CAPITAL MARKETS RESEARCH

Derek Holt (416) 863-7707
derek.holt@scotiabank.com

Dov Zigler (416) 862-3080
dov.zigler@scotiabank.com

Special Report: QE4 Prospects And Market Effects

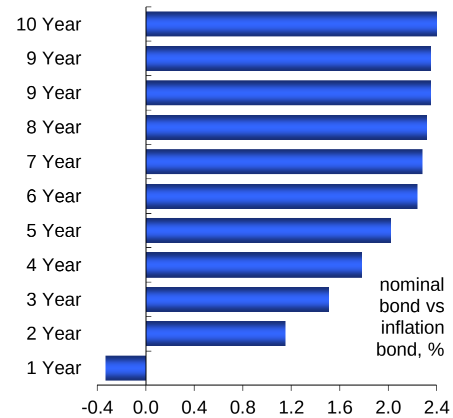
- **We continue to think the Fed will buy Treasuries in December, but we have modest conviction signaled through conservative expectations for the purchase size. The market implications may support a mild further Treasury rally and we argue that fears of debasing the USD remain misplaced.**

1. QE4 Prospects

We continue to expect the Federal Reserve to announce a Treasury purchase program at its December 12th FOMC meeting but, in playing it conservatively on the initial size of such a program we are essentially hedging our bets. Our target is about $20 billion per month in Treasury purchases which is about half of the $45 billion a month in short-term security selling to purchase longer-dated securities through Operation Twist, half of the $40 billion a month pace of MBS buying announced in September, and also about half of more bullish views than ours on the amount of Treasury buying to be announced. We anticipate this purchase program to last until about the end of 2013 with a sum total of $260 billion in Treasury purchases and $720 billion in MBS purchases equaling nearly $1 trillion in combined asset purchases by the time the Fed likely stands pat. We also recognize that this is a more conservative assumption than more extreme views on the sum total of all purchase activity in QE3/4.

Chart 1

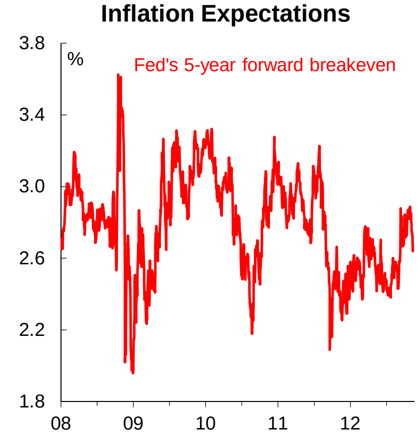
US Breakevens



Source: Bloomberg, Scotiabank Economics.

Chart 2

Markets Backing Off Inflation Expectations



Source: Bloomberg, Scotiabank Economics.

The consensus of primary dealers appears unanimous toward expecting the Fed to add Treasury purchases in December. There are three reasons why we are hedging our bets on the size of a potential purchase program. For one thing, the FOMC minutes spoke of “a number” of participants considering this option which was instantly recognized as weaker than the stronger “many” signal that the Fed has used to indicate imminent policy actions in the past.

For another, Treasury yields are already exceptionally low largely thanks to the US fiscal cliff and ongoing European concerns, so it isn’t clear that the Fed can use the QE1 rationale to buy in order to push yields lower yet.

It is possible, however, that the Fed purchases Treasuries to execute the QE2 rationale for additional bond buying that Chairman Bernanke spoke to in his February 2011 speech on the QE2 aftermath. He noted at the time that additional Treasury buying worked because it pushed investors out of the safe havens and into riskier assets and did so by putting upward pressure upon inflation breakevens and nominal Treasury yields that were tending toward signaling deflation risk. It isn’t fully clear that the Fed would face this same motivation today since the evidence on what inflation breakevens are signaling is less compelling. For instance, the one-year

Scotiabank Economics

Scotia Plaza 40 King Street West, 63rd Floor
Toronto, Ontario Canada M5H 1H1
Tel: (416) 866-6253 Fax: (416) 866-2829
Email: scotia.economics@scotiabank.com

TIPS inflation breakeven rate has pushed negative and sharply reverted lower from the 1.5% mark of about a month ago, yet this isn't just an inflation signal (chart 1). It also signals a liquidity distortion as safe-haven flows have more significantly impacted the nominal Treasury yield versus the real return. The 2-year breakeven rate has also fallen to about 1.15% from the September peak of almost 2%, and the 10-year rate has dropped to 2.4% from the September peak of over 2.6%. While the direction of the inflation trade is supportive of stimulus, the levels are less convincing across all maturities and particularly note that the ten year breakeven rate is still well above the pre-QE2 1.8% mark. Lastly, note that the Fed's preferred 5-year forward breakeven rate sits at about 2.67% which is indeed down from the recent peak of nearly 2.9% but considerably higher than the 2.2% reading in late summer 2011 and 2010 prior to QE2 (chart 2).

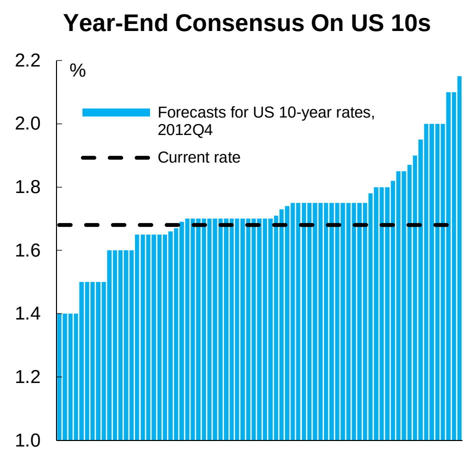
A third uncertainty is whether the Fed would wish to give time to evaluate the expiration of Operation Twist as opposed to introducing QE4 immediately. The Fed has tended not to be overwhelmingly pro-active when introducing such programs, and has generally leaned more in favour of biding its time. Doing so may have the added advantage of keeping some of the Fed's powder dry pending the outcome of fiscal cliff negotiations that are unlikely to conclude in advance of the December 11-12 FOMC meeting.

2. Impact On Financial Markets

A) A Possible Further Treasury Rally

Chart 3 shows the distribution of forecasts within the Bloomberg consensus for yields on ten-year US Treasuries at the end of 2012 at which point some clarity— good or bad — on the fiscal cliff negotiations is expected. About one-third of forecasters — including us at 1.5% — expect a modest further rally in US 10s. Some have the rally extending toward even lower yields one quarter later. Our bias remains that fiscal cliff negotiations are likely to be drawn out until the last possible minute, and this will be a contributing factor to market uncertainty in favour of safe-haven seeking. The Q3 earnings season also signaled a possible peak in the earnings cycle at the expense of risk appetite toward equities. Also note that safe-haven seeking could be reinforced by the global events calendar into year-end including this weekend's Spanish regional election in Catalonia, delays in plugging Greece's financing gap, delayed progress toward European budget and banking union agreements, and pending Italian elections by April. One of the major issues overhanging the US Treasury market, of course, is the European crisis — and the extent to which it has suppressed safe-haven yields in Europe and with them yields in the US Euro 'convertibility' risk is probably best exemplified by ultra-low German yields (as opposed to high yields in peripheral Europe, which could simply reflect default risk); indeed, European markets continue to pay an irrational premium for safety in Germany as Bunds with maturities through 2-years trade with negative yields. As long as Bund yields are ultra-low, they will drag other safe-haven assets with them — regardless of Fed policy. The impact of Fed asset purchases given this year's Europe-fuelled Treasury rally is not entirely clear.

Chart 3



Source: Bloomberg, Scotia Economics.

B) Fears Of Fed Debasement Of The USD Are Off Base

For years now, Fed policy has been accused of debasing the USD and driving up capital flows into other countries leading to concomitant currency appreciation. While there may be some truth to these concerns over time, we have consistently argued that the effects are very much overstated and that those capital flows would have largely occurred irrespective of US monetary policy. Will we change our mind if the Federal Reserve renews unsterilized Treasury buying and join the camp that argues the Fed will be responsible for added global currency market turmoil? Not likely, and for several key reasons.

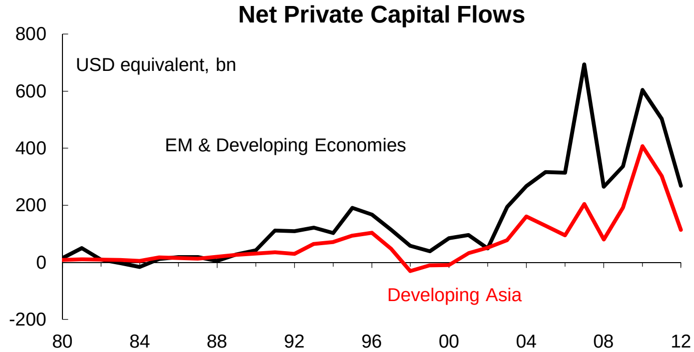
i. Relative Growth Is The Dominant Driver

As we argued in our first paper on the topic in 2010[1] and as Fed Chairman Bernanke recently addressed in his speech on "US Monetary Policy and International Implications" last month, the dominant driver of currency movements is relative capital flows that in turn are principally driven by relative GDP growth. As chart 4 demonstrates, capital inflows into EM and developing economies were surging over the past decade well before the Fed engaged in QE policies or embraced its zero interest rate policy. In the post-QE world, those capital flows have been erratic; they climbed strongly in 2010 but that was likely more to do

1. "Is The Fed Really To Blame For Emerging Market Headaches?", November 5th 2010.

with the relative resilience of growth in the EM space compared to the western developed economies than Fed policy, and then those capital flows sharply waned thereafter even as the Fed embraced further rounds of quantitative easing. The charts in the appendix to this paper show that the broader pattern across the EM and developing economy world generally but not perfectly demonstrate similar arguments for Mexico, Chile, South Korea, China, Russia and India. None of the appendix charts, however, control for GDP growth. The fact that relative capital flows are driven by GDP growth is evidenced in chart 5 which scales the capital flows to GDP for EM and developing economies and displays no secular break-out in capital flows that is inconsistent with the broad GDP effect.

Chart 4

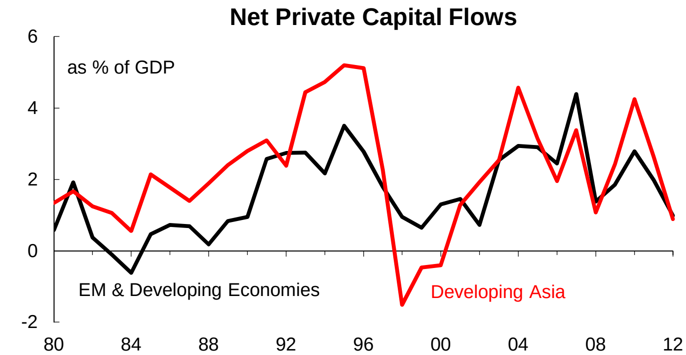


Source: IMF, Scotiabank Economics

ii. Debasement Doesn't Work When The Monetary Policy Transmission Channels Are Broken

Second, the assumptions behind how a debasement model would work in normal times do not work under current circumstances. The normal way in which a central bank can debase its currency is to flood the system with expanded money supply that results in more money chasing a similar amount of goods and services so as to put upward pressure upon domestic versus foreign prices. In order to equilibrate relative prices, the nominal exchange rate must depreciate. Thus, monetary policy works through inflation to debase the currency and spark additional challenges such as seigniorage revenues to governments in a transfer of wealth from the private sector particularly for those on fixed incomes. Critiquing this classic path to currency debasement spawns the next several arguments against how Fed policy is debasing or could debase the currency.

Chart 5

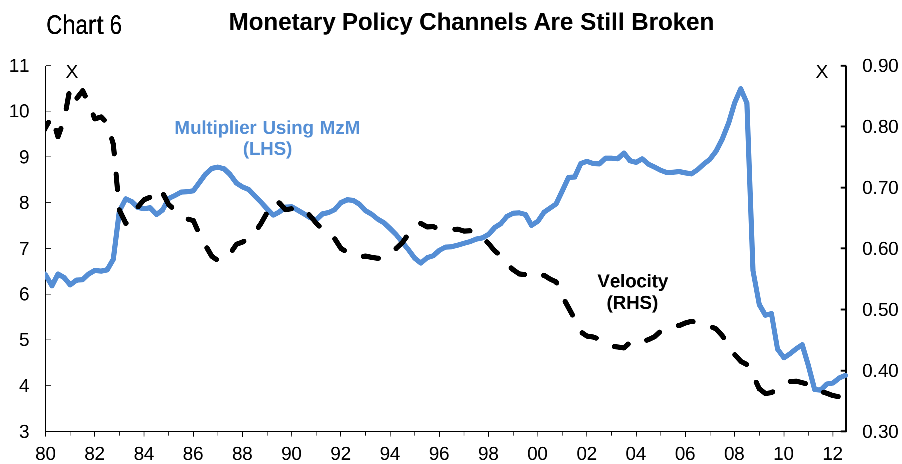


Source: IMF, Scotiabank Economics

For one, the arbitrage that leads to a weaker nominal exchange rate via interest parity or purchasing power parity is fraught with uncertainties and can take a very long period to unfold. One would hang a currency view within a finite time period upon a parity argument often to one's own peril.

For another, a key counter-argument to this theoretical path to currency debasement is that it depends upon well-functioning monetary policy transmission mechanisms in order to facilitate expanded money supply going into the system to spark inflation. A naïve look at monetary aggregates like MZM, high-powered money, or even out to M2 might lead one to believe that this is happening in recent years. These are, however, gross concepts. They neglect to consider where the money ultimately lands in net terms. Since the US money multipliers and velocity of money continue to contract (chart 6), expanded gross money supply is not working its way through the system and sparking inflation. For every nickel the Fed

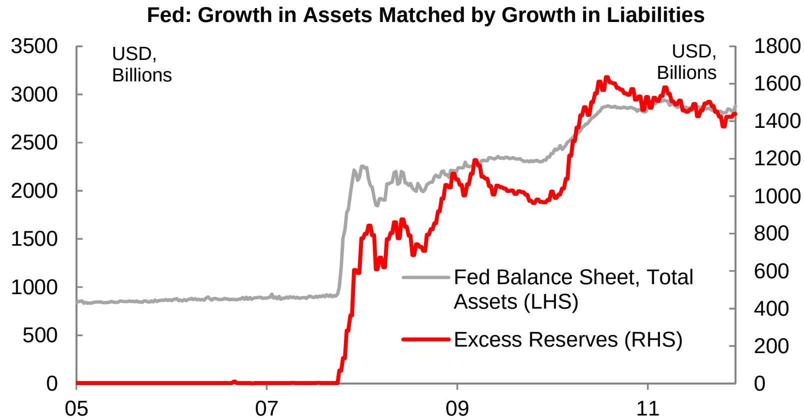
Chart 6



Source: Global Insight, Scotiabank Economics.

adds to the liability side of its balance sheet, nearly a nickel is coming right back onto the asset side of its balance sheet via excess reserves (chart 7). Thus, step one toward the debasement theory must posit that the US banking system's supply and demand dynamics will dramatically heal and drive an upward reversal in money multipliers and velocity that we don't see happening for some time. As long as the US remains in a deleveraging world that is transitioning from the private to the public sector and perhaps back on the private sector again, unconventional Fed easing won't sustainably matter to the USD. If and when it does, it is not clear that the Fed will stand idly by and watch excess reserves flood back into the system to stoke higher money multipliers and velocity and risk stoking inflation. While timing and execution are uncertain, it is not obvious that the Fed will not utilize tools like raising interest on excess reserves, open market operations through repos, or selling term deposits and asset holdings in order to provide offsetting measures to reserve redeployment via stronger lending channels. Lastly, also note that even when a net adjustment to monetary aggregates is made, it is anything but clear what the relevant definition of money supply is today. The forces of money creation and destruction are vastly more complex today than decades ago, and must incorporate market mechanisms beyond central bank policy that result in growth or contraction in broad money such as the rise and fall and possible eventual resurrection of the US shadow banking industry.

Chart 7



Source: Scotiabank Economics, Fed

iii. If Fed Easing Works, It Could Have Competing USD Positive Influences

Third, the signals sent by Fed easing and their implications for the currency are a tad ambiguous. More unconventional easing may result in concerns for the currency absent all of our critiques above, but there are competing influences. If Fed policy takes out further downside risks to growth or has a marginal positive influence over time, then that should be dollar bullish. This effect would be reinforced through bond markets pricing in quicker growth over time.

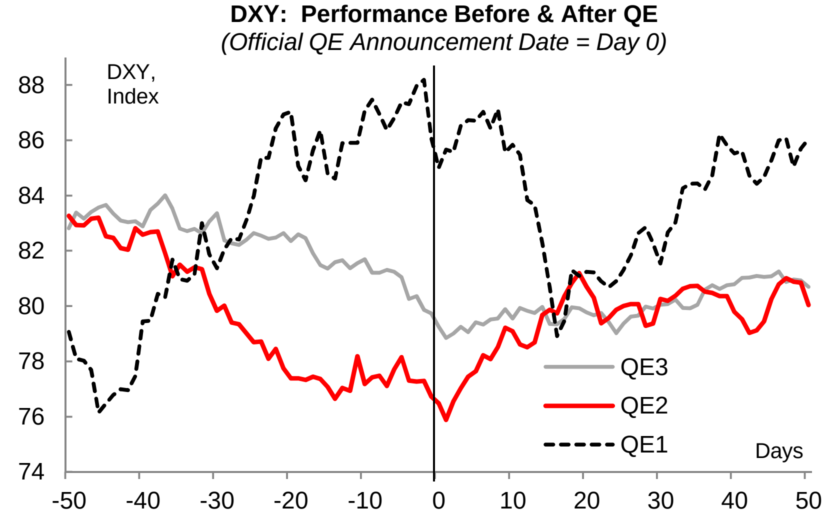
iv. It's Tough To Debase A Global Currency

Lastly, even if the Fed wanted to debase its own currency, it is doubtful it could. To a significant degree, the Fed and the USD are central bank and currency to the world, not just the US economy, and US Treasuries represent the vehicle through which this role is exercised. US dollar denominated Treasuries play a fundamental role as a global funding and liquidity management vehicle and the base security in many leveraged transactions. Because of this role and the sheer size of the US Treasury market relative to other options abroad, the scope for foreign selling of the USD and Treasuries on debasement concerns is vastly more limited than it is for other countries accused of debasing their currencies over time particularly in the Latam space. That is particularly true during the crisis period to date and via the uncertainty that we feel will continue to enshroud the global economy over 2013-14 such that the USD and Treasuries will remain the defense haven of choice.

v. Debasement Critiques Are Backed By The DXY Response To QE

It is likely because of these reasons that the theory of currency debasement caused by Fed policy has not worked for years. It is especially difficult to prove in isolation of many competing influences. The USD on a DXY basis has fluctuated within a 75-85 band for the most part since the crisis unfolded and has exhibited no clear secular break out in either direction on a sustained basis. Further, chart 8 shows the USD on the same trade-weighted DXY spot basis 50 days before and 50 days after the introduction of new QE programs over the crisis period. The reaction of this broad currency measure surrounding QE announcements has been ambiguous, and never sustained. For QE1, the USD strengthened going in, remained largely unchanged immediately afterward, but then sharply depreciated on a temporary basis until mostly recouping its prior value within less than two months after the introduction of QE1 and as risk aversion returned with stocks pushing to crisis lows. For QE2, the USD weakened going in, then strengthened afterward to the point to which it had regained much of its pre-QE2 value. For the most recent bout of QE3, the USD weakened slightly from about the 82-83 mark to the 79-70 range leading up to the announcement, and then strengthened back to the 80-81 range not long after it was implemented. In each of these periods there were many other factors driving the currency but our point is that there are no clear hard and fast rules surrounding the sustainable currency effects of successive rounds of quantitative easing probably because one has to control for the many complicating factors we have discussed. Moreover, to the extent that there are short-term declines in the DXY as markets learn about new rounds of QE (itself variable), those declines seem to have diminished with each new QE program. This is akin to the Japanese experience.

Chart 8

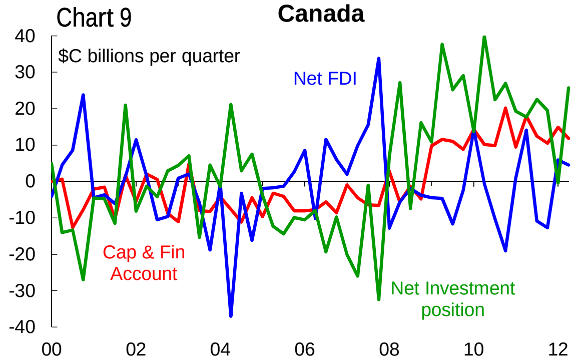


Source: Bloomberg, Scotiabank Economics

Conclusion

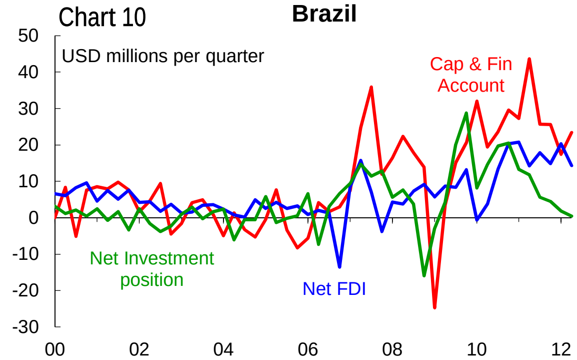
Irrespective of the very short-term implications for currency markets from the Fed's QE policies, the bigger picture issue is whether the Fed's bond-buying will help the US economy recover from its post-financial crisis malaise — and in a larger sense, cause the currency to perform more strongly as a result. That's the argument that Fed Chairman Bernanke presented to a group of international central bankers at the 2012 IMF meetings in Tokyo this year. He argued that "monetary easing that supports the recovery in the advanced economies should stimulate trade and boost growth in emerging market economies as well." Whether or not the Fed's unconventional monetary policies will meet that lofty aim is a question that will only be answered in the history books, but in the meantime, it's hard to arrive at a positive scenario for emerging markets, or for that matter global developed markets, that doesn't involve a recovery of the US economy — which needs all of the help that it can get.

Chart 9 **Canada**



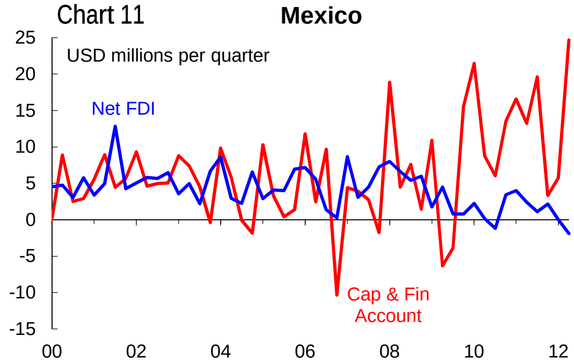
Source: Global Insight, Scotiabank Economics

Chart 10 **Brazil**



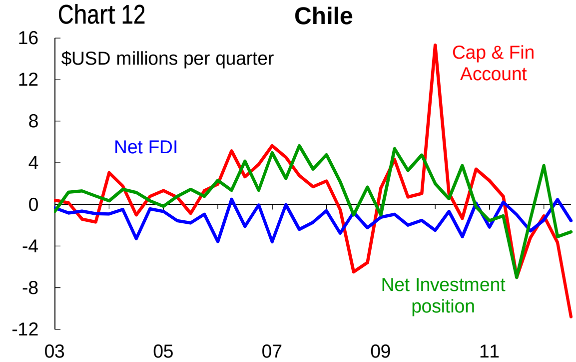
Source: Global Insight, Scotiabank Economics

Chart 11 **Mexico**



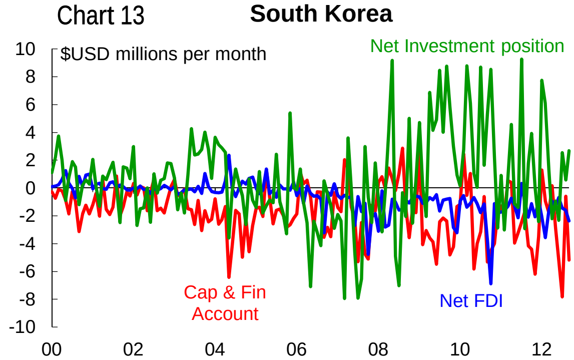
Source: Global Insight, Scotiabank Economics

Chart 12 **Chile**



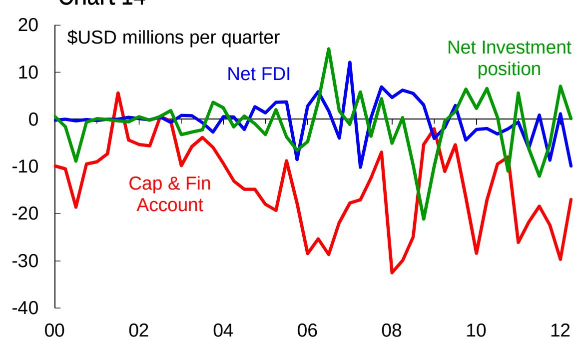
Source: Global Insight, Scotiabank Economics

Chart 13 **South Korea**



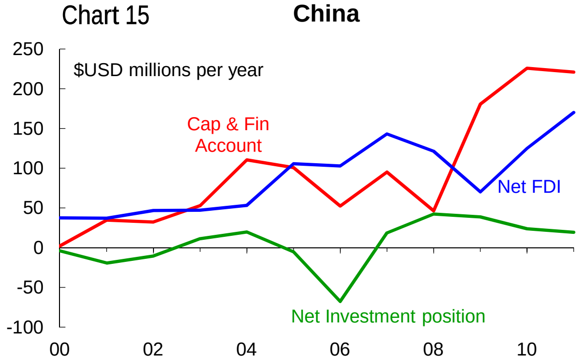
Source: Global Insight, Scotiabank Economics

Chart 14 **Russia**



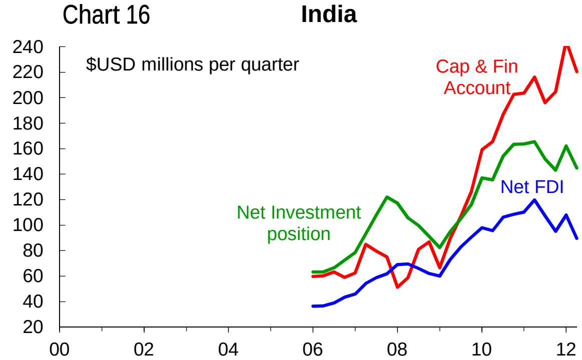
Source: Global Insight, Scotiabank Economics

Chart 15 **China**



Source: Global Insight, Scotiabank Economics

Chart 16 **India**



Source: Global Insight, Scotiabank Economics