issued is declining as sterilisation requirements diminish."

The forward basis flattener is another example. By receiving two-year forward and three-year IRS-CCS basis against paying one-year forward and one-year IRS-CCS basis, investors can gain exposure to the longer end of the curve.

Carrillo says: "Relative-value-orientated investors would have noticed that during the period of dollar liquidity improvement in dollar/won basis during January-February 2008, the forward IRS-CCS basis was significantly flatter between 1Y and 1Y Fwd1Y (the one-year rate in one year's time) while further out the curve 2Y Fwd 3Y (the three-year rate in two years' time) remained approximately at current levels and provides significantly better roll-down than the 1Y Fwd 1Y point. At a spread of 130bp (mid), this trade offers about +40bp roll-down over one year and would flatten to about +80bp if we return to a partial normalisation environment such as January-February 2008 or to +10bp in a full normalisation."

Yet there are risks. If there is a sharp deterioration in the global interbank liquidity environment to the extent that bank lending seizes up everywhere, or for a protracted period of time, then the trades could go against the investor.

But for the time being at least, observers seem to agree that the widening trend looks set to continue and, with it, a protracted arbitrage scenario offering attractive investment opportunities.

Dollar/won swap spreads v. interest rate swap spreads v. monetary stabilisation bond spreads

