J CAP

China

AsiaView

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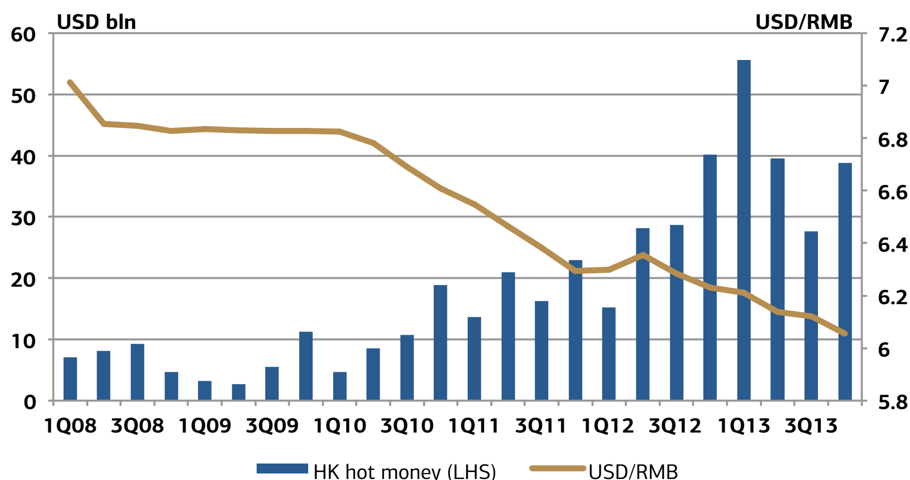
Trades discussed

- **Out-of-the-money puts at USD/RMB 7 or 8;**
- **Short China A-share listed equity funds or ETFs;**
- **Short HK banks**



Source: Wind, J Capital Research

Hot money has surged as the RMB has appreciated. Will Fed tapering result in an evacuation? Is RMB at 6.23 the trigger for a mass exit of this carry trade?

Short RMB: As Yellen tapers, hot money will flee

+ China's capital controls are porous

Since the beginning of Fed QE, hot money inflows into China have more than quintupled. USD 161 bln magically vanished at the HK/China border in 2013.

+ Hot money is a significant source of liquidity

In 2013, hot money was equal to over 60% of FDI, 1.8% of GDP, 11% of new loans and 5.7% of Total Social Financing.

+ RMB at 6.23 could be a key trigger

Following the doubling of QE3 in 2012 Q4, around USD 202 bln of hot money entered China. If the RMB was to depreciate to 6.23, the large majority of these hot money flows would be loss-making from a currency perspective.

+ Short the RMB

As the Fed exits QE, we believe there will be significant pressure for RMB depreciation.

KEY POINTS

1. China's capital controls are porous.
2. We estimate USD 390 bln of hot money entered in 2013 & can easily reverse.

By Kevin Yeoh

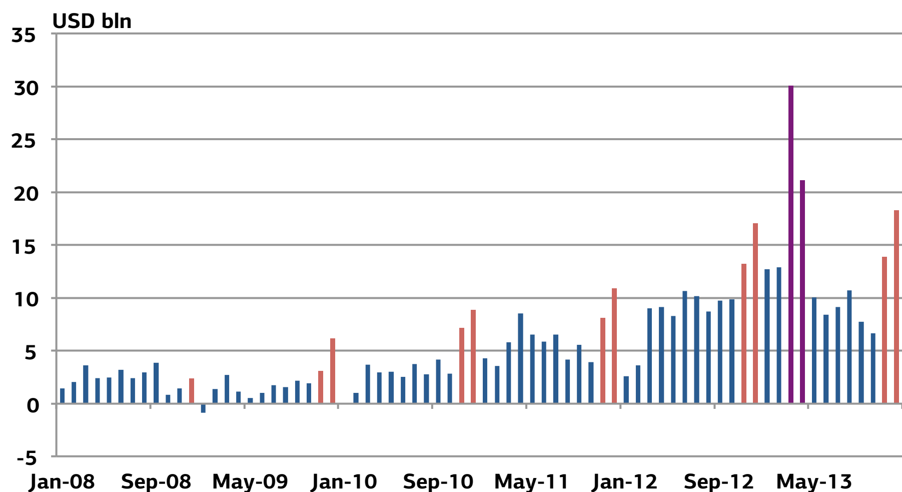
China's apparently ironclad capital controls are actually rather porous. Since the beginning of the U.S. Fed Quantitative Easing program, hot-money inflows into China have more than quintupled. We looked at the simplest measure of hot-money inflows—export invoicing fraud from China/HK trade—and found that a massive USD 161 bln magically vanished at the HK/China border in 2013. This was equivalent to over 60% of China's total legit FDI and is up from USD 29 bln in 2008.

Hot money is significant, because capital controls are often cited as a safeguard against a financial crisis in China. However, the ease with which hot money enters China means it can just as easily leave.

Our estimates are almost certainly low. Because of the difficulty of tracking the flows, we have focused our analysis on Hong Kong flows, but in reality, other nations in Southeast Asia, along with China's own bonded zones, appear to have gained share of hot money flows. In the last year as well, new free trade zones in Pudong and Qianhai have been conducting high-volume currency transactions that likely augment the hot-money flows but do not appear in trade statistics.

Chart 1 shows the monthly discrepancy between China's reported exports to Hong Kong and Hong Kong's reported imports from China. HK import data is adjusted for an insurance and freight factor of 10%.

Chart 1. HK hot money flows



Source: Wind, J Capital Research

Hot-money flows appear to spike consistently in November and December; these are highlighted by the red bars. This pattern began in November 2009 and has held constant through to 2013. We find that yields across money markets spike at the end of the year, as corporates go into the shadow-banking markets for bridge financing ahead of the January new lending cycle. Chinese corporate bond yields also frequently spike in November-December (see Chart 2 below).

The highest inflows were in March and April 2013 (highlighted in

purple). March 2013 saw USD 30 bln of hot money, while April received USD 21 bln. This was likely related to QE3 beginning in September 2012 and the Fed's increase in bond purchases to 85 bln/month in December 2012.

Hot money is a significant source of liquidity

Table 1 shows the year-on-year change in hot-money flows. There was a large jump from 2009 to 2010 (flows up 89%) and large increases since then.

In 2010 Hong Kong hot money was over 0.70% of GDP and over 1% of GDP since 2011. Hot money flows equating over 1% of GDP is large and was likely almost 2% of GDP in 2013 according to our estimates.

A comparison with China's legit FDI shows how large Hong Kong hot-money flows are. Hong Kong hot money was 26% of FDI in 2011, 44% in 2012 and likely over 60% in 2013. If FDI fell by 26-60%, this would be a major shock and point to serious problems in China, but this is exactly what could happen with hot-money flows, which could easily reverse.

Table 1. YoY hot money. Large as a % of FDI

	2008	2009	2010	2011	2012	2013
Hot money (bln USD)	29.2	22.6	42.8	73.7	112.2	161.6
YoY change	0.0%	-22.7%	89.4%	72.3%	52.1%	44.1%
China GDP (tln USD)	4.5	5.0	5.9	7.3	8.2	9.2
FDI (bln USD)	171.5	131.1	243.7	280.1	253.5	263.7*
HM % China GDP	0.6%	0.5%	0.7%	1.0%	1.4%	1.8%
HM % FDI	17.0%	17.2%	17.6%	26.3%	44.3%	61.3%
FDI % GDP	3.8%	2.6%	4.1%	3.8%	3.1%	2.9%

* Approximate FY 2013 FDI number. Numbers are out only for the first three quarters; for Q4, we have used the 2012 Q4 number.

Source: Wind, J Capital Research

Hot money has been growing faster than new RMB lending or Total Social Financing (TSF).

Table 2 shows that hot money is a significant source of liquidity to China's economy. In 2013, hot money was equal to 11.1% of new lending (up from 1.4% in 2009) and 5.7% of 2013 TSF (up from 1% in 2009).

Table 2. Hot money growth faster than lending

	2008	2009	2010	2011	2012	2013
New loans (USD bln)	800	1,563	1,293	1,221	1,339	1,451
TSF (USD bln)	1,139	2,271	2,288	2,094	2,573	2,822
Hot Money % new loans	3.7%	1.4%	3.3%	6.0%	8.4%	11.1%
HM % TSF	2.6%	1.0%	1.9%	3.5%	4.4%	5.7%

Source: Wind, J Capital Research

Connecting the dots: the Fed, hot money and China's tight financing environment

➲ QE2 was when hot money started to ramp up

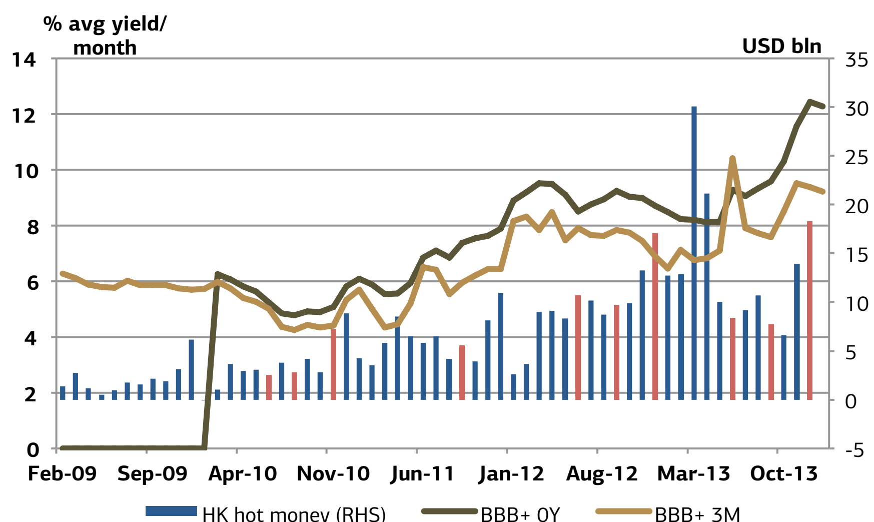
Fed policy has had a strong influence on hot money inflows. QE's resultant low yielding environment has meant China's double-digit shadow banking rates have been very enticing for hot money punters.

Chart 2 and Table 2 compare hot money flows with Fed actions and Chinese onshore BBB+ corporate bond yields. Fed actions are illustrated with red bars. That hot money spikes after Fed announcements is clear.

QE2, which began in November 2010, was particularly significant. Hot money flows had a major spike, and this is also when Chinese BBB+ corporate bond yields began their upward climb.

BBB+ corporate bond yields of over 10% are extremely high when compared to most global fixed-income assets, stuck in the 1-5% yield range. But corporate bond yields serve only as an indicator of China's tight financing environment, and the potential yields on offer. It's highly likely that speculators were drawn to higher-yielding and more exotic "assets" such as Wealth Management Products and Trusts paying 15%+ interest rates.

Chart 2. Monthly hot-money inflows taking advantage of high Chinese onshore corporate bond yields. Key Fed dates shown by red bars.



Source: Wind, J Capital Research

Table 3. Fed actions vs. HK hot money inflows and Chinese corporate bond yields

Date	Fed action	HK hot money inflow	Chinese onshore corporate bond yield
Nov 2008	Starts buying USD 600 bln of MBS.		Data doesn't go back to Nov 2008.
Jun 2010	Purchases halted when Fed balance sheet hits USD 2.1 tln.		Yields appear to have fallen.
Aug 2010	Fed resumes purchases, aims to keep holdings at USD 2.054 tln. Buys USD 30 bln of Treasuries/mth.	Hot money starts increasing.	Yields start increasing.
Nov 2010	QE2 begins. Fed buys USD 600 bln of Treasuries by 2011 Q2.	Hot money spikes in Nov-Dec 2010.	Appears to be when Chinese bond yields start increasing.
Sep 2011	Operation Twist begins.	Hot money spikes in Nov-Dec 2012.	Chinese bond yields increase sharply.
Jun 2012	Operation Twist extended.	Flows are maintained.	Yields are flat.
Sep 2012	QE3 begins. Fed buys USD 40 bln/mth of MBS.	Hot money continues increasing.	Yields fall a little over the next months.
Dec 2012	Purchases increased from USD 40 bln/mth to USD 85 bln.	Flows increase. Mar and Apr see largest flows.	
Jun 2013	Bernanke announces planned tapering from USD 85 bln-USD 65 bln/mth from Sep 2013.	Flows lower than Mar-Apr.	Interbank funding spike.
Sep 2013	Tapering held off.		Yields start going up again.
Sep 2012	Tapering begins. USD 10 bln/mth cut.		

Source: Federal Reserve Bank

Fed money printing ended up as HK hot money

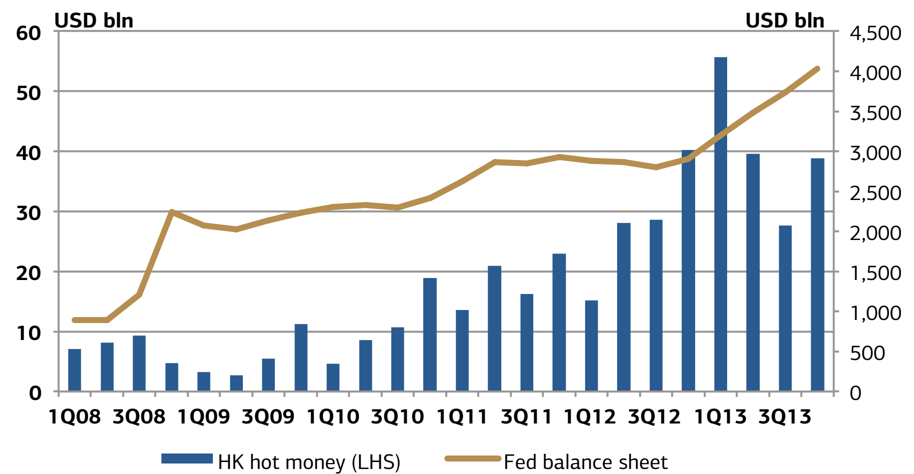
➲ The doubling of QE3 saw HK hot money spike

QE's impact on HK hot-money flows is clearer when viewed on a quarter-on-quarter basis. Chart 3 compares the massive expansion of Hong Kong hot-money inflows with that of the Fed's balance sheet, to over USD 4 tln.

Initial Fed money printing in 2008 Q4 didn't see an increase in Hong Kong hot-money inflows. Hot money only started to gain momentum when QE2 started in 2010 Q4.

QE3 also saw increased hot money. When Bernanke decided to print even more and doubled QE3 in 2012 Q4, Hong Kong hot money responded, with spikes in 2012 Q4 and 2013 Q1.

Chart 3. Fed balance sheet and quarterly hot-money flows



Source: Federal Reserve Bank, Wind, J Capital Research

Hot money flows dropped in the second and third quarters of 2013. While down on the first quarter of 2013 flows were still high compared to previous quarters. It's possible that China's June interbank funding debacle made speculators cautious about putting money in China. If this was caution, it quickly dissolved, given that flows increased in 2013 Q4.

RMB appreciation has also been a factor in attracting hot money flows (Chart 4). Interestingly, in 2012 Q2, even though the RMB weakened for a short period of time, Hong Kong hot money flows continued to increase. This is probably because Chinese onshore corporate bond yields were still high.

Potential liquidation points

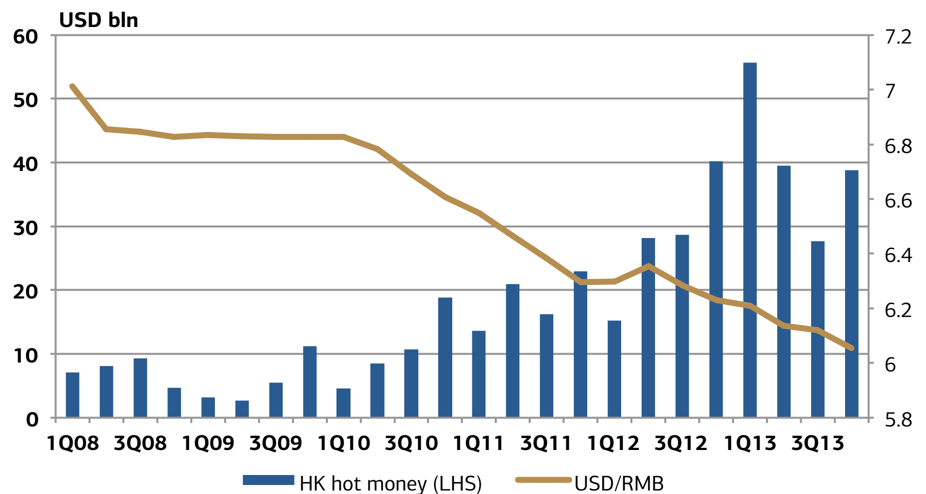
➲ RMB at 6.23 could be the trigger

Chart 4 suggests that USD/RMB at the 6.23 rate at which the Renminbi was trading in 2012 Q4 is a key trigger level. This is because so much money came in at that rate, and many of those speculators may have held positions in the domestic market since then. If they stand to lose on depreciation, they will cover their positions. The last quarter of 2012 saw a spike in hot money following QE3, and, since then, around USD 202 bln has entered China. If the RMB were to depreciate to 6.23, the large majority of these hot-money flows would be loss making from a currency perspective.

As noted above, it's likely that the positions are not all loss-making given they are probably earning double-digit yields from shadow banking. Nonetheless, it would not be surprising if there were significant liquidation if the RMB depreciated to this level.

USD 202 bln is equivalent to 2.2% of China's 2013 GDP and 14% of new loans issued that year, so it is a meaningful amount.

Chart 4. Carry trade: RMB appreciation



Source: Wind, J Capital Research

Lots of hot-money channels

Simply using Hong Kong trade data understates the total amount of hot money. We've identified at least another USD 162 bln of hot money from a range of channels. We think this is conservative as we have not included estimates from well-known black market money exchanges like Qianhai (where you can easily funnel USD 300 mln via a dodgy private equity structure), the Shanghai Pilot Free Trade Zone, or lending to China; the Bank for International Settlements' ("BIS") estimates 880 bln in foreign-currency lending to China.

USD offshore corporate bonds: 92 bln

92 bln of USD-denominated offshore corporate bonds are outstanding, and the large majority has been issued by Chinese property developers. We previously wrote about this carry trade in January 2014 and noted that developers were borrowing in USD given their expectations of continued RMB appreciation and lower offshore funding costs vs. tight conditions onshore. Given the recent depreciation of the RMB, these developers are now faced with higher offshore funding costs, while bond investors will be less likely to fund them in the future. This trade could easily reverse.

FDI into China: at least USD 11.7 bln is hot money

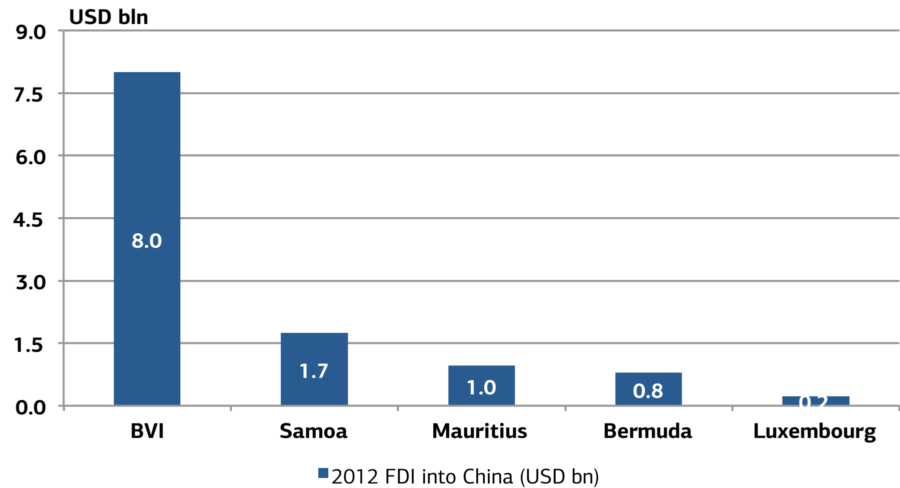
➲ BVI, Samoa, Mauritius, Bermuda, Luxembourg = USD 11.7 bln

A number of tax havens pop up in China's FDI numbers. and they are being used to round-trip funds back into China. We view this as an additional source of hot money.

Corporations of all domiciles routinely use territories like the Cayman Islands as staging platforms for investment in China; separate establishment insulates the China assets from other corporate holdings, which is convenient, among other things, for taxes, debt, and staff incentive. But there are some registration locales that legitimate corporate investors are unlikely to use, because auditors and regulatory bodies frown on the non-transparency. These territories include the British Virgin Islands, the Seychelles, Samoa, Mauritius, and Bermuda.

The Pacific island nation of Samoa has the sixth-highest proportion of overweight people in the world. However, one wouldn't expect Samoa to feature as highly in the ranks of China FDI flows. Amazingly, for a country with a GDP of only USD 677 mln, Samoa apparently invested USD 1.7 bln into China in 2012, or 2.5x its GDP! Other notable countries include the British Virgin Islands (USD 8 bln), Mauritius (USD 1 bln), Bermuda (USD 800 mln) and Luxembourg (USD 222 mln). Together, they total USD 11.7 bln.

Chart 5. Little big investors in China

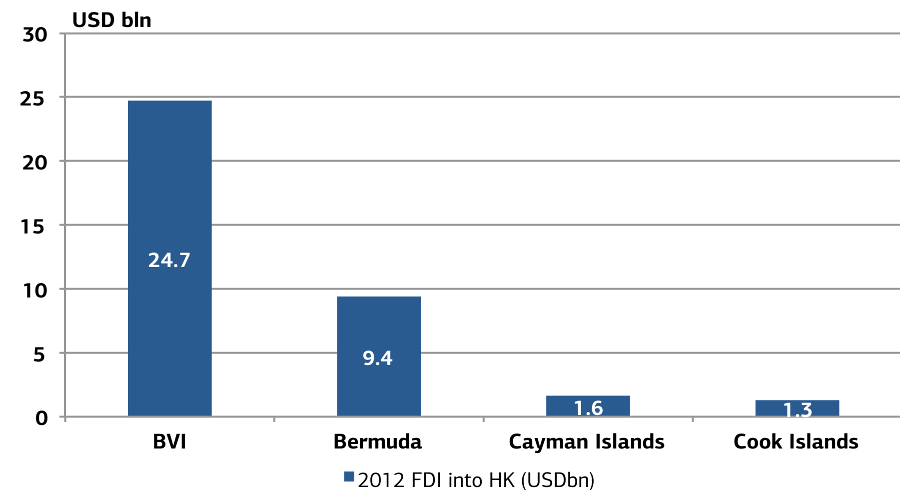


Source: Wind

Hong Kong too: USD 37 bln from tax havens

In 2012, Hong Kong received tax haven inflows of USD 37 bln. We think the large majority of this money slipped into China. It's possible that HK/China trade fraud already accounts for most of these flows, but we think this is unlikely. Another Pacific island nation popped up - the Cook Islands, who had FDI of 1.3 bln. This is more than 7x Cook Islands' USD 183 mln of GDP.

Chart 6. Tropical island to Hong Kong trade



Source: Census and Statistics Department HK SAR

HK bank lending to the Mainland

According to the Hong Kong Monetary Authority, Hong Kong banks have made USD 368 bln in foreign-currency loans, mostly to Chinese companies. While a proportion of this lending would be for genuine funding needs, it's likely that currency and shadow banking rate arbitrage are key demand drivers. Assuming 80% of the USD 368 bln is for Chinese companies and 30% of this is for speculation gives a hot money figure of USD 88 bln.

Foreign-currency lending growing faster than RMB lending

➲ The BIS estimated foreign currency loans in China at USD 880 bln

In a recent working paper, the BIS conservatively estimated that foreign currency loans in China totaled USD 880 bln and now account for up to 8.5% of all lending in China.[1] It's highly likely that a portion of this lending is for currency and interest rate punting, but for conservatism, this will be left out of our hot money total.

International debt securities of USD 239.7 bln

The BIS has numbers on international debt securities ("IDS") issuance. When grouped by "residence," China only has USD 48.6 bln of IDS outstanding. However, the BIS also looks at IDS issuance by "nationality". On a nationality basis, China has USD 239.7 bln of IDS outstanding, almost double that of 2011's USD 118.1 bln total. It's likely that the USD 92 bln of corporate bonds above is part of the USD 239.7 bln, but we've been unable to verify this as they are from two separate data sources.

Such issuance has added to China's stock of credit and probably is a form of hot money. For the purposes of conservatism, we won't include this in our hot money total, but it is important to highlight this chunk of liabilities as an additional source of potential vulnerability.

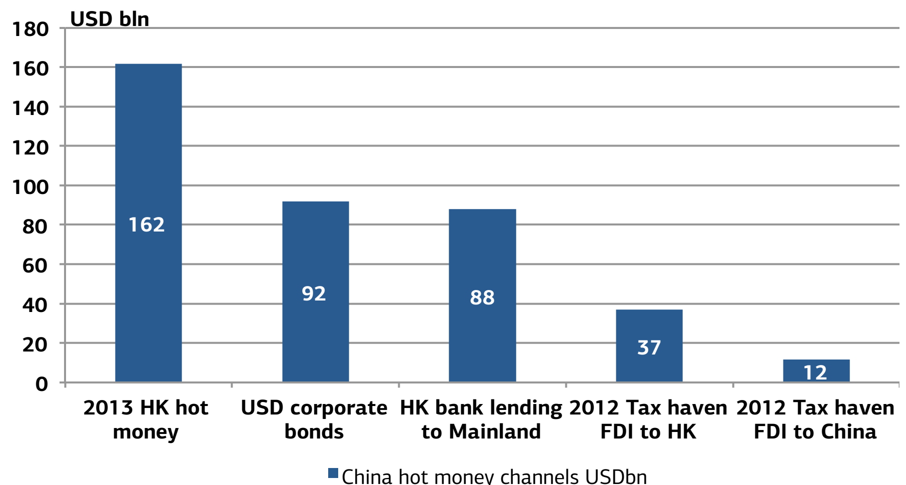
Total hot-money estimate of USD 390 bln

Our estimate of total hot money of at least USD 390 bln is equivalent to:

- 1.5x estimated 2013 FDI (after reducing reported FDI by flows from the island tax havens mentioned above).
- 4.2% of China's 2013 GDP.
- 27% of China's new loans issued in 2013.
- 14% of 2013 TSF.

[1] http://www.bis.org/publ/work431.pdf

Chart 7. Total hot money of USD 390 bln



Source: Wind, HKMA, AsiaBonds Online, J Capital Research

Coping with normalization

The World Bank recently published its "Global Economic Prospects" report in January 2014. The report was focused on how developing countries could cope with policy normalization in developed countries.

The report noted that Central Europe has been undergoing an extended period of restructuring and deleveraging similar to high-income countries. During the pre-Global Financial Crisis years, Central Europe saw "massive cross-border bank lending flows:" around 6% of regional GDP in the 2003-2007 period.

Our estimate of hot money entering China is 4.2% of GDP, a similar level to the substantial cross-border lending flows seen in Central Europe. However, our numbers are for hot money only, which is much more flightier than bank lending. While our numbers do incorporate some HK bank lending, we don't include the BIS' estimate of USD 880 bln foreign currency lending. Foreign currency lending in China is a huge 9.6% of GDP and 50% larger than the 6% seen in Central Europe.

The World Bank report found that financial inflows to developing countries fell abruptly during the GFC to negative 1% of GDP. If hot money was to reverse in a similar way in China, this would be equivalent to around 5% of China's 2013 GDP disappearing.

If Yellen switches the printing presses off

The World Bank also modeled a "rich-world" Central Bank normalization scenario in an attempt to understand potential capital flight from developing countries. As we have already seen from emerging market panic in Turkey and Argentina, the Fed's exit from QE is unlikely to result in linear outcomes. However, such modeling is instructive as a comparison base with our own capital flight views.

Assuming the Fed adds 50 bps in 2015 and a cumulative 100 bps by end-2015, with other QE-exits by the ECB, Bank of Japan and Bank of England, the World Bank estimates portfolio flows to developing countries will fall by 33%. Note that these are portfolio flows from the

Balance of Payments ("BoP") and not hot money, which is likely to be jumpier.

A 33% drop in China hot-money flows would be USD 128.7 bln and equivalent to:

- 51% of 2013 estimated FDI.
- 1.4% of GDP.
- 9% of new loans issued in 2013.
- 5% of 2013 TSF.

Such a reduction would have a large impact on China's financing environment. We think this is a conservative estimate given hot money is more likely to flee compared to BoP portfolio flows. Furthermore, this doesn't assume any impact from potential RMB depreciation and as shown above, depreciation would likely result in loss-making positions being liquidated, which could lead to a mad dash for the exits.

Short the RMB

Our analysis points to RMB weakness as the Fed exits QE.

The World Bank estimates that average developing country portfolio flows will fall by 33% in a normalizing environment. We think hot money will exit at a much faster rate. As hot money rushes out, liquidity will drain from China's financial system pushing onshore interest rates even higher. Defaults will occur and more hot money will flee.

As the hot money panic becomes a stampede, the RMB will come under further depreciation pressure and it's not hard to see the situation snowballing into a large depreciation.

We don't profess to any insight on the timing of this trade, but see USD/RMB at around 6.23 as a potential trigger point.

Potential ways to express a short RMB trade include:

- **Long-dated, deep out-of-the-money currency puts at USD/RMB 7 or 8**. Given the uncertainty over the trigger point, deep out-of-the-money puts are a cost-effective way to gain exposure.
- **Shorting China A-share market listed equity funds or ETFs**. RMB depreciation will see the value of China A-share equities decline on an un-hedged currency basis. A China financial crisis would also hit the A-share market.
- **Short Hong Kong banks**: Cross-border FX lending has rarely been a prudent form of banking and Hong Kong has a large exposure—a recent Wall Street Journal article cited cross-border lending to

China at around USD 427 bln, which is one-third of all deposits in Hong Kong. The article also noted that Bank of East Asia saw bad loans in its domestic China business surge 85% to HKD 840 mln in 2013.

- **Short CNH-denominated property bonds**: Retail investors buy CNH-denominated bonds to play RMB appreciation. An issue with this trade is a potential lack of liquidity and borrowing costs may be high.

Trade risks

- **US Fed stops tapering:** Liquidity would continue to flow to China.

➲ What about those large FX reserves?

- **Large-scale currency intervention by the PBOC:** China has 3.8 tln of FX reserves. Even if USD 390 bln of hot money was to flow out in one day, the PBOC could step in and easily defend with its massive reserves. However we think that the FX reserves defense is not as clear-cut as it seems. This view must be overlaid with the likely panicked herd mentality, psychology of crowds and the political economy backdrop of plutocrats wanting to get their assets out of China ASAP. China's FX reserves have accumulated at an astonishing rate and we think it's likely that they could melt away at an equally astonishing rate. While this view is imprecise, we think the rush for the exit will be large and very real, but is hard to quantify. We don't see this as a Black Swan event.

- **Hot money flows are not for speculative purposes and are really being used for productive investment within China:** We think this is unlikely.

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